EVERGREEN

Neighbourhood Area Structure Plan

Melcor Developments Ltd.

EVERGREEN
Naturally Exquisite

City of Red Deer

Adopted September 29, 2014 | Bylaw 3217/C-2014

Amended March 4, 2019 | Bylaw 3217/A-2019

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TABLE OF CONTENTS

TABLE OF CONTENTS Continued

TABLE OF CONTENTS Continued

Figures

TABLE OF CONTENTS Continued

Tables

executive summary

HISTORY

The NW quarter of Section 26-38-27-W4M, hereafter referred to as the Evergreen "Plan Area", has historically been agricultural land. This property has been owned by the Larratt family since 1948, when David Larratt purchased the land from Robert Lund. Since 1975 the Plan Area has been owned by Mr. Larry Larratt.

EVERGREEN'S VISION

The Evergreen neighbourhood will be a vibrant residential community in northeast Red Deer that is home to approximately 2,636 residents. Evergreen will respect the unique natural features in an effort to protect wildlife habitats, enabling residents and visitors to enjoy beautiful natural surroundings. As a result of its unique open space features, access to primary roadways, and proximity to nearby amenities; Evergreen will be one of the most desirable residential areas in the entire City.

Located approximately 7.0km from Red Deer's downtown, 8.0km from Highway 2, and 5.0km from Highway 11; Evergreen is a convenient place to call home for those employed both in and out of town. In addition, Evergreen attracts new residents by providing a wide range of residential and recreation opportunities based on its extensive open space network and connections to neighbouring park spaces.

The Land Use Concept for the Evergreen creates a predominantly residential community that supports residents in accessing their daily needs by using alternative methods such as walking or cycling. Access to employment areas, larger-scale retail, destination leisure and cultural spaces is facilitated by excellent pedestrian, transit, cycling, and road connections.

PLANNING PROCESS

The NASP has evolved through a visioning process involving both the Developer and the City's Administration. Through this process, detailed policies and guidelines were developed that were used to direct land use through subdivision and development permit stages. Applications during this time will be developed to collectively shape the development as outlined in Evergreen's Vision.

NASP PURPOSE

The Evergreen Neighbourhood Area Structure Plan (NASP) refines and implements the strategic objectives and policies identified within the Section 26 Multi-Neighbourhood Plan, East Hill Major Area Structure Plan, Neighbourhood Planning and Design Standards, City of Red Deer Municipal Development Plan, and many other plans as previously prepared. It is also informed by specific engineering and transportation studies and servicing constraints in the area.

Interpretation

All images as shown in this NASP have been included for visioning purposes only and should not be used to identify exact locations or be considered an indication of what will be constructed.

AMENDMENT

2019

The Evergreen NASP was originally approved by the City of Red Deer in September of 2014. An amendment was approved in March of 2019 to facilitate the following two changes:

1. Redesign of the one-way roadway in the southern portion of the neighbourhood to alleviate challenges related to waste management.
2. Convert a portion of R1 Low Density Residential Lots in the southwest to R1G Small Lot Residential, in response to current market conditions.
3. Additional of a 0.04 ha parcel of municipal reserve south of Elder Close to connect to the Emerson neighbourhood.
4. Addition of two trail crossings across the south legs of the natural area to facilitate better trail connections.

As described in the 2014 Evergreen NASP, a 13.3m One-Way Local Roadway was proposed along the south boundary of the Plan Area (Elder Close). Following approval, it was determined by the City of Red Deer that the one-way roadway design would not function once the City transitions to automated waste collection. Collection trucks would not be able to collect waste from the interior homes. To facilitate waste collection, the Developer was asked to redesign the south p-loop accordingly.

At the time of Evergreen's approval, the R1G Small Lot Residential land use was new for the City of Red Deer and had not yet been widely constructed or accepted; as such, the use of this land use in Evergreen was limited. Since approval, many R1G homes have been constructed in Vanier East and Laredo and have been quickly accepted as a housing standard.

The R1G land use district is a tool to assist with increasing the City's density, lower infrastructure costs, be competitive with surrounding communities thereby retaining and attracting new residents and address residential affordability. This similar land use district exists in Calgary, Edmonton, Airdrie, and Sylvan Lake to name a few.

2021

A 2021 NASP amendment was completed to amend the land use of one parcel of land. Shifting housing trends and market demands warranted:

1. Change one R3 site to R2T and R1A.
2. Change Community Amenity sites to alternate approved zoning.

A 0.96 ha R3 site was originally identified along Evergreen Way and intended to be built as a multi-storey apartment complex. The proposed amendment maintains medium and high density residential via fee simple dwellings duplex and townhomes. This revision allowed for continuation of townhomes along the entrance road and a parcel of R1A along the north of the parcel.

Evergreen originally proposed two Community Amenity sites. Both sites had alternate land uses in the event that they were not purchased and developed for community amenities. Both sites were advertised according to the City of Red Deer's guidelines, due to a lack of interest both sites were rezoned to their alternate land uses on May 1, 2017.

2025

In 2025, a comprehensive review of the undeveloped area was completed to improve the layout and better reflect market trends, desired housing types, and land uses.

The amendment also updates all land use districts as per the 2024 Zoning Bylaw.

2026

A 2026 NASP amendment was completed to increase the northern R-M site to meet a builders requirements.

background

The purpose of the Evergreen Neighbourhood Area Structure Plan is to describe the land use framework and development objectives for the NW quarter of Section 26-38-27-W4M, which is intended to accommodate residential, commercial, community, and recreational uses.

RELEVANT PLANNING DOCUMENTS

The Evergreen NASP has been created to function with and respect existing planning documents. The following relevant documents have been reviewed and referenced in preparation of this NASP:

- Province of Alberta - Municipal Government Act (2000)
- Stantec Consulting Ltd – Northland Drive/20 Avenue Functional Planning Study (2008)
- The City of Red Deer – 2004 Growth Study (2005)
- The City of Red Deer - 2023-2026 Strategic Direction (2023)
- The City of Red Deer – Commercial Opportunities Study (2010)
- The City of Red Deer – East Hill Major Area Structure Plan (2021)
- The City of Red Deer - Intermunicipal Development Plan (2007)
- The City of Red Deer – Zoning Bylaw (2024)
- The City of Red Deer - Mobility Playbook (2013)
- The City of Red Deer – Municipal Development Plan (2013)
- The City of Red Deer – Neighbourhood Planning and Design Standards (2022)
- The City of Red Deer - River Valley and Tributaries Park Concept Plan (2010)
- The City of Red Deer - Section 26 Multi-Neighbourhood Plan (2013)
- The City of Red Deer – Trails Master Plan (2005)

Municipal Government Act (2000)

The Municipal Government Act (MGA) of Alberta outlines the purpose and powers of Municipalities. One of these powers is to require an Area Structure Plan for the purpose of providing a framework for subsequent subdivision and development of an area of land. As stated in s633(2), an Area Structure Plan must describe:

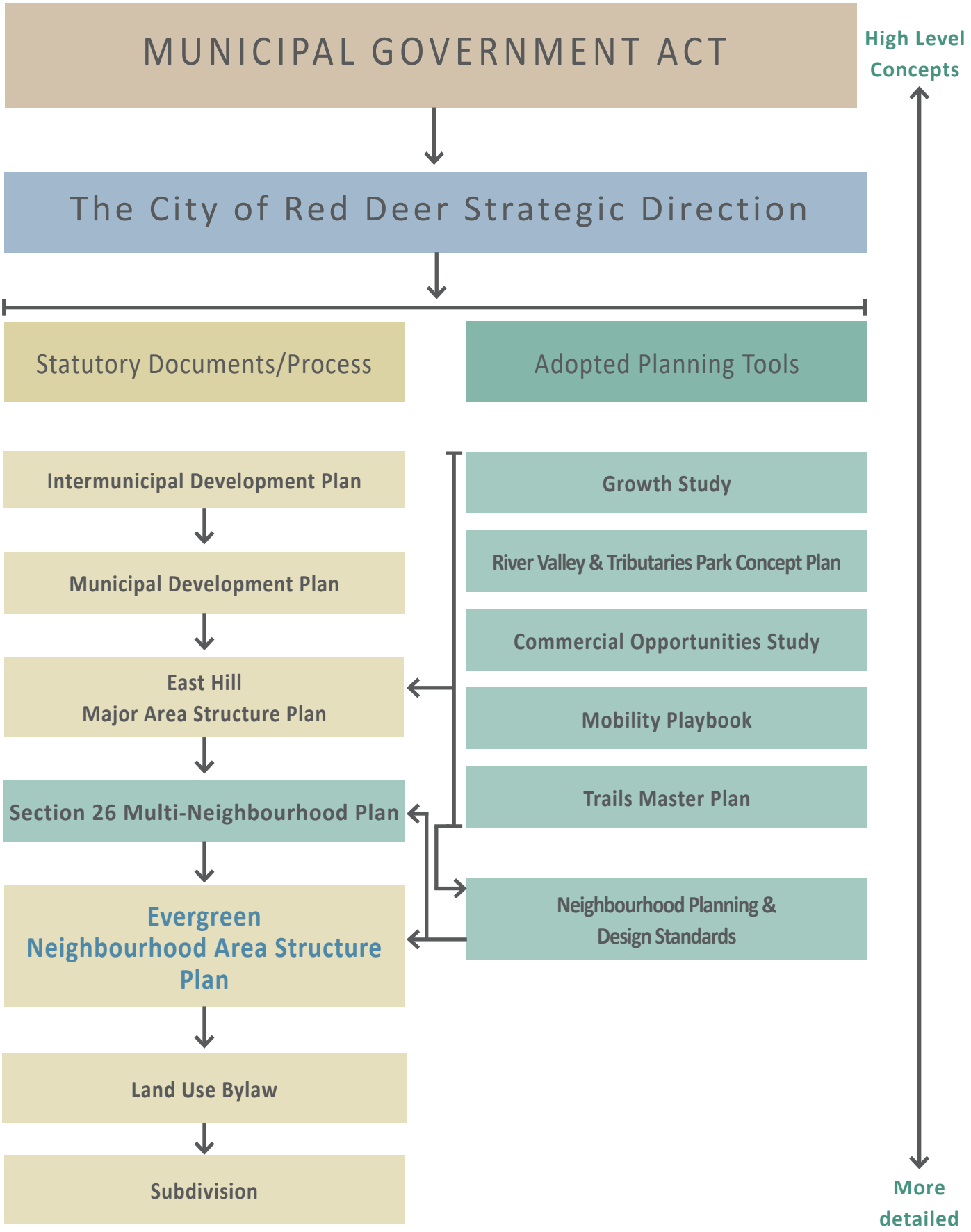
- the sequence of development proposed for the area,
- the land uses proposed for the area, either generally or with respect to specific parts of the area,
- the density of population proposed for the area either generally or with respect to specific parts of the area, and
- the general location of major transportation routes and public utilities.
- and may contain any other matters the council considers necessary.

2023-2026 Strategic Direction (2023)

The City of Red Deer's Strategic Direction guides the City along a path and provides focus and purpose. It is the City's most important plan as it shapes the organization, the municipal programs, and services they provide. In 2023, the strategic direction for 2023-2026 was created which strived to make Red Deer a healthy community.

> *A healthy and happy community is sustainable when people have opportunities for meaningful work and volunteerism, have great relationships, and take pride in the place they call home. Well-used and popular amenities exist for active living and for formal and informal interaction. People regularly participate in physical activity and intellectual experiences.*
>
> *Red Deer's community wellness is fundamentally founded on a balanced, proactive, and responsive approach to environmental health, cultural*

Figure i - Plan Hierarchy



health, economic health, and social well-being -- our pillars of sustainability.

The following are two of six themes from the City's Strategic Direction highlighted for their direct impact on the Evergreen NASP:

Design

Design and plan our community to reflect our character and values.

Our City's planning and urban design has resulted in a welcoming, more walkable and environmentally sustainable community which accurately reflects our character and values. It provides housing options, pedestrian routes, and allows for alternate forms of transportation and deliberate connections to our parks, trails, and well designed public spaces where people can meet and interact and feel a sense of belonging.

Movement

Design for and facilitate integrated movement.

Our deliberate decision to create viable alternatives to single occupant vehicle travel in our transportation network encourages healthy active lifestyles, environmental stewardship, supports safety for people of all ages, increases use of our public and green spaces, and integrates our sidewalks, trails, bike lanes, transit service, rail, and roads with our built environment.

Growth Study (2004)

The purpose of the *2004 Growth Study* was to focus on land absorption rates and suture land inventory requirements for industrial, residential, and commercial land uses within the City of the following 50 years. The Study was also to consider future need to open space, environmental preservation areas, and public service uses. In this Study, the Evergreen Plan Area was identified in Growth Sector B, for future residential development at the population threshold of 90,000-115,000.

Intermunicipal Development Plan (2007)

The City of Red Deer/Red Deer County Intermunicipal Development Plan (IDP) establishes a broad growth framework. It provides policy direction for the preservation of Natural Capital, areas of common land use planning interest, long range planning, infrastructure and services provision (including opportunities for cooperation), and Annexation Areas for The City.

As identified in the IDP, the Evergreen Plan Area is located within the City of Red Deer's Growth Area.

Municipal Development Plan (2013)

The City of Red Deer Municipal Development Plan (MDP) outlines broad policies for guiding growth and changes in the City for the next twenty-five years. Among many other things, the MDP sets out the following policies regarding neighbourhood designs:

- Density in new neighbourhoods shall ensure a minimum of 14.80 dwelling units per net developable hectare.
- The City shall continue to require a mix of housing types and forms in all residential neighbourhoods.

The Evergreen Plan Area is identified in the MDP for future residential development; there are no constraints listed for the development.

River Valley & Tributaries Park Concept Plan (2010)

The Red Deer River and Tributaries Park Concept Plan identifies lands that are best suited for potential trails and parks within the City of Red Deer Growth Area. This Plan identifies the Evergreen Plan Area as a wetland with associated streams. This area is also identified as "East Hill Park" a minor park node.

Commercial Opportunities Study (2010)

The City of Red Deer Commercial Opportunities Study defines a vision for commercial growth for the City of Red Deer and aids in the forecasting of retail/service/office development. The Evergreen Plan Area was identified as a possible location of a District Centre; however, that direction was not reflected in the East Hill MASP or Section 26 Conceptual Plan.

Figure ii - Municipal Development Plan and Northland Drive Alignment

LEGEND

- Proposed/Existing Open Space
- Existing Commercial
- Residential Development
- Future Arterial Roadway
- Future Expressway
- Access Point
- Red Deer River
- City Boundary
- NASP Boundary

Mobility Playbook (2013)

The Red Deer Mobility Playbook is a user-friendly tool to identify the strategies and actions needed to provide Red Deerians with more mobility choices. The following action items were identified in the playbook:

- Put pedestrians first by using human scaled streets
- Create walkable hubs
- Build quality footpaths and maintain them
- Place transit stops where other things are happening
- Ensure access for pedestrians, motorists, cyclists
- Improve the transit waiting experience
- Tie urban networks into recreation
- Plan with the entire street cross-section in mind
- Create a Red Deer model for cycling
- Establish new housing standards
- Require transit-oriented development
- Enforce and provide incentives for minimum density targets
- Define a set of street typologies based on the desired end users
- Balance the network with all users in mind
- Ensure drivers have a place without infringing on quality for other models

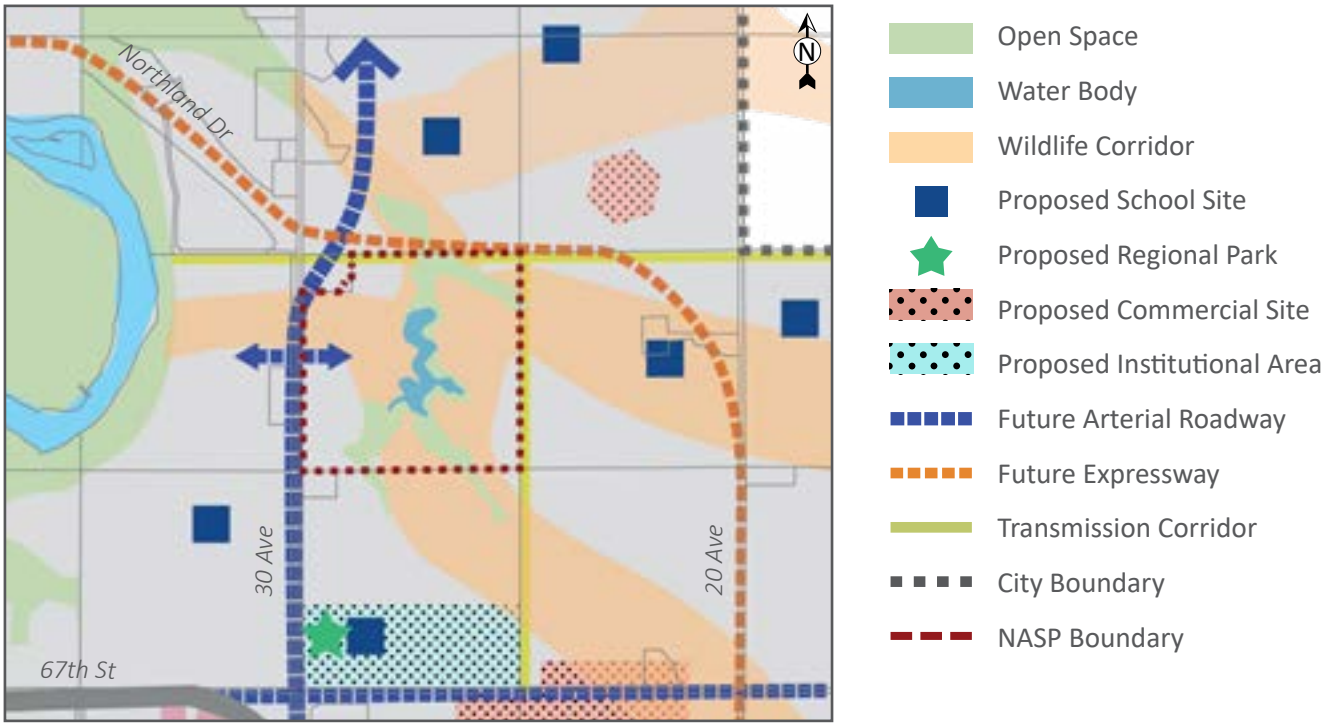
Trails Master Plan (2005)

The City of Red Deer Trails Master Plan does not identify future trails near the Evergreen Plan Area; however, a proposed extension of Waskasoo Trail is shown along the east bank of the Red Deer River. This extension would span 3,860m from Mackenzie Recreation Area to River Bend Golf Course and consist of a 3.0m asphalt trail with furnishings and wayfinding signage.

Highway 11A/Northland Drive/20th Avenue/McKenzie Road Functional Planning Study

The City of Red Deer prepared a Functional Planning Study for the Highway 11A/Northland Drive/20th Avenue/ Mckenzie Road corridors from Highway QE2 north to Highway QE2 south. In preparation of the Evergreen Concept Plan, the *Northland Drive/20 Avenue Functional Planning Study* was reviewed for its potential road alignment and to ensure an adequate right-of-way in the Plan Area. The roadway improvements and various intersection options for 30th Avenue/Northland Drive have been incorporated into the Concept Plan.

Figure iii - East Hill Major Area Structure Plan



East Hill Major Area Structure Plan (2021)

The City of Red Deer East Hill Major Area Structure Plan (MASP) sets out the broader transportation and land use objectives for multiple quarter sections in east Red Deer.

The following elements were shown within the MASP which may affect the planning of the Evergreen Lands Plan Area.

Transportation

30th Avenue

30th Avenue runs along the west boundary of the Plan Area; this roadway is currently constructed to a paved rural standard utilized primarily to access rural residential homes and the River Bend Golf and Recreation Area. The East Hill MASP identifies 30th Avenue as a major north-south arterial roadway which will require upgrading to meet such a standard.

Northland Drive

Northland Drive is an expressway that will run along the northern boundary of the Plan Area. As part of this roadway, a major intersection is envisioned to be located at its crossing with 30th Avenue. The Evergreen Plan Boundary has been designed to accommodate this intersection.

Transmission Corridors

Two transmission corridors are proposed to run along the Plan Area boundary. The right-of-way to the east will be utilized by the City of Red Deer's Electrical Light and Power department. The right-of-way to the north will run along Northland Drive and be registered to AltaLink.

These transmission rights-of-way, along with the roadways along the north and west will also act as firebreaks in support of Alberta's FireSmart design principles.

School Site

A school and major recreation site has been identified for location one quarter section south of the Plan Area. It is anticipated that this site will contain city-wide sports fields and high school sites for the Catholic, Francophone, and Public School authorities. Although located off-site of the Evergreen Plan Area, providing connections toward this area will be importance for the neighbourhood.

Neighbourhood Planning and Design Standards (2022)

The City of Red Deer's Neighbourhood Planning Design Standards states the following matters must be considered when preparing a Neighbourhood Area Structure Plan:

- Major Area Structure Plan
- Natural, historical, and constructed features
- Lane versus laneless subdivision
- Street classification and layout
- Oil wells, gas wells, and pipelines
- Traffic, rail, industrial, and/or commercial noise
- Traffic volume, capacities, and constraints
- Drainage routing and detention
- Erosion and sediment control
- Municipal Reserve parcels
- Transit system
- Development phasing
- Community mailboxes
- Enhances optional subdivision amenities

In addition, nine guiding principles are identified for all neighbourhoods. This principles are as listed below and are discussed throughout the remainder of this NASP.

1. Natural areas and ecosystem enhancement
2. Mixed land uses
3. Multi-modal choice and connectivity
4. Compact urban form and density
5. Integrated parks and community spaces
6. Housing opportunity and choice
7. Resilient and low impact neighbourhoods
8. Safe and secure neighbourhood
9. Unique neighbourhood identify

Section 26 Multi-Neighbourhood Plan (2014)

The City of Red Deer undertook a planning exercise to examine the entire Section 26 area.

The purpose of a Multi-Neighbourhood Plan was noted as to establish a high level conceptual plan that achieves the 9 Neighbourhood Planning Principles, as identified in the Neighbourhood Planning and Design Standards; identifies synergies, features, and connections; and creates distinct neighbourhood character.

The Section 26 Multi-Neighbourhood Plan outlines broad land uses, including environmental reserve and open space, and arterial and collector road patterns. Although Neighbourhood Area Structure Plans may vary in design and layout from the Section 26 Multi-Neighbourhood Plan, the intent is that the overall multi-neighbourhood plan is retained.

The following are a few of the key directions identified for guiding the development of the Section. Evergreen has been designed to be consistent with this Multi-Neighbourhood Plan.

Key Directions

Natural Areas

- Protect, connect, and integrate the key natural features of the site
- Create ecological connections via a looped trail

Mixed Land Uses

- Create three neighbourhood nodes, featuring housing with easy access to daily services, and schools. Apply a family of public design elements
- Neighbourhood nodes will provide medium and high density housing alongside neighbourhood commercial uses.

Multi-modal Choice

- Create a connected network of off-street trails for pedestrians and cyclists, connecting regional trail system to Commercial District
- Strive for a grid-like network of streets and trails, while avoiding large, unattractive parking lots
- Strong connections between proposed high schools and adjacent properties will make schools an integral part of the neighbourhood

Figure iv - Section 26 Multi-Neighbourhood Plan

LEGEND

- Open Space
- Water / Stormwater Management
- Residential
- Commercial
- District Commercial
- Node
- School
- Roadway
- Open Space Trail
- Road R/W & Roadway Trail
- City Boundary
- NASP Boundary

Compact Urban Form and Density

- Create small, tight blocks to improve connectivity
- Transition from higher density to lower density development focused around the nodes

Integrated Parks and Open Spaces

- Create a variety of park types, and link to open spaces
- Emphasize high quality park design and diversity rather than amount of park space achieved

Housing Opportunity and Choice

- Incorporate diverse housing types: single family, duplexes, townhouses, apartments.
- Mitigate visual impacts of the ELP sub-station

Resilient, Low Impact Neighbourhoods

- Manage stormwater on the surface and use features to create resilient, low impact neighbourhoods

Safe and Secure Neighbourhoods

- Use environmental design principles that naturally reduce speeds, create safe on-street pedestrian trails, and utilize effective crime prevention

Unique Neighbourhoods

- Allow Developers to create and apply their own styles, building materials, and architecture

Concept Plan Elements

The following elements were identified in the Section 26 concept plan for location within the Evergreen Plan Area.

Open Space

Evergreen is shown focused around the existing central water body with enhanced open space connections surrounding. These open spaces will be developed with trails to provide pedestrian short cutting to community nodes and destinations.

A north-south open space connection is shown along the east boundary of the Plan Area via the use of the utility transmission corridor.

Amenities

A community node is shown at the terminus of the main gateway road adjacent the open space.

Figure v - Existing Zoning Bylaw Designation

LEGEND

- A-1 - Future Urban Development
- R-L - Residential Low-Density
- R-N - Residential Narrow Lot
- R-D - Residential Duplex
- R-M - Residential Medium-Density
- DC - Direct Control (Commercial)
- C-4 - Major Arterial Commercial
- R-H - Residential High-Density
- P-1 - Parks and Recreation
- PS - Public Service
- Red Deer River
- City Boundary
- NASP Boundary

Zoning Bylaw (2024)

The City of Red Deer Zoning Bylaw (ZB) describes all available zoning districts to be utilized throughout the City and identifies any potential land use constraints available at the time of its creation. There are no constraints listed for the development of the Plan Area in ZB. This Plan has been developed to conform to the bylaw and all its zoning regulations.

Subsequent to NASP approval, the Zoning Map will be amended to redesignate the Evergreen Plan Area to the land uses as described in this Plan.

setting

Figure 1 - Location Plan

Figure 2 - Existing Conditions

LOCATION

The Evergreen Plan Area is located in northeast Red Deer within the northwest quarter of Section 26-38-27-W4M. This area is located northeast of the 67th St/30th Ave intersection and is sized at 153.83ac (62.25ha).

NATURAL ENVIRONMENT

The most prominent feature of this site is a water body located in the center of the Plan Area. This water body was caused by the introduction of a levee restricting natural flow patterns and is recorded as not naturally occurring.

In addition, a ravine runs at a diagonal across the northeast corner of the Plan Area. This ravine consists of mature tree growth and surrounds a seasonal stream.

Topography

The site is relatively flat with a gentle slope toward the central water body and in the northeast corner surrounding the ravine. Overall, the site drains into the central water body.

Vegetation

The existing vegetation located on site is agricultural in nature with the exception of that surrounding the water body and the northeast ravine.

As noted in the Environmental Site Assessment completed for the Plan Area, vegetation on the property includes cultivated agricultural grasses and plant species which are representative of the Aspen Parkland.

Conservation

The Evergreen neighbourhood has been designed to support existing natural vegetation, minimize potential negative impacts, and enhance the overall community by maintaining ties to the natural environment.

Steps will be taken during construction to minimize the impact on the previously noted water body and vegetation.

Figure 3 - Pipelines and Wells

LEGEND

- Abandoned Fresh Water Pipeline 7154-5
- Discontinued Fresh Water Pipeline 7154-21
- Oil Well Effluent - 16696-10
- Oil Well Effluent - 16696-11
- Abandoned Oil Well Effluent - 16703-1
- AltaLink Instrument 962 214 807
- Conserve Oil & Gas Right-of-Way
- Conserve Oil & Gas Lease Agreement
- Well Site
- NASP Boundary

BUILT ENVIRONMENT

Buildings

One temporary structure is located in the northwest portion of the Plan Area.

Utilities

As shown on **Figure 3 - Pipelines and Wells**, there are several natural resource rights-of-way running through the Plan Area. The following descriptions of these utilities are based on a Phase One Environmental Site Assessment, completed in 2012 by ParklandGEO, the Abacus Datagraphics database, and the property's land title.

Pipelines

At time of submission, all Conserve Oil & Gas pipelines listed below are in the process of being removed from the Evergreen Plan Area. The Developer will provide confirmation that the pipelines have been removed, the caveat removed from land titles, and a pipeline amendment has been submitted to Alberta Energy Regulator (AER).

R/W Plan 1418 RS - 7154-5

Caveat 2178RJ, registered to Conserve Oil & Gas No. 11 Corporation is a blanket Caveat over the entire quarter section for an easement. This Caveat possibly pertains to the R/W Plan 1418 RS which contains one abandoned fresh water pipeline registered to Conserve Oil & Gas (7154-5). This right-of-way is not listed on the title of the property.

R/W Plan 4432KS - Multiple Pipelines

This right-of-way contains three pipelines registered to Conserve Oil & Gas No. 11 Corporation:

- Discontinued fresh water pipeline - 7154-21
- Abandoned oil well effluent - 16703-1
- Oil well effluent, level II pipeline - 16696-10

R/W Plan 5407 KW - 16696-11

This right-of-way contains an oil well effluent pipeline registered to Conserve Oil & Gas No. 11 Corporation (16696-11) that ties into the 16696-10 line running north-south.

Instrument 962 214 807

This right-of-way runs along the north boundary and is 7.5m in width. It is registered to AltaLink Management Ltd.

Outside of Plan Area

Two rights-of-way run parallel outside the northern boundary of the Plan Area:

- R/W 832 0928
- R/W 565J KS

Well Sites

Abandoned Well Site (12-26)

This former well site was owned by Conserve Oil and Gas. It was abandoned in 1991. Remediation of impacted soil at this site was completed in the summer of 2012 (Rec. Cert. No 1130). The environmental risk associated with the facility is considered to be low to moderate as impacts are considered to be limited to the Lease Area. A Lease Area surrounds this well which has not been in use since the well's abandonment in 1991.

The Developer will provide written confirmation that the Licensee has been contacted and the exact well location confirmed and temporarily marked prior to any construction (includes top soil stripping).

WELL SITE ACCOMMODATION

The Evergreen concept plan has been designed to accommodate the well site using a 5.0m radius development setback and providing a convenient access to the site via the collector roadway and open space systems. This 5.0m radius setback has been provided using a 10.0m wide linear park, approximately 34.0m in length, which will allow for future access to the well and associated working room, if needed. This setback will also ensure minimal disruption to the surrounding areas and prevent accidental contact of construction equipment with the well.

The requirements regarding development setbacks surrounding abandoned wells are outlined in the Alberta Energy Regulator's *Directive 079: Surface Development in Proximity to Abandoned Wells* (2012).

Outside of Plan Area

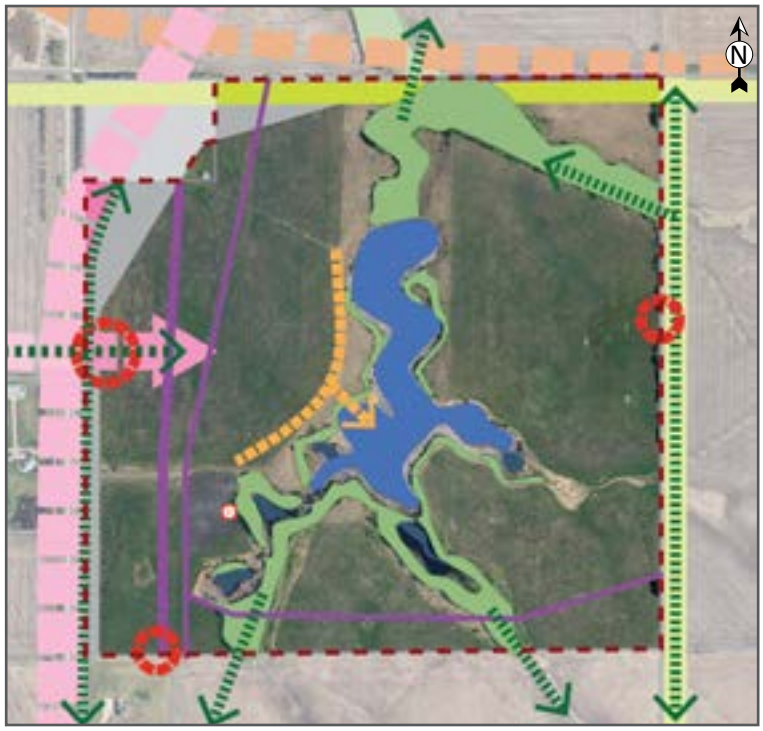
- **Abandoned Well Site (07-26)**
  Registered by Chevron Canada Limited, this well site was abandoned in 1953 and was reported to be reclamation certificate exempt.
- **Abandoned Well Site (04-35)**
  Registered by Chevron Canada Limited, this will site was abandoned in 1952 and was reported to be reclamation certificate exempt.
- **Abandoned Well Site (03-35)**
  Registered by Chevron Canada Limited, this well site was abandoned in 1953 and was reported to be reclamation certificate exempt.

ENVIRONMENTAL SITE ASSESSMENT

The 2012 Environmental Site Assessment completed for the Evergreen Plan Area by Parkland GEO identified three areas of potential environmental concern that would necessitate further investigation prior to subdivision:

- Completion of remediation efforts for the abandoned lease area located on the Subject Property within LSD 12-26-38-27-W4M.
  - » *This well site was reclaimed in 2012.*
- Identification and investigation of the two former well sites owned by Chevron Canada Limited were located southeast and northeast of the Plan Area. Investigation should be looking for typical impacts associated with lease areas such as possible sumps and flare pits. A phased drilling program is recommended to verify the presence or absence of environmental impacts.
  - » *The Developer will contact Chevron Canada to recommend further testing during the pre-design and detailed design stage of Evergreen.*
  - » *All testing will be completed by Chevron Canada in coordination with the land owners as listed below.*
    - *The northwest well site is located within the City of Red Deer's Northland Drive right-of-way.*
    - *The southwest well site is located on the quarter section southeast of Evergreen, within the AltaLink transmission right-of-way.*

Figure 4 - Opportunities & Constraints



LEGEND

- Utility Right-of-Way
- Well Site (5m radius setback)
- Pedestrian Linkage
- Potential Views
- Access Point
- Existing Vegetation
- Existing Water Body
- Transmission Line
- Future Major Roadway
- Future Expressway
- Roadway Widening
- NASP Boundary

Other

A minor pipeline release of crude oil was reported by the ERCB on the southwestern portion of the Property in 1999. The environmental site assessment provides no further detail regarding where this spill was; however due to the low volume (0.1 m3) of the release, the environmental risk relating to the spill is considered to be low.

A remediation certificate from Alberta Energy Regulator (AER) is required by the City to confirm that the contaminated area has been remediated and is suitable for the proposed land use. Development approvals will not be issued until a remediation certificate has been issued (includes top soil stripping).

OPPORTUNITIES & CONSTRAINTS

The Evergreen Plan Area provides an opportunity for a unique residential development with ties to the existing open space network. Many trail connections are possible throughout the central and west portion of the Plan Area, as well as along 30th Avenue and Northland Drive.

Several constraints exist on site as previously noted including limited vehicle accessibility due to the eastern transmission line and Northland Drive. In addition, there are three utility rights-of-way with pipelines that will require removal, and one well site which will require a 5m radius development setback.

Figure 5 - Surrounding Uses

LEGEND

- Proposed Commercial
- Intuitional
- Existing Open Space
- Existing Residential
- Existing Commercial
- Existing Industrial
- Future Urban Development
- Highway
- Major Roadway
- Red Deer River
- NASP Boundary
- City of Red Deer Boundary

SURROUNDING LAND USES

Land in all directions of the Plan Area is currently undeveloped, utilized for agricultural farming purposes with residential homesteads and accessory buildings. Both the Plan Area and lands surrounding have been identified for future residential development in both the City of Red Deer's MDP and East Hill MASP.

Nearby Amenities


Discovery Canyon

Open Space and Trails

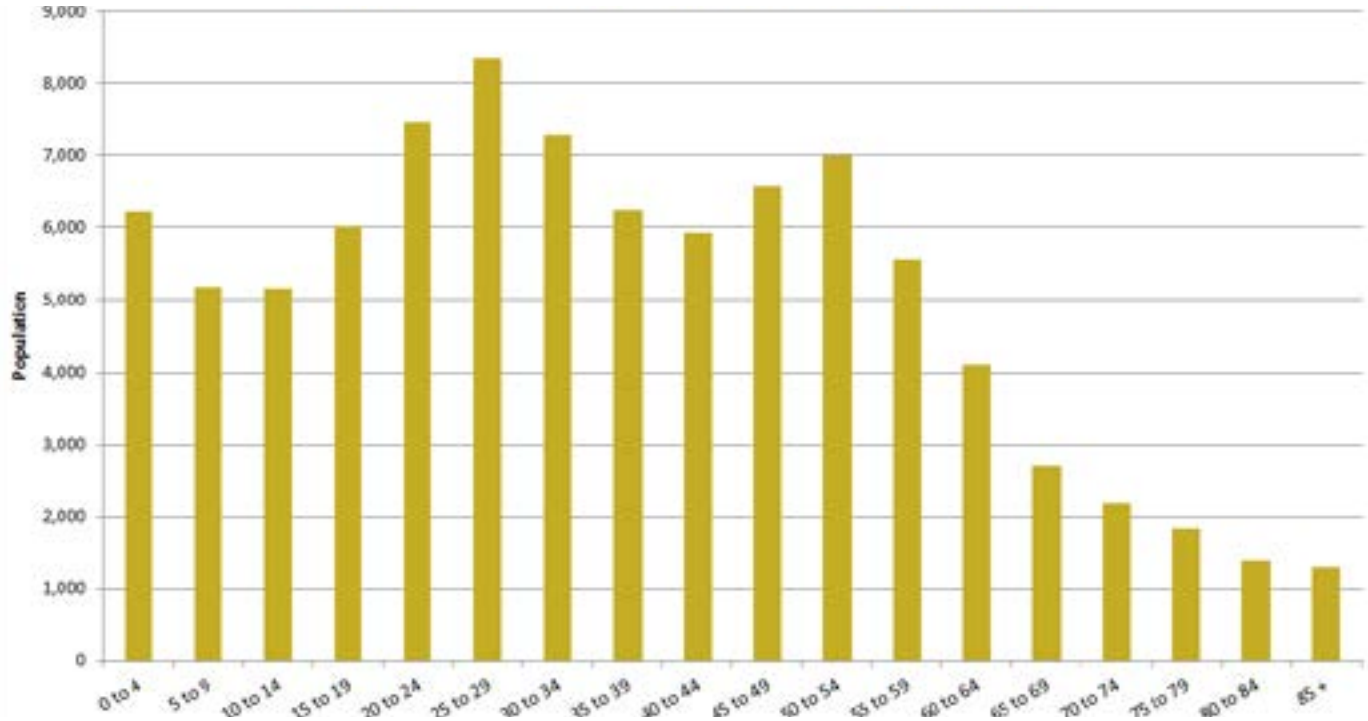
Located approximately 400m west of the Plan Area is the Red Deer River which will provide opportunities for trail linkages into the Waskasoo Trail network that runs throughout the City and Red Deer River Valley.

The River Bend Golf and Recreation Area is located approximately 3.5km (42min walk) northwest of the Plan Area. This area is a recreational destination in Red Deer and includes River Bend Golf Course, Discovery Canyon - a naturalized water tube park, cross-country ski trails, a biathlon range, wooded hiking trails, canoeing and fishing areas, a boat launch, and extensive outdoor passive recreation space.

Commercial

The Clearview Market Square, a large commercial area, is located south of the Plan Area at the corner of 67th Street and 30th Avenue. The Timberlands commercial area is not currently constructed; however, it has been approved for development and will include 6.7ha of mixed use and arterial commercial space. Additional areas for commercial development have also been identified for location in the quarter section immediately south of the Plan Area running along 67th Street. This area is located 1.5km south of the Plan Area (18min walk).

Population by Age Group, Red Deer, AB, 2011



DEMOGRAPHICS

The following information is based on the City of Red Deer's 2019 Municipal Census, and 2021 Statistics Canada Information.

The demographics of Red Deer demonstrate that Red Deerians are generally younger, with smaller families, and a higher income than average Canadians. This information can be utilized to determine what types of land uses or housing types would be best suited in Evergreen.

Population

In 2021 the City of Red Deer was the third largest city in Alberta with a population of 100,844. Located directly between Calgary and Edmonton, Red Deer is at the center of the Calgary/Edmonton Corridor, one of the fastest growing regions in Canada. Red Deer's population has steadily increased at a compound growth rate of 0.4% over the past 5 years, from 100,418 persons in 2016. According to Statistics Canada, the two main factors of growth in this area are: migration from other provinces, and natural increase.

The City's population was recorded as being 49.4% female and 50.6% male with an average age of 39 and a mode age (age most frequently recorded) of 36; lower than the provincial average of 38 and national average of 40. Red Deer's younger population may result in more single residents or young families.

Income

In 2020 Red Deer's families experienced a median after-tax income that was almost $2,800 above the Canadian average.

Household Information

Based on the 2013 Municipal Census, Red Deer's total private dwelling unit count was 40,893; more than half of which were single-detached dwellings. Confirmed by the 2011 Federal Census, this makes Red Deer's average household size 2.4 persons per dwelling unit. Also recorded by the census was an average of 1 child at home per census family, primarily under 14 years of age.

In 2011 the home ownership rate in Red Deer was 67.5% meaning only 32.5% of the population were living in rental units.

vision

IMPORTANCE OF VISIONING

Visioning early in the process is an important part of planning any community or area. The vision for a community lays the foundations from which goals, objectives, and principles can be formed. A clear and concise vision provides the project team with a record to check-back with as the project moves forward.

Visioning Process

The Evergreen project team met on several occasions to form a vision for the community, including meetings to review past projects both inside and outside the region, municipal standards, local trends; as well as site visits to explore the site's natural opportunities and constraints. This information formed the basis of discussion during the final visioning process.

Characteristics

The following characteristics were identified during the visioning process:

Overall Feel

- Natural or "earthy"
- Simple, elegant, and refined
- Sophisticated
- High-end (in location, finish, and style)
- Wildlife-friendly and areas where residents may encounter wildlife

Special Features

- Stormwater runoff reduction
- Wildlife crossing
- High level architectural details
- Open space amenities utilizing natural characteristics

"NATURALLY EXQUISITE"

Taking its cue from the simplicity of nature, Evergreen is the destination for relaxed living. Embracing the natural beauty of water features, native green spaces, and mature woodlands; this sustainable neighbourhood is designed for exploration and outdoor recreation. With modern architecture reflecting the natural surrounding and contemporary amenities nearby, you'll have the best of both worlds. Find yourself grounded in the serenity of Evergreen - *naturally exquisite*.

Figure 6 - Perspective Massing Illustration

Community Features

Natural Environment

Evergreen will showcase strong ties to the natural environment through its inclusion of an extensive open space network that spans from north to south. This open network will include the only naturalized pond in Red Deer and will provide residents with scenic recreation spaces and alternative transportation routes.

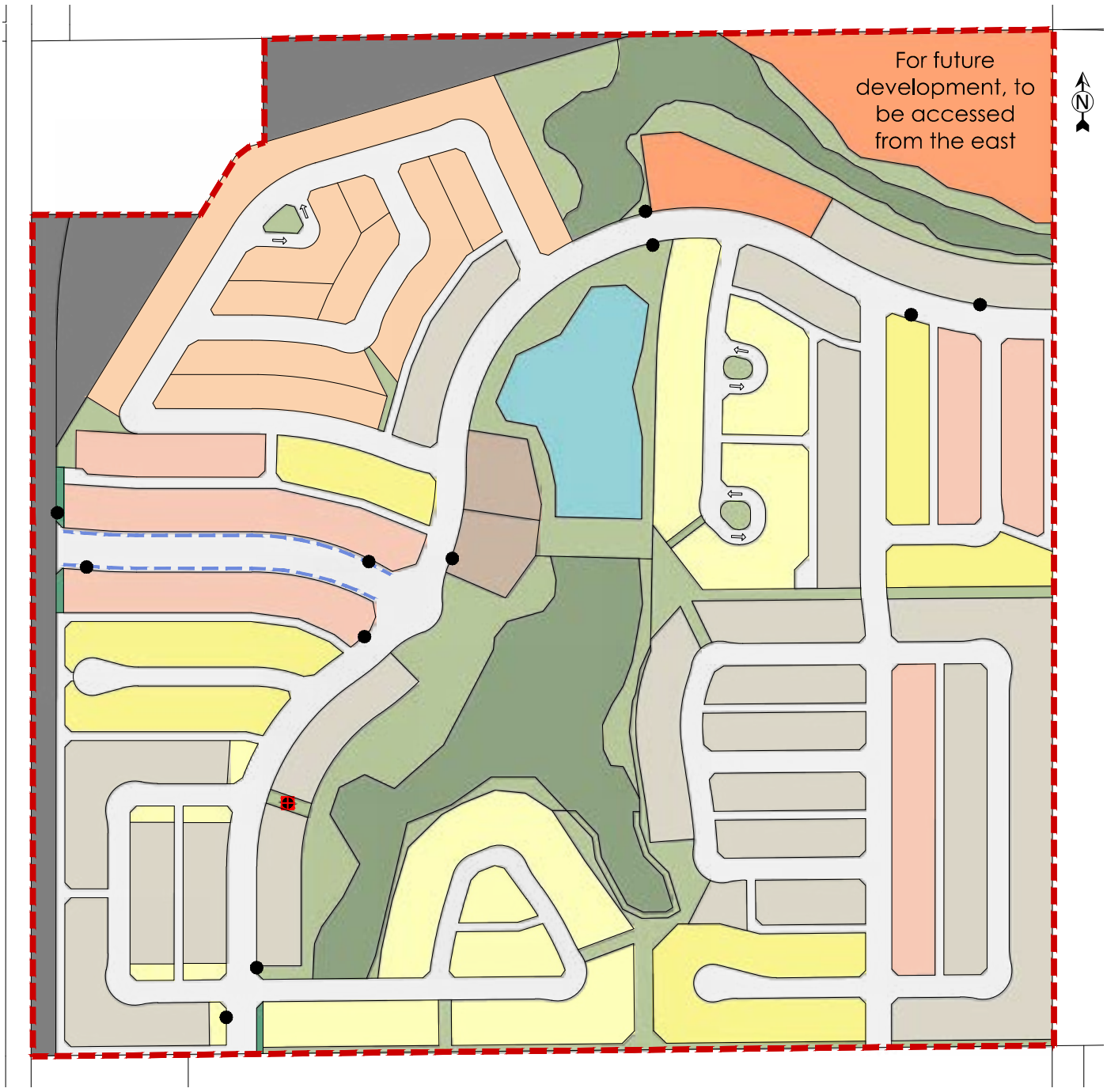
Amenities

Evergreen's close proximity to neighbouring amenities such as the Waskasoo Trail network, River Bend Recreation Area, Clearview Market Square, and future school sites will afford residents the opportunity to conveniently access daily services while enjoying the privacy and comfort of suburban living.

Population

Approximately 2,621 residents will call Evergreen home, living in a mix of housing types comprised of 1,094 dwelling units. The variety of housing types in Evergreen will allow young couples to find starter homes, college students to find affordable rental units, professionals to grow their families, and empty-nesters to retire comfortably.

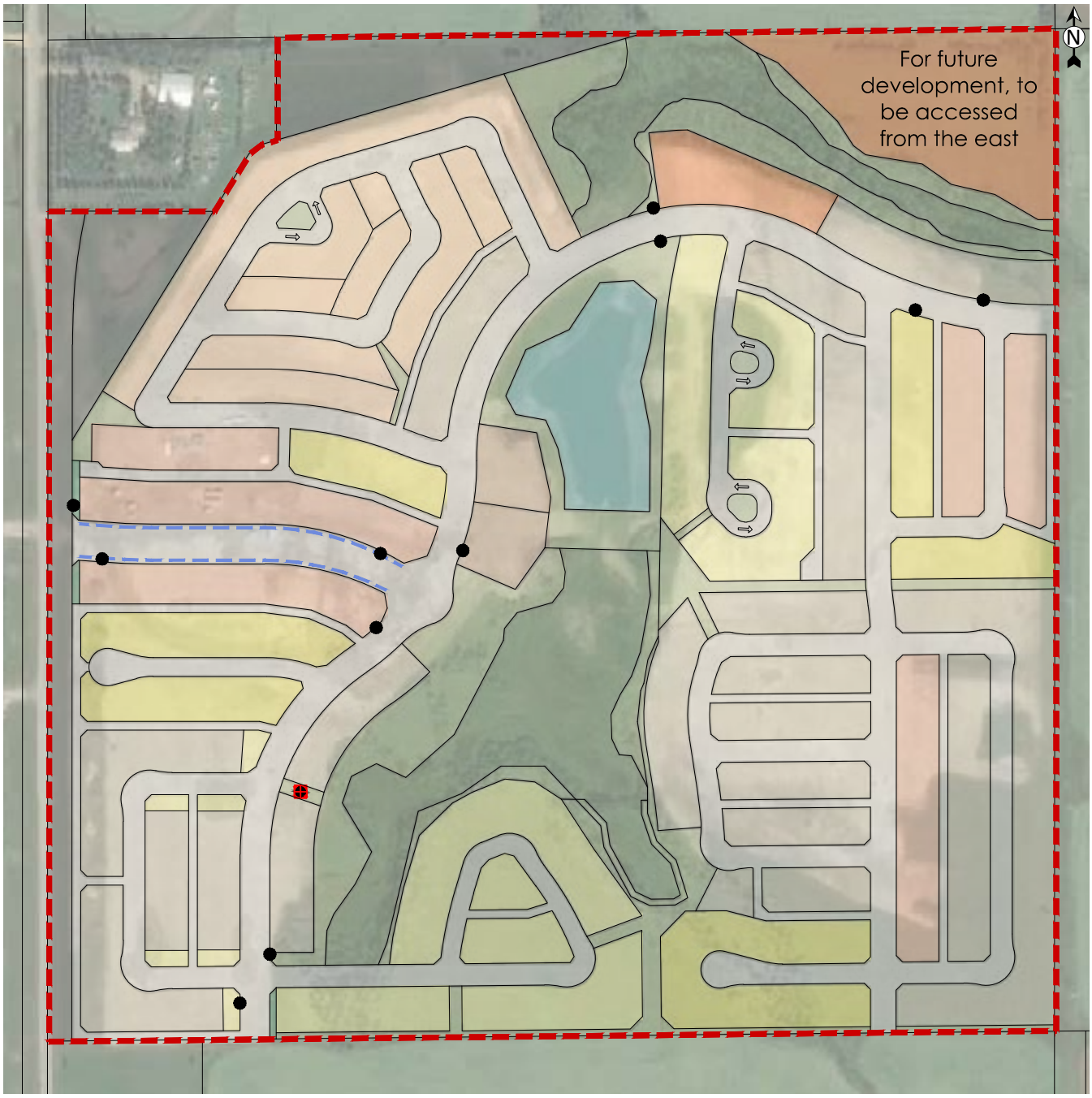
Figure 7 - Land Use Concept Plan



Legend

- R-L Residential Low Density
- R-W Residential Wide
- R-N Residential Narrow Lot
- R-D Residential Duplex
- R-M Residential Medium-Density
- R-M Residential Medium-Density (Town House)
- R-H Residential High-Density
- Municipal Reserve (MR)
- Environmental Reserve (ER)
- Public Utility Lot (PUL)
- Stormwater Management (PUL)
- Well Site
- Potential Transit Stop
- Protected Parking Area
- Road Widening
- NASP Boundary

Figure 8 - Land Use Concept Plan over Aerial



Legend

- R-L Residential Low Density
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- Environmental Reserve (ER)
- Public Utility Lot (PUL)
- Stormwater Management (PUL)
- Well Site
- Potential Transit Stop
- Protected Parking Area
- Road Widening
- NASP Boundary

PLANNING PRINCIPLES

The following are planning principles for the development of new communities, as identified by the City of Red Deer. Many of these principles have been used to create development objectives for Evergreen.

1. Natural Areas

Evergreen has been designed around its existing natural environment. The neighbourhood preserves its significant existing vegetation and utilizes its natural drainage pattern.

Support environmentally sensitive areas. Preserve the existing water body where possible.

Although the existing water body was not naturally made, it is currently home to a variety of aquatic plant materials and attracts water fowl. For this reason, the northern portion of the water body will be conserved. To increase circulation and health of the water, the water body will be reshaped to remove areas where the water tends to be stagnant.

Preserve existing areas of significant vegetation

Areas of existing, healthy, vegetation have been identified for preservation. These areas are intended to contribute to the overall health of the water body and provide shelter to wildlife.

Accommodate wildlife.

Create areas of aquatic habitat.

Areas of aquatic habitat will also be constructed during the landscape design surrounding the water body. This will include planting additional vegetation that provides the water with oxygen and nutrients.

Provide wildlife corridor linkages.

Although the Plan Area is not officially recognized as a wildlife corridor, the location of its water body and large stands of trees makes it a safe area for animals to travel to and from the Red Deer River Valley. To minimize the impact the development has on these animals, and their impact on residents, corridor linkages will be provided for the animals to safety pass through the community to the River Valley.

2. Mixed Land Uses

A mix of land uses has been identified in Evergreen to provide residents a range of residential options and recreational areas. A community node has been identified at the terminus of the primary gateway roadway which branches off of 30th Avenue to blend residential, community, and recreation uses.

3. Multi-Modal Choice

In addition to motorized vehicle routes, an extensive trail network has been created in Evergreen to provide connectivity for pedestrians, bicyclists, and alternative transportation modes such as scooters, wheelchairs, skateboards, or rollerblades.

4. Compact Urban Form & Density

Evergreen increased its density and decreased the footprint of the development by increasing the amount of developable area. This has been done by preserving much of the neighbourhood as open space, minimizing areas consumed by lanes, reducing roadway widths, and reducing overall lot depths.

5. Integrated Parks & Community Spaces

Evergreen has been designed around public open spaces. These areas range from natural areas surrounding the water body and ravine, to more programmed areas where residents can gather for picnics and social get-togethers. These open spaces are linked to the surrounding residential areas by linear park connections.

Provide community gathering areas.

The provision of public or private gathering areas is an important part of creating communities, it allows residents to relate to one another on common ground and build social capital.

Social capital is the understanding that social networks

have a real value. In residential communities, this is typically seen through neighbours offering mutual support, providing child-minding to one another, borrowing tools or supplies, carpooling to school, or working together for a common purpose like fund-raising for a cause or event. By being part of the community, residents are provided the opportunity to build this social capital and benefit emotionally and financially from this network of neighbours.

Provide public access to the wetland area.

To ensure this amenity can be enjoyed by all residents and visitors, a public trail and associated park space will be provided circumnavigating the water body. This trail will be connected to the overall City of Red Deer trail network and utilized for recreational purposes.

6. Housing Opportunity & Choice

A mix of housing options is envisioned for Evergreen to provide a range of single family and multi-family homes. Each type of home has been considered with regards to its location near a community amenity such as the gateway street with increased landscaping or near public open spaces.

Provide a range of housing options.

Create housing options for a variety of age groups, income levels, and lifestyles.

Providing a variety of homes to suit different lifestyles allowing residents the opportunity to stay within the community as they age.

Maximize the amount of premium lots.

Many times there are certain areas in neighbourhoods that are considered to be 'premium lots' due to their view, proximity to open space, lot size, etc. In this community, the idea of premium lots is taken one step further to share these features across the neighbourhood and ensure the type of lots that would typically be considered as 'premium' are a variety of housing styles at a range of price points.

Provide residential areas with views of the wetland.

There is a very small amount of lots within the City of Red Deer that provide views to a water body. Although the water body located in Evergreen will be accessible to the public, it will also provide scenic views for lots surrounding it.

Provide lots fronting onto public spaces.

Public spaces are intended to be enjoyed and used. By locating homes along public spaces, residents are encouraged to extend their activities into these spaces. This proximity also encourages residents to provide visual surveillance of the park sites.

7. Resilient & Low Impact Neighbourhood

Evergreen has been designed to work with the natural environment by utilizing the existing vegetation and drainage of the site. The central water body will be used for stormwater management purposes and, where possible, overland drainage will transport stormwater into the pond thereby filtering the stormwater naturally prior to its eventual release into the Red Deer River.

In addition to these design features, home builders and residents will be encouraged to construct their homes and yard in energy and water efficient manners.

Increase economic efficiency.

Utilize energy efficient lighting throughout the neighbourhood.

Choosing efficient lighting can reduce the amount of electricity used and amount of infrastructure required for maintenance; as well as increase the quality of lighting throughout the neighbourhood. Lighting in Evergreen will be chosen with these ideas in mind during the detailed design stage.

Provide enhanced amenities by collecting ongoing funding for their maintenance.

The Evergreen community will be run via a Home Owners Association that will collect funds from residents on an ongoing basis to support maintenance of the neighbourhood's enhanced amenities.

An agreement with the City of Red Deer will be required

to identify what the role of the HOA will be in association City will be, describe what the standard level of service in the City is, and how the HOA can supplement that service level. Although Evergreen's amenities will be partially funded by an HOA, access of the open space system and trails will be open to everyone.

Reduce environmental impact.

Provide incentives to home builders for green construction.

Canada has several guidelines that can be utilized for builders to construct 'green' homes, including the LEED Canada Rating System and Build Green Alberta. The highlights of each program include maximizing water and energy efficiency to reduce environmental impacts, decrease costs to home owners, and elongate the life of the home.

Working with a selected group of builders to construct housing in Evergreen provides the Developer with an opportunity to work closer to achieve green building standards.

Provide educational information regarding how to utilize hearty plants in yard landscaping.

Utilizing hearty plants which are accustomed to Red Deer's climate can reduce the amount of excessive watering and pesticides necessary to have a thriving yard.

Implementing this technique is an aesthetically pleasing alternative which is also beneficial to the environment and can save home owners money from the reduced maintenance required.

Suggested plant materials include: Colorado Blue Spruce, Blue Juniper, Red Osler Dogwood, Creeping Juniper, Thyme, Purple Coneflowers, and many more.

8. Safe and Secure Neighbourhood

Evergreen has been designed with pedestrians and residents in mind by enhancing sidewalks, pedestrian crossings, and public park spaces. The location of homes surrounding public open spaces, as well as the use of low level lighting throughout, provides increased safety and passive surveillance in parks.

9. Unique Neighbourhood Identity

Evergreen is truly unlike any other neighbourhood in the City of Red Deer. The preservation of an existing water body, community branding, wayfinding signage, high quality landscaping, unique play equipment, and diverse public gathering spaces will set this neighbourhood apart.

Provide creative outdoor spaces.

Incorporate a natural playground.

Natural playgrounds are consistently being recognized for their benefits to the improved health and wellbeing of children of all ages by providing opportunities to incorporate native landscapes and land forms into a play space. Natural playgrounds introduce ecological processes, diversity, and new and challenging play opportunities back into urban landscapes, thus engaging children in these natural processes and promoting more creative and spontaneous play.

Incorporating a natural playground into Evergreen will not only reflect the natural theme of the community but will also encourage children to explore the outdoors during play times and throughout their lives.

Evergreen's natural playground is discussed further on page 36.

Require a high level of public landscaping.

Locations with a strong sense of place have a recognizable character, which can be seen visually. By requiring a high level of public landscaping, a character can be showcased throughout the community.

Encourage outdoor activity by using winter city design.

If there is one thing that Red Deer is guaranteed, it is dark winters. Throughout the course of the year, Red Deer sees an average of 12hrs of sunlight: between Mid-March to late September, Red Deer's hours of sunlight increase from 11.5 up to around 16.5 and back down, dropping over the winter to around 7.5 in December.

Regardless of the weather, winters can keep even the most active people inside due to the dark. The outdoor

world can become more enjoyable by using simple winter city design technique to manage dark days and nights, provide shelter from the wind, and encourage snow-based activities.

As part of a winter city design, Evergreen's outdoor realm may be designed using a variety of lighting in public spaces, including in street trees and along park pathways.

Evergreen's winter city design is discussed further on page 47.

Create a visually striking community.

Create a theme that is reflective of the community's vision.

To build on the Evergreen vision, as previously described, a theme will be created. This theme will guide the visual aesthetic of the neighbourhood toward the community's vision: naturally exquisite.

Create a set of guidelines that provide requirements and recommendations to builders and home owners.

A set of community guidelines, for use by the Developer, and Architectural Guidelines, for use by home builders, will be created for this community to thoroughly outline the neighbourhood's theme and detail how the public and private realm can be shaped to reflect the theme. Utilizing and adhering to the guidelines throughout the community will provide a continuity throughout the streetscape, open spaces, and community as a whole.

More information regarding these guidelines is provided on page 49.

land use & housing

RESIDENTIAL USES

Overview

The Evergreen neighbourhood has been designed to create highly desirable properties for residents of all age, lifestyle, and income. By providing a variety of lot sizes and housing types, a range of residents will be able to call Evergreen home.

Types of Housing

Single-detached house with front garage.

Walk-out basement.

Secondary suite entrance.

Single Family

Although the majority of lots within Evergreen are anticipated to be single family, a variety of housing styles and price points is supported. Single family areas will include Residential Low Density Zone (R-L), Residential Narrow Lot Zone (R-N), and Residential Wide Zone (R-W). The location of these particular zones are shown on **Figure 9 - Residential Concept Plan**.

APPROPRIATE HOUSING STYLES

Standard

Design of standard single family homes should consider a high level of architectural detail in particular to minimize the impact of the front garage.

Walk-Out Basements

Homes located on slopes or along open spaces are often designed with walk-out basements. These type of homes will be designed with a deck off the main floor, and a door to the backyard from the basement. Walk out basements appeal to a variety of residents for different reasons including: an increased amount of natural light in basements making the space more livable, the ability to have bedrooms in the basement with full size windows, and increased air quality/reduced moisture in the basement.

Additional Suites

Additional suites will be accommodated as per the City of Red Deer Zoning Bylaw which states that the maximum for any neighbourhood is 15%. Homes with additional suites will require additional parking as per the City's ZB.

HEIGHT

The maximum height for single family homes in these districts will be 3 storeys or 15m measured from the average lot grade.

PARKING

The majority of parking in the R-L, R-N and R-W districts will be via front attached garage and driveway. As per the City's Zoning Bylaw, two on-

Walk-out basement.

Semi-detached housing without front garage.

Small lot 2-storey semi-detached housing.

Semi-detached housing with front garage.

2-storey row homes with front garage.

lot parking spaces will be provided per home. Additional parking will be available on-street.

ACCESS

Access to single family homes homes will be via the front street, with some lots accessible via the rear lane; this will also allow for additional rear parking or storage of recreation vehicles.

Multi-Family

Two types of multi-family housing will be available within Evergreen, Residential Duplex Zone (R-D) and Residential Medium-Density Zone (R-M). These zones will contain duplex and townhouse dwellings and can be situated of fee simple lots or as part of a condominium development.

APPROPRIATE HOUSING TYPES

Appropriate housing types for this district include bungalow, bi-level, or two-storey duplex and townhome housing. These units may or may not include front garages.

ADDITIONAL SUITES

Additional suites will be accommodated as per the City of Red Deer Zoning Bylaw which states that the maximum for any neighbourhood is 15%. Homes with additional suites will require additional parking as per the City's LUB.

HEIGHT

The maximum height for homes in this district will be 3 storeys or a 15m height measured from the average lot grade.

PARKING

Parking in R-D and R-M district will be via front attached garage and driveway or rear lane based on housing style and desired price point. As per the City's zoning, two parking spaces will be provided per home.

ACCESS

Access to R-D and R-M homes will be via the front street or rear lane which will provide opportunities for front attached garage or rear pads which will also allow for additional rear parking or storage of recreation vehicles.

R-H Multiple Family

R-H Multiple Family areas can take a variety of forms as further described below. This type of housing provides a more affordable residential option that appeals to a variety of residents including but not limited to renters, first time home buyers, and retirees. One R-H area has been located in Evergreen at the terminus of the gateway roadway as part of the community node. This location was chosen based on the anticipated location of public transit stops and proximity to the open space network and community amenities.

14-unit multiplex with internal roadways.

Row home development with first floor parking.

Apartment style building with street access.

APPROPRIATE HOUSING TYPES

This R-H multi-unit housing will be constructed based on market conditions at the time of development and could include one of the following. All building types listed below can take the form of rental or condo facilities. Regardless of building type, this site should be designed as a focal feature of the community with a high level of architectural detail and visual interaction at street-level.

Apartment-Style

Apartment style buildings have shared entries, hallways, and often building amenities such as fitness centres or hot tubs.

Multiplex Building

Multiplex buildings commonly range from 4 to 18 units and share no common spaces: all units have separate entries and utilities.

Row homes

Row homes consist of three or more attached units which do not overlap one another and have shared common walls from foundation to roofs.

Additional Suites

As per the City's zoning, additional suites will be accommodated as a discretionary use in the R-H district.

DENSITY

The anticipated density in this district is approximately 85.0 du/ha for apartments of multi-unit buildings, assuming a four-storey building with underground parking. The density for rowhomes is approximately 35.0 du/ha.

HEIGHT

Should the R3 site be developed as one or more multi-family building, the maximum height is 6 storeys; however, if the R3 site is developed for row homes, the maximum height is 3 storeys or a 15m from the average lot grade.

PARKING & ACCESS

All parking will be determined by what type of units are constructed; however, all will be located on-site as per the City of Red Deer's Zoning Bylaw. The primary access to the R-H sites will be via an internal roadway network; however, front street access will be provided for pedestrian and visitor use.

DENSITY & UNITS

The estimated population of Evergreen is 2,621 persons. This number is based on the land uses proposed and will change after final build-out. The overall housing density of the Evergreen community is 20.3 du/net developable hectare. Full land use calculations are located on page 24.

Table 1 - Residential Land Use Calculations

Land Use	Area (ha)	Units	Density	% Of Housing Stock
R-L Residential Low-Density Zone	5.17	118	23	10.8%
* R-L Additional Suites	--	17	-	1.6%
R-N Residential Narrow Lot Zone	10.89	294	27	26.8%
* R-N Additional Suites	--	45		4.1%
R-W Residential Wide Zone	4.06	117	29	10.7%
* R-W Additional Suites	--	17		1.6%
R-D Residential Duplex Zone	3.98	147	37	13.4%
* R-D Additional Suites	--	22		2.0%
R-M Residential Medium-Density Zone	3.01	105	35	9.6%
R-M Residential Medium-Density Zone (Townhome)	4.14	178	43	16.3%
R-H Residential High-Density Zone	0.69	34	50	3.1%
Total	**31.95**	**1,094**		**100.0%**

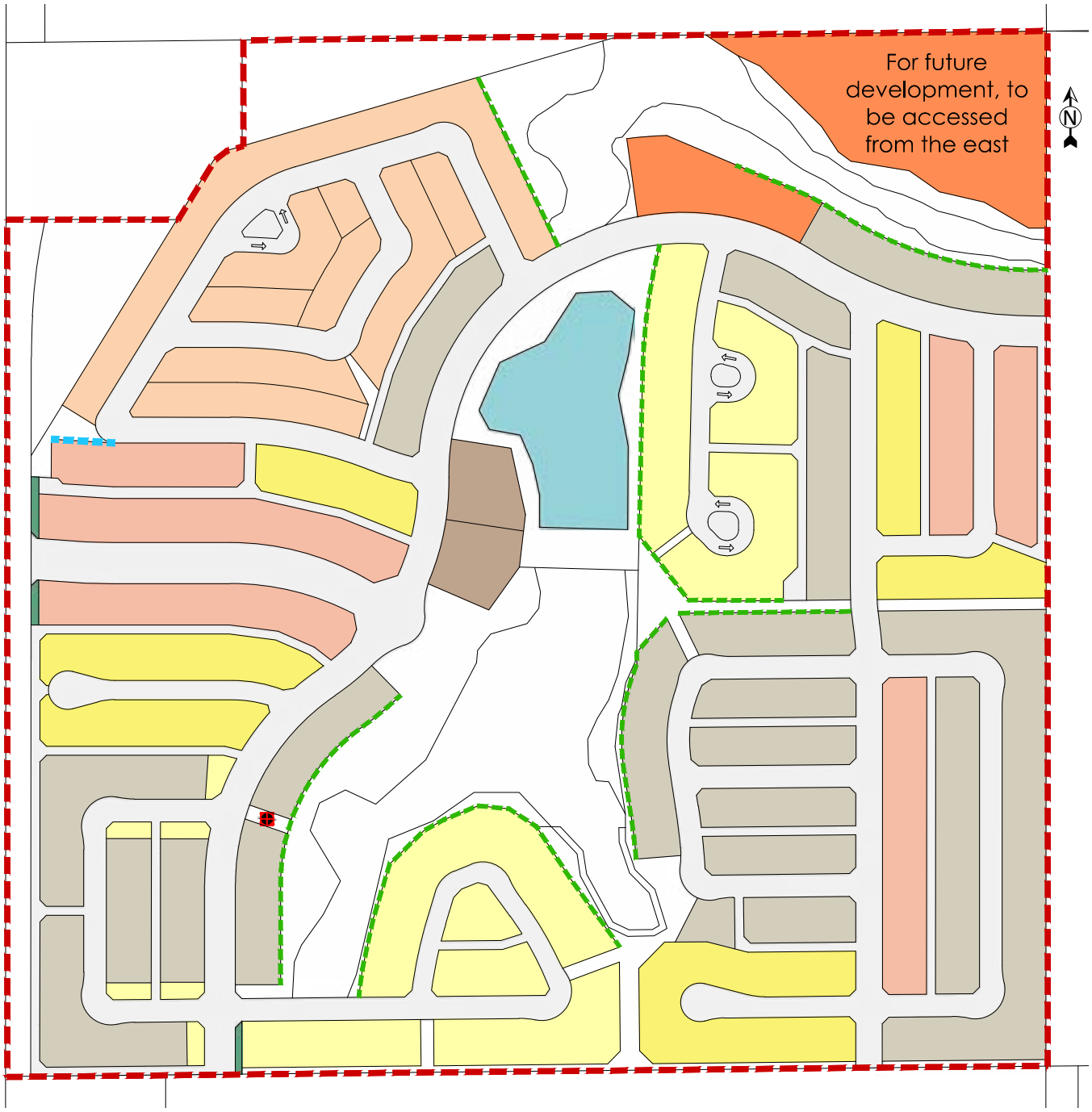
**Calculated assuming that 15% of all R-L, R-N, R-W & R-D units will include additional suites; these suites are counted as 1 unit each.*

Densities calculations are based on the assumptions as outlined following assumed averages, exact density and unit counts may differ at the time of subdivision. :

Table 2 - Population Projection

Residential Land Use Calculation	Hectares	# of Units	Household Size	Population
R-L Residential Low-Density Zone	5.17	118	2.4	283
* R-L Additional Suites	-	17	*2.4*	*40*
R-N Residential Narrow Lot Zone	10.89	294	*2.4*	*706*
* R-N Additional Suites	-	45	*2.4*	*108*
R-W Residential Wide Zone	*4.06*	*117*	*2.4*	*280*
* R-W Additional Suites	-	17	2.4	40
R-D Residential Duplex Zone	3.98	147	*2.4*	*352*
* R-D Additional Suites	-	22	*2.4*	*52*
R-M Residential Medium-Density Zone	3.01	105	*2.4*	*252*
R-M Residential Medium-Density Zone (Townhome)	4.14	178	*2.4*	*427*
R-H Residential High-Density Zone	0.69	34	*2.4*	*81*
Total	**31.95**	**1,094**		**2,621**
Density: 20.3 du/ha	*(1,094 Dwelling Units / 53.77 Developable Hectares)*			

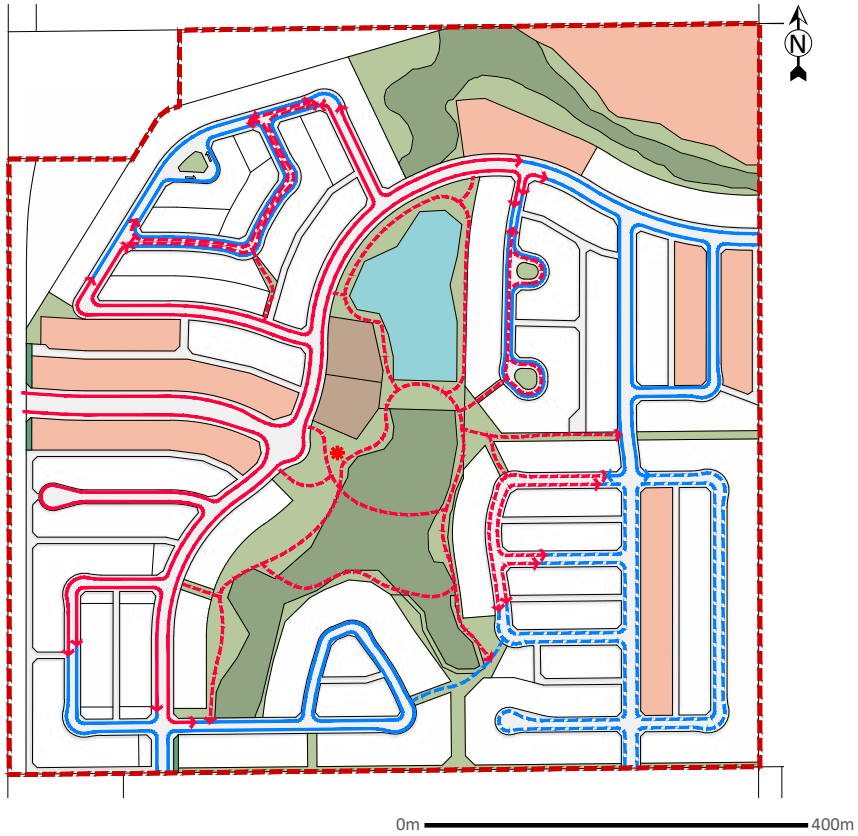
Figure 9 - Residential Concept Plan



Legend

- R-L Residential Low Density
- R-W Residential Wide
- R-N Residential Narrow Lot
- R-D Residential Duplex
- R-M Residential Medium-Density
- R-M Residential Medium-Density (Town House)
- R-H Residential High-Density
- Fronting onto Green Space
- Possible Walk-Out Basement
- Stormwater Management (PUL)

Figure 10 - Neighbourhood Node



LEGEND

- High Density Multi-Family
- Medium Density Multi-Family
- Municipal Reserve
- Environmental Reserve
- Public Utility Lot
- Stormwater Management Facility
- Node

Walking Distances:

- *~400m = 5min walk, sidewalks only*
- *~400m, using trail connections*
- *~800m = 10min walk, sidewalks only*
- *~800m, using trail connections*

NEIGHBOURHOOD NODE

Evergreen's neighbourhood node consists of a variety of uses with street-orientation to provide an array of services to residents and an opportunity for neighbours to socialize. The central park site forms the basis of this node which is supported by higher density residential, and community type uses. The location of this node was chosen to facilitate both pedestrian and vehicular access.

LAND USE CALCULATIONS

Table 3 - Land Use Calculations

Land Use Category	Hectares	Acres	% of Developable Area
Gross Plan Area	62.26	153.85	
Environmental Reserve	4.96	12.25	
Major Streets (Expressway)	2.20	5.44	
Major Streets (30th Ave)	1.33	3.29	
Developable Plan Area	53.77	132.87	100.00%
Residential	31.95	78.94	61.0%
R-L Residential Low-Density Zone	5.17	12.77	9.9%
R-L Additional Suites (15% of R-L units)	--	--	--
R-N Residential Narrow Lot Zone	10.89	26.91	20.8%
R-N Additional Suites (15% of R-N units)	--	--	--
R-W Residential Wide Zone	4.06	10.04	7.8%
R-L Additional Suites (15% of R-L units)	--	--	--
R-D Residential Duplex Zone	3.98	9.84	7.6%
R-D Additional Suites (15% of R-D units)	--	--	--
R-M Residential Medium-Density Zone	7.15	17.67	13.7%
R-H Residential High-Density Zone	0.69	1.71	1.3%
Open Space	7.88	19.48	12.4%
Municipal Reserve (MR)	6.38	15.76	11.1%
Public Utility Lot Excluding SWMF (PUL)	0.07	0.16	0.1%
Public Utility Lot SWMF (PUL)	1.44	3.56	2.7%
Transportation	13.94	34.45	25.9%
Collector Roadways	3.69	9.12	6.9%
Local Roadways	8.10	20.01	15.1%
Lanes	2.15	5.32	4.0%

Densities calculations are based on the assumptions as outlined following assumed averages, exact density and unit counts may differ at the time of subdivision. :

- *R-L Average lot size: 435m²*
- *R-N Average lot size: 360m²*
- *R-W Average lot size: 345m²*
- *R-D Average lot size: 265m²*

Table 4 - Roads and Utilities Percentage

Roads and Utilities	Hectares	Acres	% of Net Plan Area
Gross Plan Area	62.26	153.85	
Environmental Reserve	*4.96*	*12.25*	
Net Plan Area	57.31	141.60	100.0%
Allowable Area for Roads & Utilities	17.19	42.48	30.0%
Actual Area of Roads & Utilities	18.98	46.90	33.1%
Municipal Improvements	3.53	8.73	6.2%
Northland Drive Expressway	*2.59*	*6.41*	*4.5%*
30th Avenue Arterial	*0.94*	*2.32*	*1.6%*
Evergreen Roadways and Utilities	15.45	38.17	27.0%
Collector Roadways	*3.69*	*9.12*	*9.0%*
Local Roadways	*8.10*	*20.01*	*14.1%*
Lanes	*2.15*	*5.32*	*3.8%*
Public Utility Lots	*1.51*	*3.72*	*2.6%*
Over Dedication	1.79	4.41	2.6%

outdoor realm

View of pathway's seating area and housing along east side of central water body. Note the use of pedestrian-level lighting along the pathway.

OVERVIEW

Evergreen has been developed with 31.73 ac (12.84 ha) of public open spaces, 21% of the Gross Plan Area. Four different types of open spaces make up the overall open space network as indicated in **Table 5 - Green Space Amenities**.

Table 5 - Green Space Amenities

Green Space		**Area (ha)**	**Area (ac)**
Open Spaces	*Neighbourhood Park (Including SWMWF)*	4.09	10.10
	Parkettes	0.05	0.12
Natural Areas		5.98	14.77
Linear Parks & Pedestrian Links		2.72	6.71
	TOTAL	12.84	31.73

Table 6 - Municipal Reserve Calculation

Municipal Reserve Dedication	**Area (ha)**	**Area (ac)**	% of MR Developable Area
Gross Plan Area	62.26	153.85	
Environmental Reserve	*4.96*	*12.25*	
MR Developable Area	57.31	141.60	100.0%
Required MR Dedication	5.73	14.16	10.0%
Actual MR Dedication	6.38	15.76	11.1%

It is recognized that Evergreen has dedicated 11.1% of its MR Developable Area as Municipal Reserve; however, the City of Red Deer will not be required to purchase 1.1% of excess from the Developer.

Figure 11 - Types of Open Spaces and Amenities

LEGEND

- Neighbourhood Park
- Parkette
- Linear Parks & Pedestrian Links
- Natural Spaces
- Stormwater Management Facilities

Potential Parks Programming

- Potential Picnic Area
- Potential Children's Play Structure
- Potential Look-Out
- Potential Seating Node

Note: All areas shown in hectares.

TYPES OF OPEN SPACES

Covered picnic area.

Natural playground.

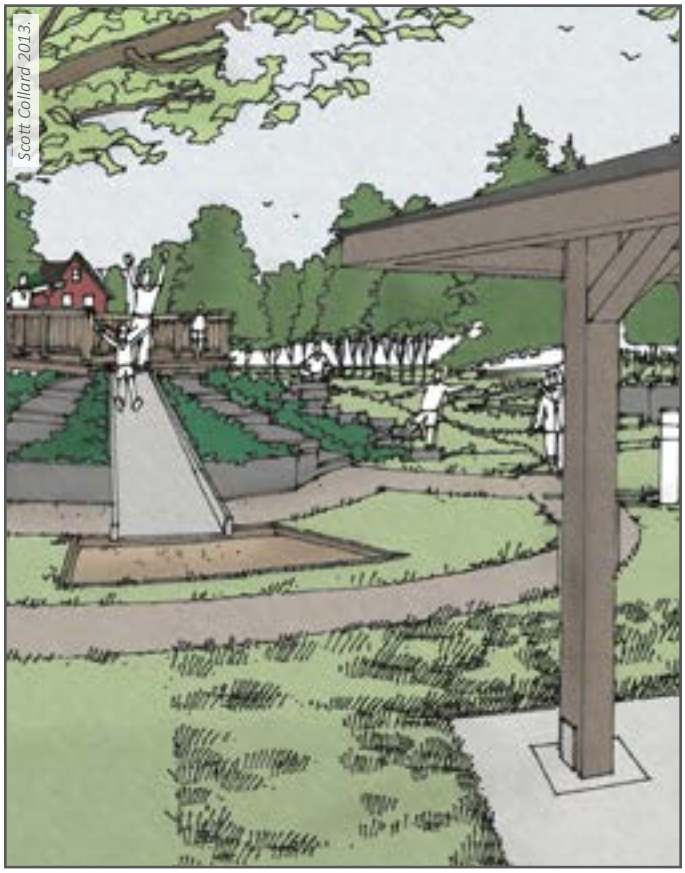
Neighbourhood Park

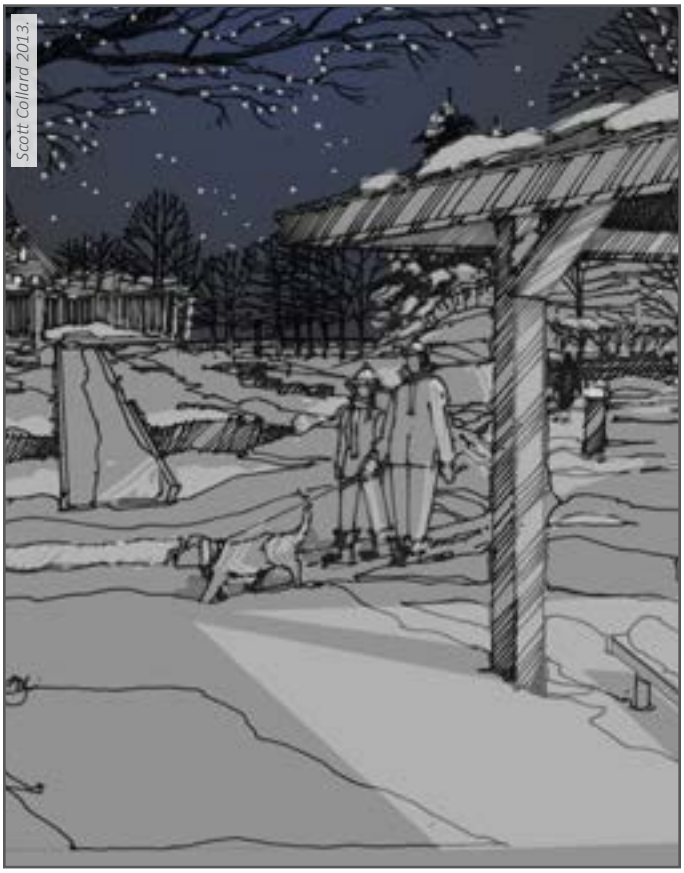
The intent of the neighbourhood park site is to provide a centrally-located and primary recreational space for the neighbourhood. This space is designed around the central water bodies and is envisioned primarily for passive or unstructured recreation. This park also acts as a scenic destination for walking trails or children's play.

Location and Size

The neighbourhood park in Evergreen is located in the center of the Plan Area at the terminus of the gateway roadway.

Evergreen's central neighbourhood park is 11.51 acres (4.66 ha) in size excluding the natural areas or connecting and linear parks.





Covered picnic area and natural playground in the central park, to the west of the central water body, during a summer day and winter night.

Natural playground.

Scenic lookout.

Proposed Amenities

Amenities located within the neighbourhood park site include walking trails, a children's play structure, picnic areas, pond lookouts, and two stormwater management facilities.

Picnic Area

To extend residents' activities outdoors, several picnic areas will provide spaces for outdoor dining. These areas may include picnic tables, bench seating, and outdoor grilling facilities.

Natural Playground

Natural playgrounds may be constructed in Evergreen to encourage children's imaginative play in the outdoors. These play structures would be located in close proximity to picnic sites to provide a mix of uses including those for parents as well as children. The design of these structures will be determined during the detailed design phase in consultation with the City of Red Deer.

Scenic Lookouts

Lookouts may be constructed along the water body. These area will be designed as resident gathering areas where friends can meet and visit, children can watch the ducks, or joggers can stop to stretch. The location of these lookouts will be determined during the detailed design phase.

Example of passive recreation activity.

Multi-use pathway.

Stormwater management pond.

Trail system through naturalized area.

Stormwater Management Facilities

The Evergreen ponds are designed to retain stormwater, act as a habitat area for wetland creatures, and provide a visual amenity to residents. The ponds have also been utilized as the focal element of the neighbourhood's trail and park system.

Parkette

The intent of parkette site is to provide smaller open spaces for passive recreation activities such as playing frisbee, tag, building snowmen, etc. These areas are within easy and short walking distance to residents.

Location and Size

One parkette has been identified in northwest Evergreen, sized at 0.12 ac (0.05 ha). This location has been chosen to provide convenient open space access for residents in the northwest portion of the neighbourhood.

Proposed Amenities

Constructed elements within the parkette may include small seating areas, refuse containers, and a children's play structure in the northwest park. In addition, a fence may be required along the perimeter to ensure roadway setbacks to children's play areas are maintained; this will be determined during detailed design.

Natural Spaces

Evergreen has been designed to incorporate natural spaces intended to add to the overall feel of the community and provide areas that residents can enjoy in a less structured way; via views or organic and unprogrammed nature trails. The Environmental Reserve areas as shown in this NASP are an estimate only; the final ER boundaries will be determined at the time of subdivision and will be based on the regulations of the MGA.

Ravine

The ravine located in the northeast corner of the community will remain in its natural state and act as a wildlife corridor. To preserve the vegetation, no formal trails will be developed through the ravine; however, trails will be constructed surrounding this area for pedestrian connectivity.

Existing Trees

Existing trees surrounding the south stormwater management facility have been preserved to provided wildlife shelter and habitat. No formal trails will be developed through these areas.

Stormwater Management Facility

The south stormwater management facility has been identified as an Environmental Reserve to preserve existing vegetation.

Reverse housing fronting onto linear park space in southeast portion of Evergreen.

Homes fronting onto linear park space.

Homes backing on to linear park space.

Linear Parks & Pedestrian Connections

Linear parks have been used to provide continuous off-street connectivity throughout the Plan Area for pedestrians. This pedestrian network has been designed to connect residents to the 30th Avenue multi-purpose trail system to the west, Northlands Drive regional trail to the north, joint school site to the south, and transmission Corridor trail to the east.

Location and Size

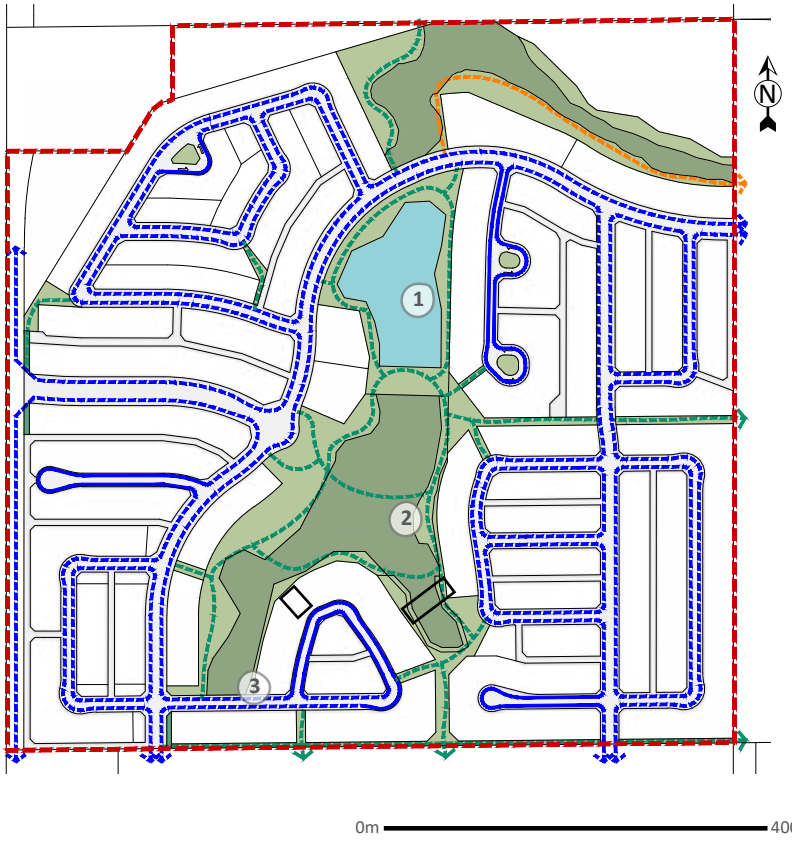
A variety of linear parks are located throughout the community, namely providing connectivity through the center of the Plan Area to the east, a continuous shared linear park along the south boundary, and those surrounding the reverse housing in the southeast.

Linear parks vary in length and are generally between 6 to 10m in width.

Proposed Amenities

Amenities in linear parks will be limited to trails, landscaping, and occasional seating areas with refuse containers. These areas are not intended for prolonged visits; therefore, to minimize redundancy and prevent loitering, they will not contain gathering type amenities.

Figure 12 - Open Space and Trail Network



LEGEND

Trail Network*

1 North pond loop
~ 0.55km = 6.6min walk

2 South pond loop
~ 1.25km = 15min walk

3 Total pond loop
~ 1.8km = 21.6min walk

Hard Surface Recreational

Potential Soft Surface Recreational

Separated Sidewalk Connections

Monolithic Sidewalk Connections

Constructed Crossing

**All distances are shown conceptually and will vary subsequent to detailed design.*

Winding trail with pods of landscaping.

Trail system through naturalized area.

Trails

The linear park and trail system in Evergreen is intended to provide short-cutting options for pedestrians and a recreational area for walkers, joggers, cyclists, etc. This network will connect to adjacent neighbourhoods and the City's overall Waskasoo Trail System to provide connectivity to surrounding areas and recreational amenities.

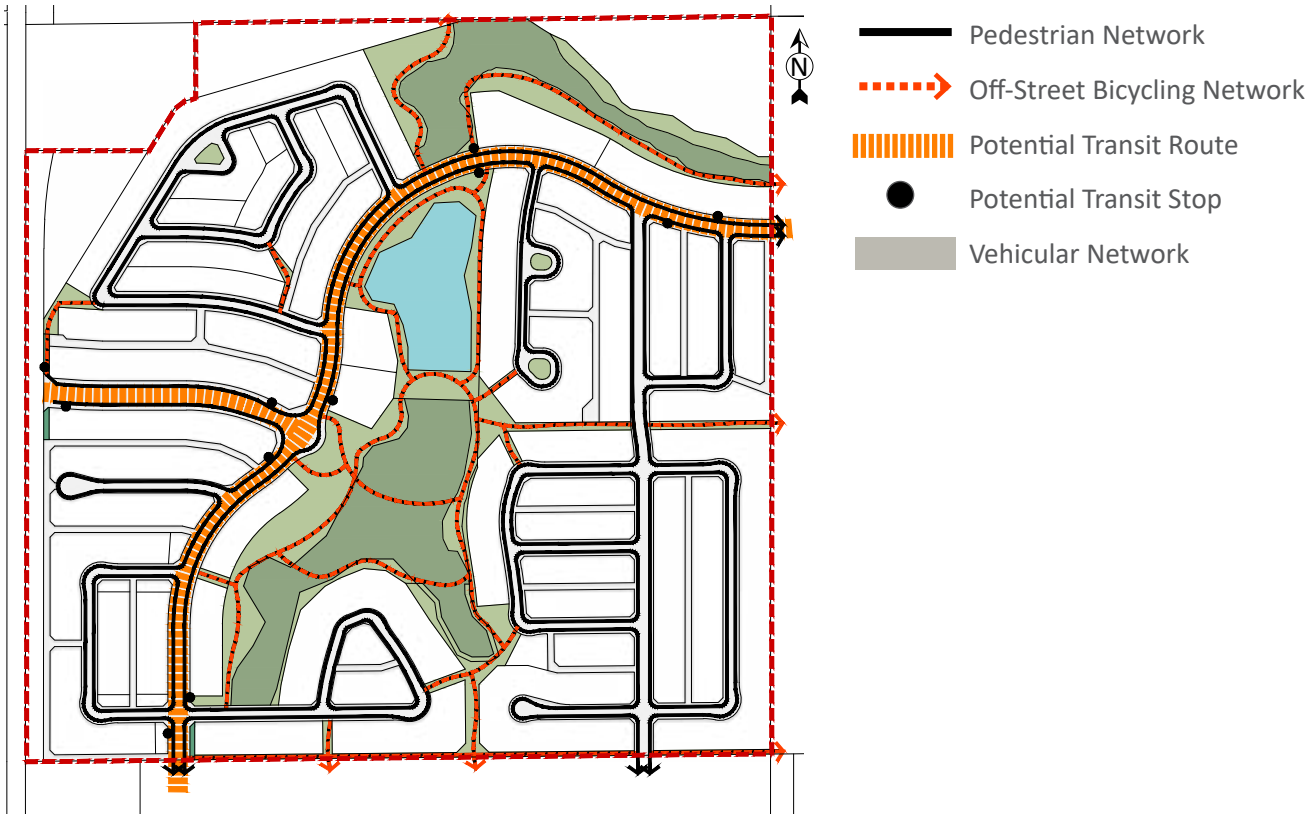
Three levels of trails are proposed in the neighbourhood as part of this overall system: hard surface connections, hard surface recreational, and potential soft surface. Hard surface connections will take the form of concrete sidewalks located along roadways, hard surface recreational trails will be paved trails throughout open spaces, and potential soft surface trails will be constructed in areas intended for walkers only. No trails will be developed in the north ravine area. Two trail crossings will be constructed across each of the south legs of the natural area; these crossings will be detailed during landscape design.

Connections

A north connection will be provided to connect with the Northland Drive expressway's regional trail network and a west connection will be provided to connect with the 30th Avenue trail and facilitate commuter bicycling by the west utilizing Evergreen's main entry road.

movement & connectivity

Figure 13 - Multi-Modal Movement



CIRCULATION

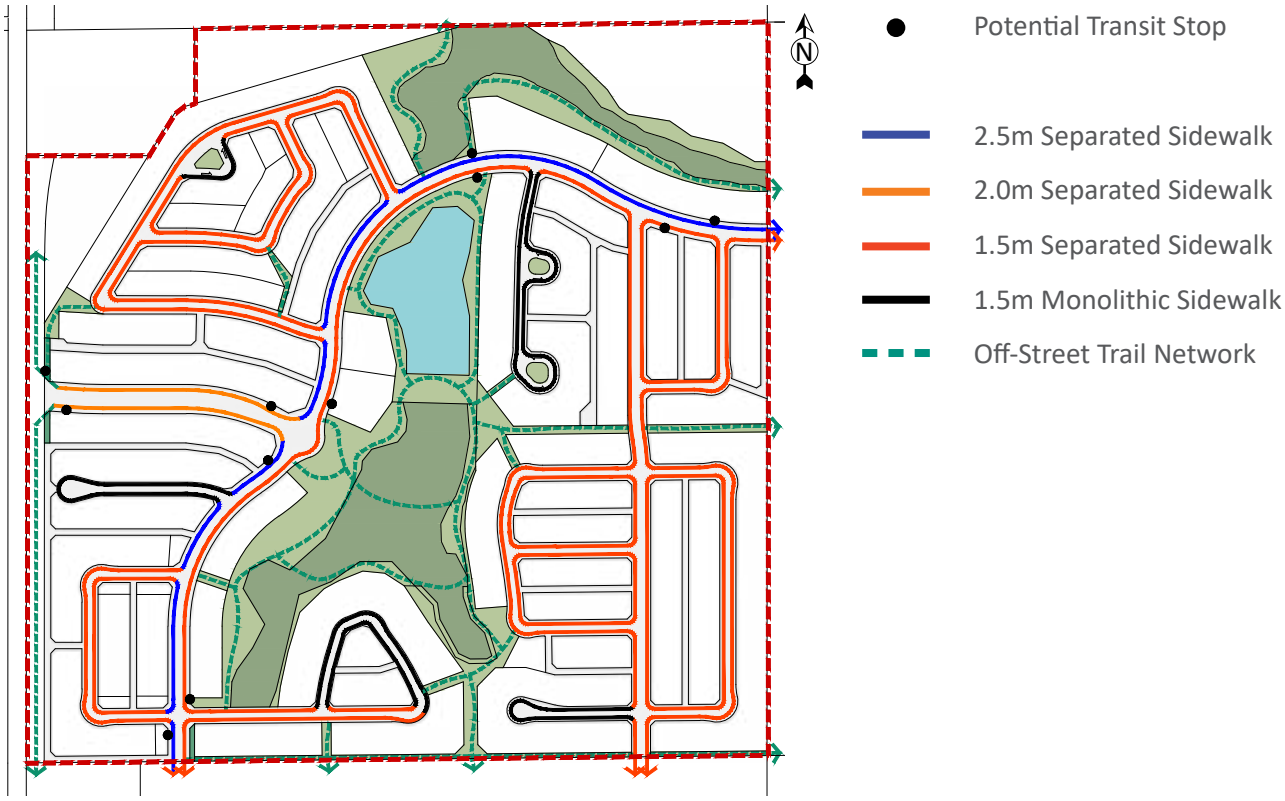
Multi-Modal Movement

The Evergreen neighbourhood has been planned to facilitate integrated movement of residents throughout the community and provide connections to destinations outside of Evergreen. In addition to providing connections for residents, a multi-modal transportation network has been incorporated to accommodate a variety of transportation modes including walking, rolling, riding, and driving. All portions of Evergreen have been designed with pedestrians in mind putting their safety, comfort, and overall experience first by creating an enhanced streetscape.

Table 7 - Multi-Modal Movement

Mobility	Location	User Experience	Accessibility & Integration	Safety
Pedestrian	Sidewalks, trail connections	Local destinations or those in adjacent neighbourhoods	Fully integrated into neighbourhood via separated sidewalks and paved open space trails to promote accessibility	Separated sidewalks, intersection bump-outs, highlighted mid-block crossing
Bicycle	Trail connections, on-road routes	Recreation: destinations inside neighbourhood or those adjacent Commuter: destinations outside of neighbourhood	Fully integrated into neighbourhood via paved open space trail network	Off-street trail connections, intersection bump-outs
Transit Rider	Sidewalks, trails connections, collector roadways	Destinations outside of neighbourhood	Routes along collector roadways only with pedestrian connections	To be determined by City of Red Deer
Vehicle	Collector and local roadways, lanes	Destinations outside of neighbourhood	Local roadways linking to collectors, minimize unnecessary through traffic	Curvilinear street pattern

Figure 14 - Sidewalk Type



Example of monolithic sidewalk.

Recreational cycling on off-street trail.

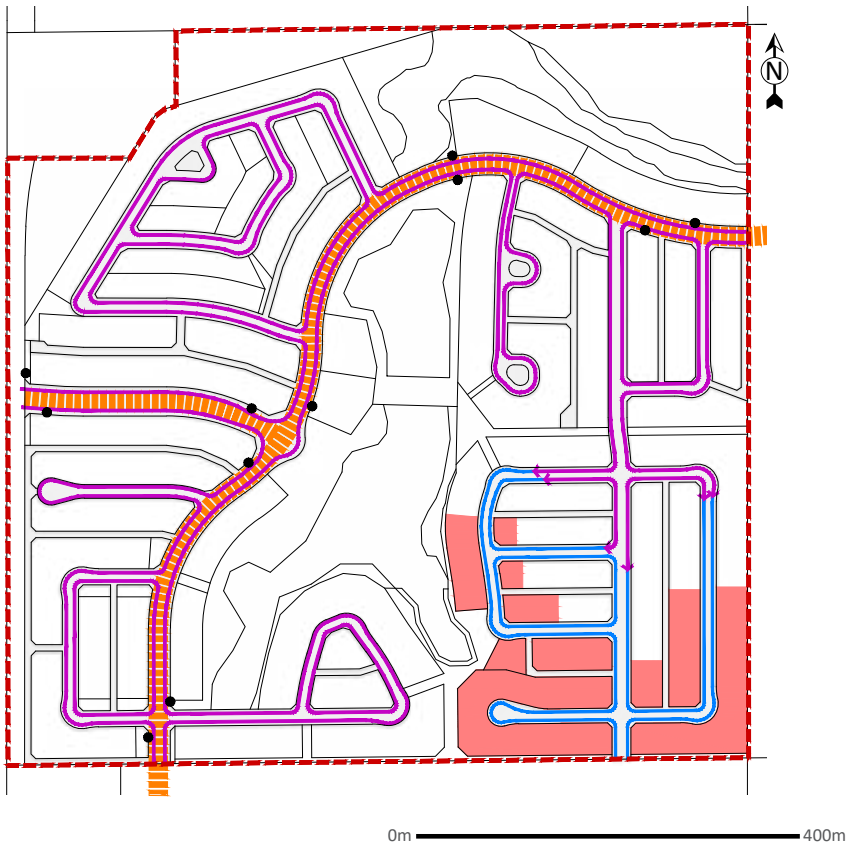
Walking

Walking is not only a healthy and active mode of transportation, it is also one of the most popular for school-aged children and seniors. Evergreen has been designed to facilitate and encourage walking throughout by providing a welcoming pedestrian environment using separated sidewalks and off-street trails, pedestrian nodes and rest stops, and pedestrian short-cutting to increase convenience and reduce distances between destinations.

Rolling

Rolling is intended to describe cycling, rollerblading, skateboarding, scootering, and any other self-propelled wheeled modes of transportation. Whether these forms of transportation are used for commuting or recreation, trail connections have been provided alongside the roadway to provide a safe and comfortable environment for these users. The use of paved trails rather than shale also increases the accessibility of park spaces to those with reduced mobility.

Figure 15 - Transit Network



Sample photo of Red Deer's transit buses.

Example of separated sidewalk.

Riding

Transit locations will be chosen by the City of Red Deer's Transit department along the primary collector roadway, based on the City's standards and preferences. All transit stops will be located 500m apart and within 500m of the majority of residents; this represents a 6min walking time. These locations are intended to be in reasonable walking distance from all homes within the neighbourhood.

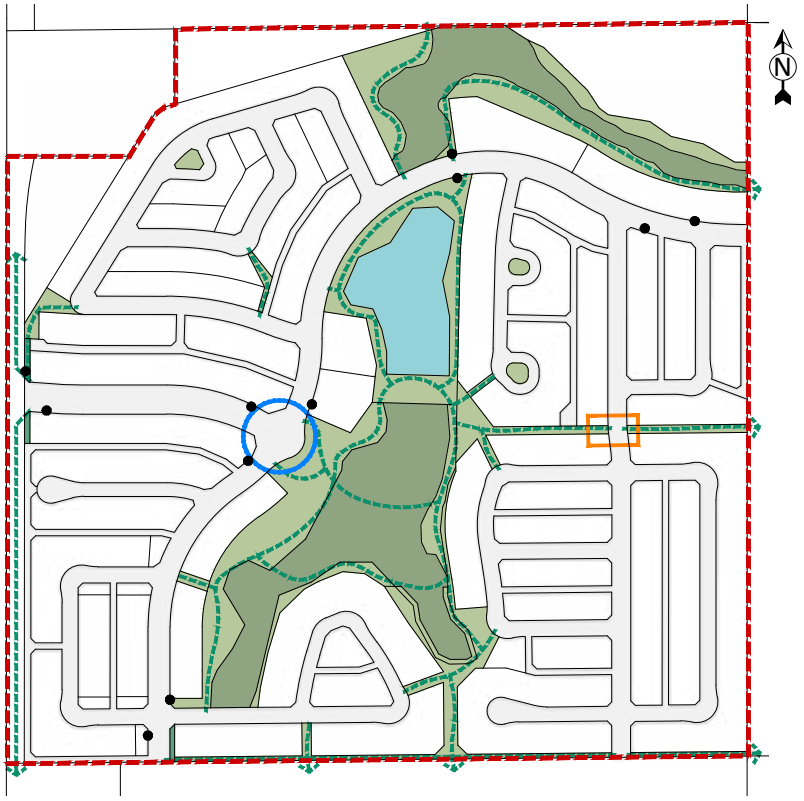
A small area of the Plan Area falls outside of the 500m distance from the potential transit stops; however, these areas are anticipated to be within the 500m catchment boundary of transit stops in future surrounding developments.

Special attention will be given to locate transit routes near multi-family areas to facilitate higher density use. It is also recognized that many middle and high school students in Red Deer utilize transit to get to school; therefore, a focus has been put onto providing safe pedestrian routes to and from bus stops as part of the Safe Route to School program.

Driving

Driving is the most prominent form of commuter transportation. The Evergreen neighbourhood has been designed to create a comfortable environment for motorists without sacrificing the comfort and safety of alternative transportation types. More information regarding roadways is discussed on page 38.

Figure 16 - Pedestrian Safety



LEGEND

- Off-Street Trail Network
- Important Trail Connection
- Single-Lane Roundabout

Intersection bump-outs and landscaping.

Example of mid-block crossing with bump-outs.

Highlight cross-walk at roundabout.

Safety

To enhance pedestrian and motorist safety, traffic calming measures have been identified in various areas throughout Evergreen. Though exact locations will be determined during detailed design; they will include: intersection bump-outs, mid-block crossings, a roundabout, and on-street parking.

Utilizing intersection bump-outs extends the curb out into the street reducing the distance pedestrians are required to travel across the roadway and making them more visible. Intersection bump outs will not be permitted crossing collector roadways.

Important Trail Connections

One important mid block crossing is identified in the east area. Additional trail crossings may be considered at the detailed design stage. Consideration for additional trail crossings will be based on operational requirements, pedestrian safety, and user needs.

Roundabout

A roundabout is located at the terminus of the gateway collector roadway. This method of intersection has been chosen to slow and disperse traffic at the three-way intersection and provide a focal feature for the roadway in the form of enhanced landscaping or the accommodation of public art.

Northland Drive - 30 Avenue to 20 Avenue Cross-Section with berm.

Example of an existing berm along 30th Avenue.

ROADWAYS

External Roadways

Northland Drive

Northland Drive will run along the north boundary of Evergreen. This portion of the roadway is intended to be a six-lane expressway at full build-out, anticipated to coincide with the City's 188,000 population horizon (estimated sometime around 2038). The City of Red Deer currently has the initial roadway construction budgeted from 2016 through 2018, at which time it will function as a two lane arterial roadway.

As traffic demands increase, the roadway will be expanded in stages to a four-lane roadway, before it is ultimately upgraded to a the six-lane expressway.

Note: The Northland Drive cross-section and project is in no way tied to the development of Evergreen and is subject to change.

30th Avenue

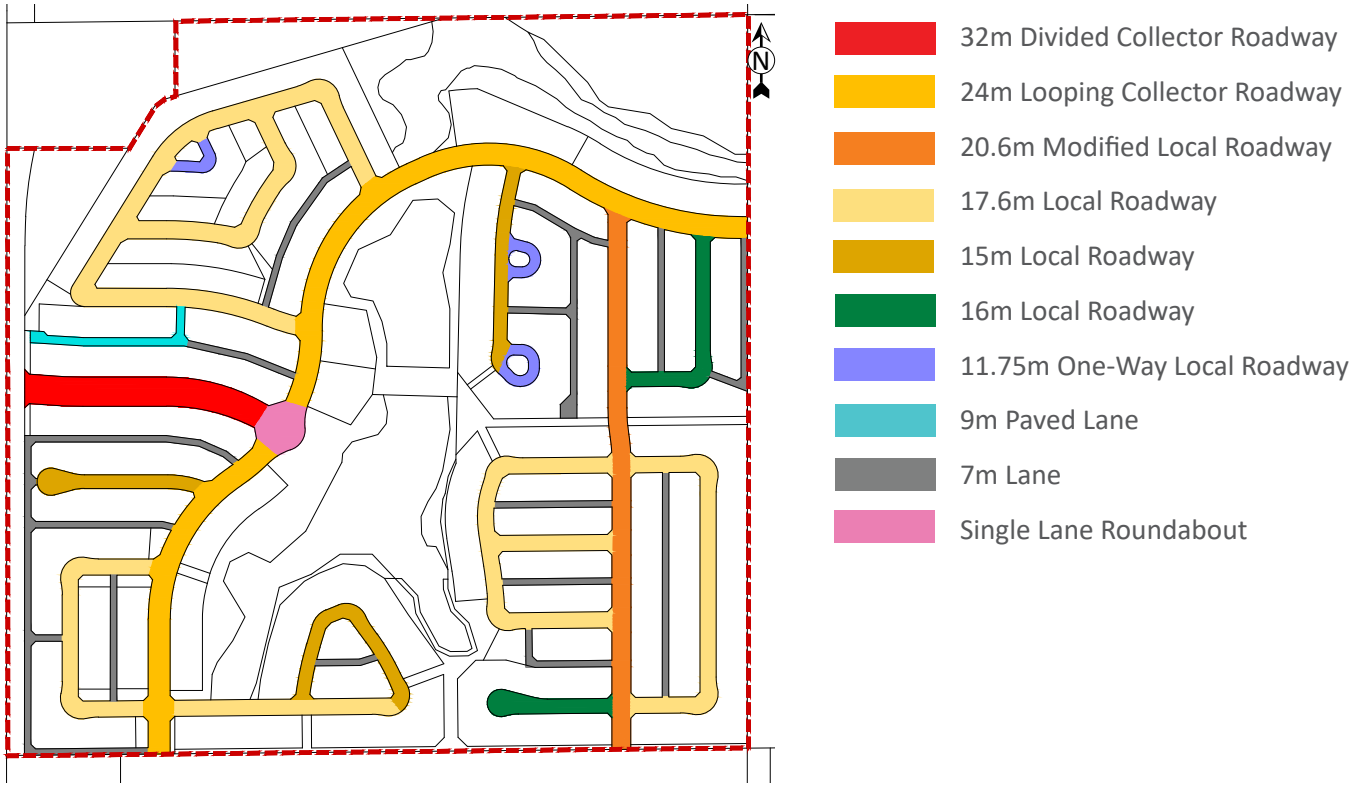
30th Avenue runs along the west boundary of Evergreen connecting 67 Street to Northland Drive. This roadway is intended to be a four-lane arterial at full build-out; however, it will function as a two-lane arterial until such a time when traffic demands a larger roadway. Construction of 30 Avenue is scheduled to begin in 2015.

Note: The 30th Avenue cross-section and project is in no way tied to the development of Evergreen and is subject to change.

Berms and Screening

Berms will be built on either side of Northland Drive and 30th Avenue roadways to minimize visual and acoustic impact of traffic from adjacent developments. These berms will be consistent to that found elsewhere along main arterials.

Figure 17 - Roadway Hierarchy



Internal Roadways

Cross-sections of all roadways are shown in Figure 19-26. All non-standard cross-sections will be considered by the City and finalized at the Servicing Study stage.

Collector Roadways

The Evergreen neighbourhood will be accessed via two collector roadways: the gateway collector and main looping collector.

32m Divided Collector Roadway

Evergreen's gateway roadway enters the neighbourhood from the west off of 30th Avenue and extends to the roundabout. This roadway has been designed to provide a grand entrance to welcome both residents and visitors into the community. It it also recognized as the primary access roadway until such a time that connections to the surrounding lands are developed.

This roadway has been designed using a 32.0m wide right-of-way with two lanes of travel in either direction and protected parking areas. To accommodate multi-modal movement, separated sidewalks have been provided on both sides of the road separated from traffic by landscaped boulevards.

Limited protected parking will be accommodated to provide some visitor parking to guests of homeowners along the gateway roadway.

This roadway will be further designed during detailed design to provide a transition at the terminus of this roadway into the one-lane roundabout.

As shown on **Figure 18 - 32.0m Divided Collector Roadway Perspective Illustration**, **Figure 19 - 32.0m Divided Collector Roadway Cross-Section at Boulevard**, and **Figure 20 - 32.0m Divided Collector Roadway Cross-Section at Protected Parking**, this cross-section is not standard in the City of Red Deer and will be subject to review by the City prior to implementation at the Servicing Study stage.

24m Looping Collector Roadway

The main collector roadway in Evergreen loops through the community from southwest to northeast. This roadway has been designed with a 24.0m wide right-of-

Evergreen's gateway collector roadway looking east on a summer afternoon.

Evergreen's gateway collector roadway looking east on a winter night.

way, one travel and one parking lane in either direction, a landscaped boulevard, and a 2.5m and a 1.5m separated sidewalks on either side of the roadway.

In addition to providing functional access to the community, the collector roadway identifies a sense of place for the neighbourhood by incorporating high levels of landscaping providing continuity and themeing throughout.

As shown on **Figure 21 - 24.0m Undivided Collector Roadway Cross-Section**, this cross-section is not standard in the City of Red Deer and will be subject to review by the City prior to implementation at the Servicing Study stage.

20.6m Modified Local Roadway

An expanded local roadway is located along the east portion of the Plan Area stretching from north to south. This roadway provides access from the main collector to residential areas east of the water body. To facilitate traffic in this area and allow the inclusion of a transit route, a 20.6m wide right-of-way with one travel lane and parking in either direction is used. This roadway also has 1.5m wide sidewalks separated from traffic by a landscaped boulevard.

As shown on **Figure 22 - 20.6m Undivided Collector Roadway Cross-Section**, this cross-section is not standard in the City of Red Deer and will be subject to review by the City prior to implementation at the Servicing Study stage.

Local Roadways

The system of local roads within the community has been designed to create exclusive pods of homes and provide access to individual development clusters while discouraging outside traffic.

Driveways will be designed to meet roadways at 90 degrees and are not permitted to "flair out". This will preserve boulevard space, accommodate trees, and improve on-street parking.

17.6m Two-Way Local Roadway

All typical local roadways will have a 17.6m wide right-of-way with 1.5m separated sidewalks. Utilizing this cross-

section in place of the City's current standard allows for an enhanced streetscape by incorporating street trees in the landscaped boulevard, separated sidewalks in either direction increasing the pedestrian experience, and increases safety by providing a buffer between pedestrians and motorists.

As shown on **Figure 23 - 15.0m/17.6m Local Roadway Cross-Section**, this cross-section is not standard in the City of Red Deer and will be subject to review by the City prior to implementation at the Servicing Study stage.

15.0m Two-Way Local Roadway

15.0m wide local roadways have been included in Evergreen and designed to The City of Red Deer standards which utilizes a 15.0m wide right-of-way, 10.0m wide carriage width, and includes a 1.5m wide monolithic sidewalk on each side of the roadway.

16.0m Two-Way Local Roadway

Two 16.0m wide local roadway in multi-family areas has been identified and will be designed to The City of Red Deer standards which utilizes a 16.0m wide right-of-way, 11.0m wide carriage width, and includes a 1.5m wide monolithic sidewalk on each side of the roadway.

11.75m One-Way Local Roadway

One-way local roadways has been proposed in three areas of Evergreen. Homes in the northwest portion of the Plan Area surrounding a park will utilize a road with 11.75m wide right-of-way. Two additional areas in the northeast will have similar configurations. This roadway is shown on **Figure 24 - 11.75m One-Way Local Roadway Cross-Section** and will not have a sidewalk along the park side as a multi-use trail will be designed within the park.

Lanes

Many lots in the Evergreen neighbourhood have been designed with rear lanes; however, lanes have not been provided for lots adjacent green spaces, including parks and preserved natural areas. All standard rear lanes will be designed to The City of Red Deer standards and will be 7.0m wide as shown on **Figure 26 - 7.0m Lane Cross-Section**. Any lanes adjacent to Municipal Reserves or public utility lots will have bollards installed to prevent vehicular access and short-cutting.

9m Paved Lanes

Homes fronting onto public green spaces and the rowhomes along the gateway roadway will utilize a lane for their only vehicular access. These lanes will be paved to facilitate access, ease of use year-round, allow snow clearing, increase aesthetics, and allow for snow storage during winter months.

As shown on **Figure 25 - 9.0m Paved Lane Cross-Section,** this cross-section is not standard in the City of Red Deer and will be subject to review by the City prior to implementation at the Servicing Study stage.

Turn-Arounds

Until such time that development occurs to the east or south, connecting roadways in Evergreen will be constructed with turn-arounds at their terminus.

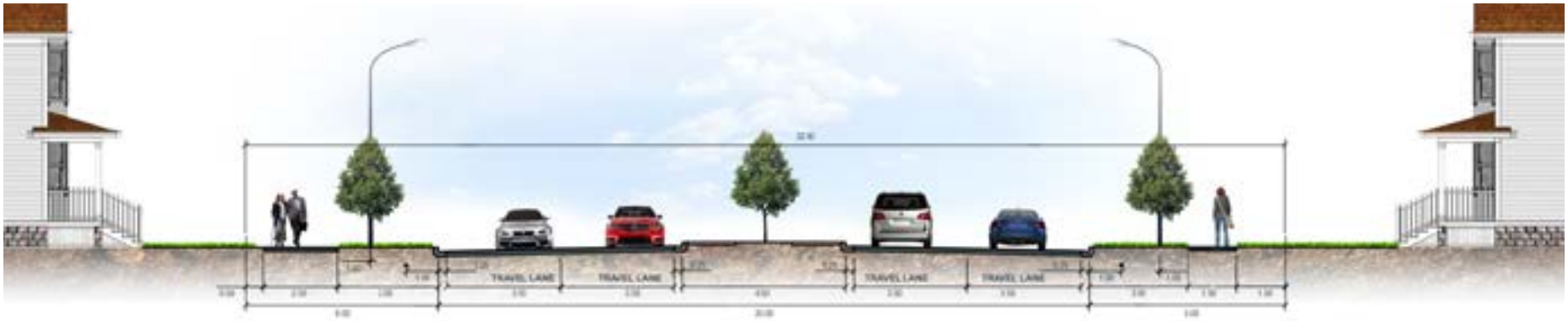
Parking

On-street parking will be permitted on all roadways within Evergreen except along the 32.0m Divided Collector gateway roadway where there will be limited protected parking stalls. The provision of on-street parking acts as a safety feature to pedestrians by acting as a buffer between sidewalks and motorists. It also narrows the roadway and adds uncertainty into drivers' path of travel which has been shown to slow traffic and make drivers more aware of their surroundings.

Figure 18 - 32.0m Divided Collector Roadway Perspective Illustration

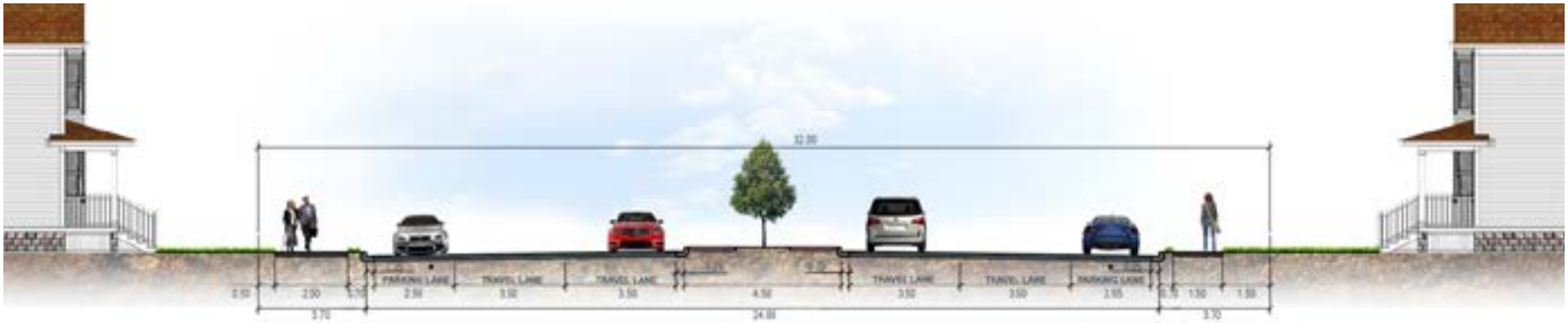
This cross-section is not standard and will be subject to review by the City prior to implementation at the Servicing Study stage.

Figure 19 - 32.0m Divided Collector Roadway Cross-Section at Boulevard



This cross-section is not standard and will be subject to review by the City prior to implementation at the Servicing Study stage.

Figure 20 - 32.0m Divided Collector Roadway Cross-Section at Protected Parking



This cross-section is not standard and will be subject to review by the City prior to implementation at the Servicing Study stage.

Figure 21 - 24.0m Undivided Collector Roadway Cross-Section

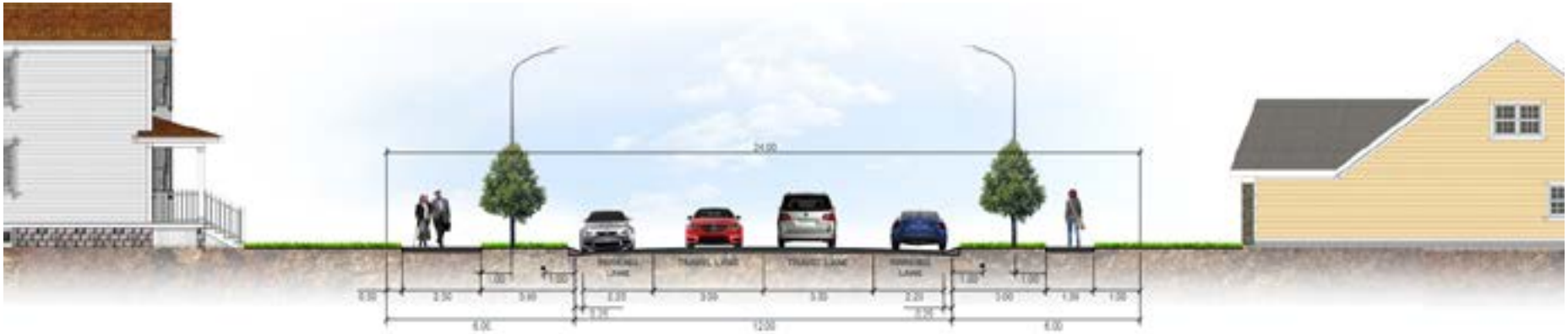
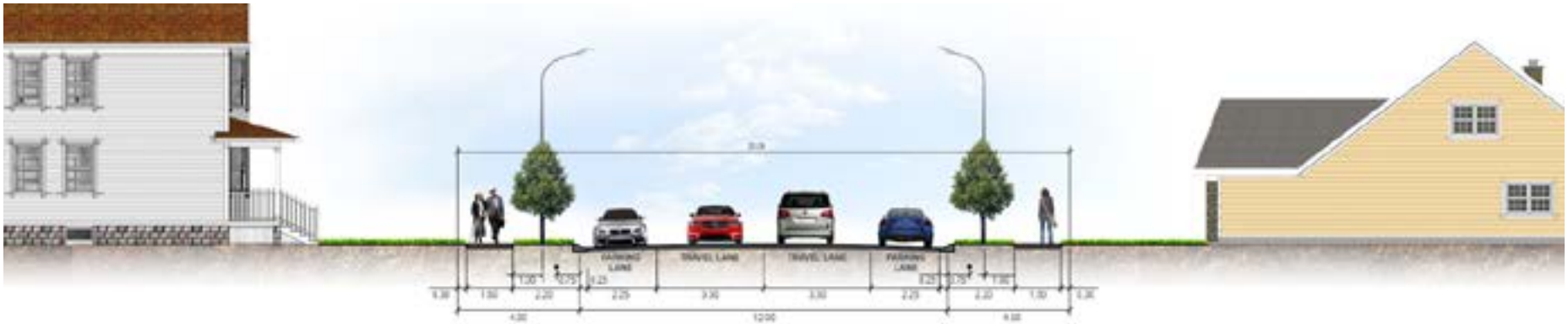
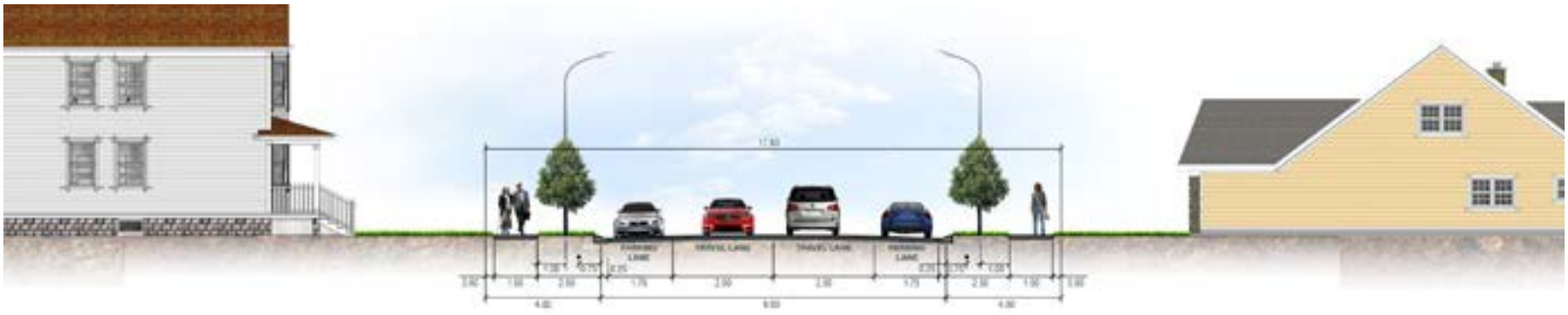


Figure 22 - 20.0m Undivided Collector Roadway Cross-Section



This cross-section is not standard and will be subject to review by the City prior to implementation at the Servicing Study stage.

Figure 23 - 15.0m/16.0m/17.6m Local Roadway Cross-Section



This cross-section is not standard and will be subject to review by the City prior to implementation at the Servicing Study stage.

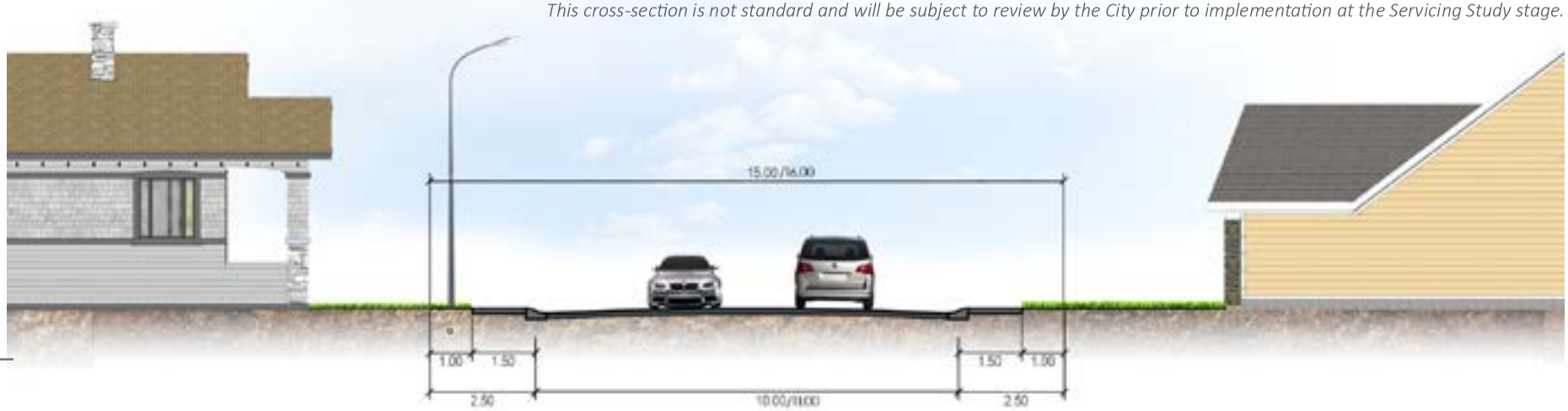
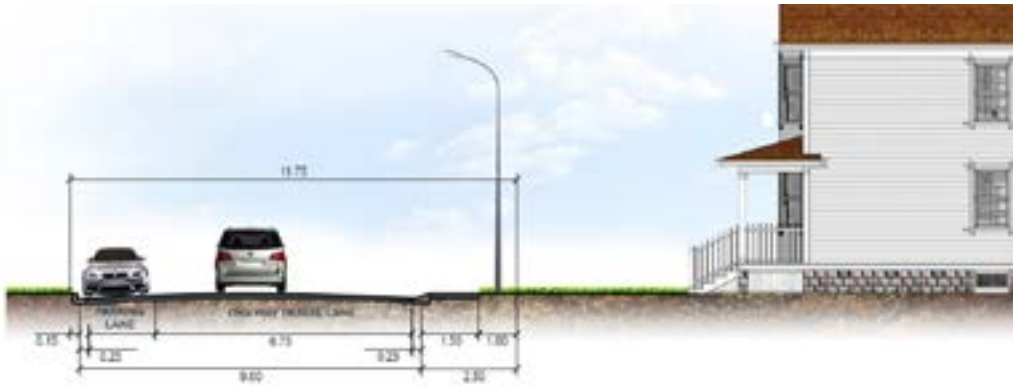
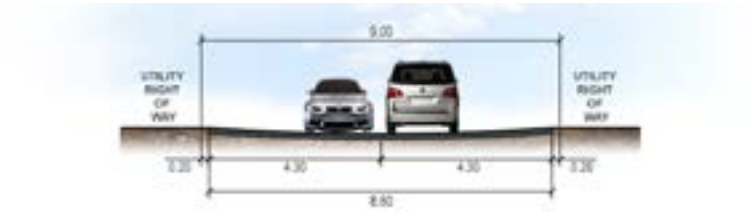


Figure 24 - 11.75m One-Way Local Roadway Cross-Section



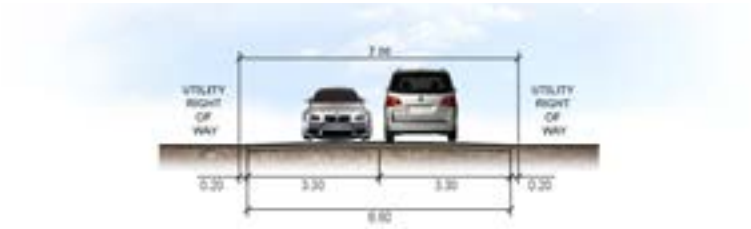
This cross-section is not standard. Parking will only be located on one side and will be subject to review by the City prior to implementation at the Servicing Study stage.

Figure 25 - 9.0m Paved Lane Cross-Section

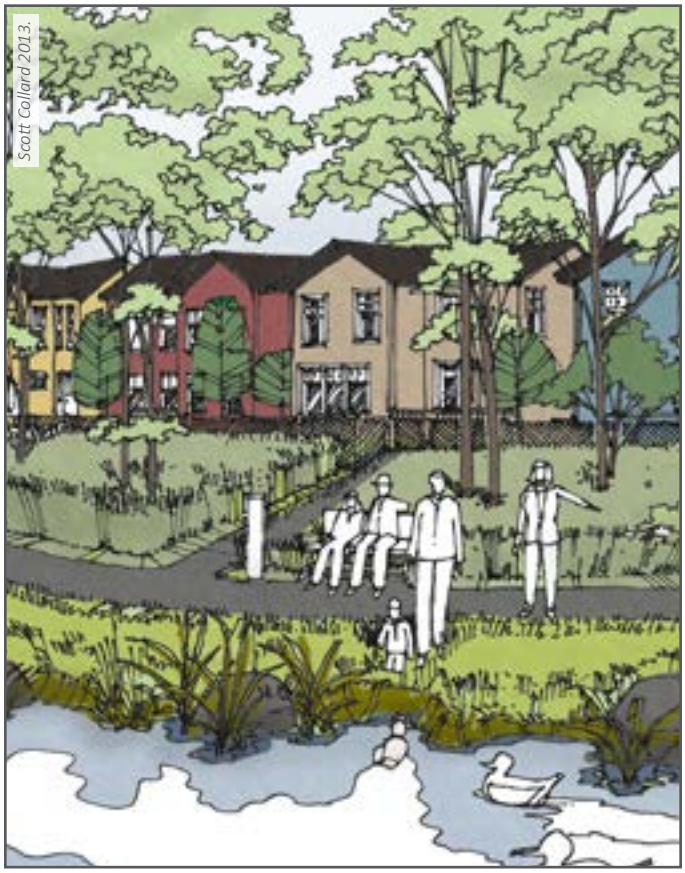


This cross-section is not standard and will be subject to review by the City prior to implementation at the Servicing Study stage.

Figure 26 - 7.0m Lane Cross-Section



sense of place



View of seating area along pathway and housing along east side of central water body.

FEATURES

Evergreen has been designed around the stormwater management facilities in the center of the Plan Area. This area will act as a focal point for all activities and terminus for major roadways and trails.

View points towards this area will be maximized and these areas will include high-quality landscaping to showcase the neighbourhood.

Gateways

There are two gateways identified in Evergreen: an entrance off of 30th Avenue, and the southwest entrance along the looping collector roadway. These areas provide a first impression of the neighbourhood to residents and visitors and convey the overall theme of the community.

To highlight these gateways areas, a high level of landscaping will be provided along with a community marker. In addition, a high standard for detail will be required along the main west-east gateway roadway.

Winter City Design

As part of a winter city, Evergreen has been designed to encourage outdoor activity year round. To encourage this type of activity, public open spaces have been designed to embrace winter, and its darkness.

Colours

Encouraging the use of rich colours on homes, commercial buildings, and in the community's design elements; through the use of architectural guidelines; is one way that Evergreen will warm up winter by adding colour to an otherwise snow-white neighbourhood.

Lighting

The long dark days of winter can often feel daunting which is why Evergreen's streetscapes are proposed to be designed to incorporate street tree lighting that will transform the darkness into a palette on which to create a whimsical environment of illumination.

Public park areas may also be been designed to include pedestrian-scaled lighting to illuminate pathways throughout the winter months. This illumination will

Evergreen's gateway collector roadway looking east.

Reverse housing fronting onto linear park space in southeast Evergreen.

Evergreen's central park, natural playground, and picnic area.

All-season use of cleared trails.

Use of illuminated bollards along trail.

accommodate outdoor play for children in the winter and enhance safety surveillance.

Various levels of lighting may be used in different areas of Evergreen to provide appropriately scaled lighting for pedestrians and motorists, and to create focal areas in the community.

The intention of providing lighting in open spaces is primarily for use of public spaces during the winter time when day lengths are shorter. The lighting in open spaces would be limited to immediately along primary trails and could be designed to run for only a few hours after the sun has set. All determination of lighting will be done during detail design.

The responsibility for maintaining proposed lighting will be determined through future negotiations with the City of Red Deer.

Maintenance

Although the average temperature in Red Deer during the winter months is around -10°C, snowfall can quickly pile up and create significant barriers to outdoor recreation. To combat this, on-going trail maintenance throughout the winter months is important to allow continued access and safe use of the community's open spaces for residents.

Street tree lighting during the summer.

Coloured street tree lighting in winter.

Continuous fencing along public areas.

Coloured concrete in median paving area.

BUILT FORM

The overall design of Evergreen is intended to connect residents and visitors with the outdoors. To achieve this, a variety of concepts may be utilized which will be further determined subsequent to NASP approval. Concepts that may be considered include the following.

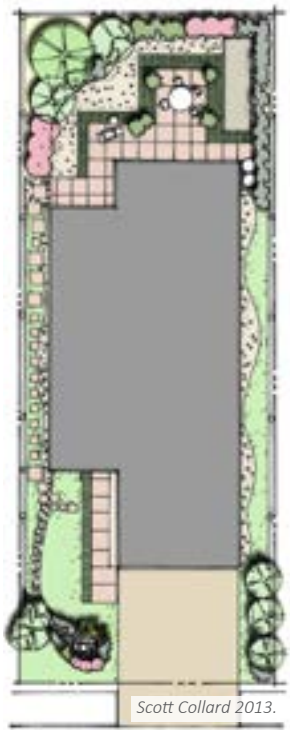
- Community entry features
- Illuminated street trees
- Pedestrian-scaled lighting along major pathways
- Wayfinding signage
- Continuous fencing along public areas
- Enhanced median paving

Architectural Design

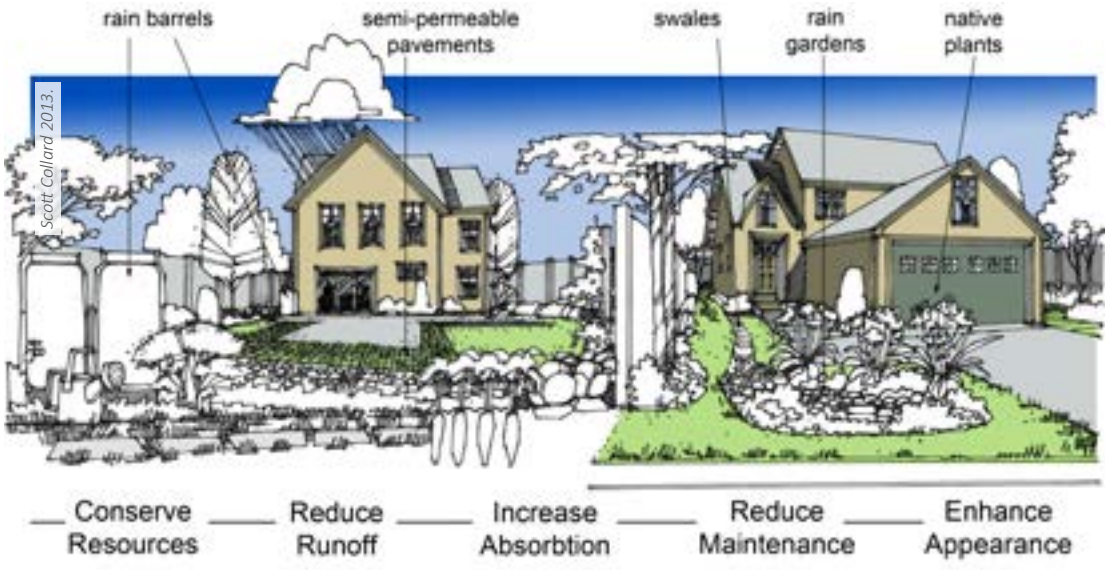
All buildings in Evergreen will be built recognizing the Neighbourhood Planning and Design Standards and Melcor Evergreen Architectural Guidelines.

Built forms in Evergreen may take their design elements from nature, focusing on visual and physical connections to outdoor spaces. A set of Melcor Neighborhood Design Guidelines will provide direction toward the overall aesthetic of the community as described on page 59.

servicing



Scott Collard 2013.



OVERVIEW

The proposed trunk utility connection points for the sanitary and storm utilities shown in this NASP deviate from the City's current trunk infrastructure planning identified in the Greater East Hill Functional Servicing Study (GEHFSS). As a result of this deviation, Evergreen's Developer may be required to register City of Red Deer utility rights-of-way to facilitate the installation of deep utility extensions connecting to the adjacent quarter section to the east, if development is anticipated to proceed on this adjacent parcel prior to utilities reaching the quarter section boundary.

This requirement will be imposed by way of a Supplementary Condition in a future Development Agreement for a development phase in Evergreen if the City's Development Section determines it to be necessary in order to allow the adjacent quarter to the east timely access to utility service connections.

STORMWATER SERVICING

The City of Red Deer has an existing storm trunk up the escarpment of the Red Deer River Valley. This trunk line is constructed to the intersection of 30th Avenue and The North Highway Connector, and will ultimately service a large portion of the future development in east Red Deer. The City has extended this trunk servicing south along 30th Avenue, in conjunction with the intersection improvements at the intersection of 30th Avenue and 67 Street. The Evergreen development will connect to this 30th Avenue trunk sewer at the northwest corner of the development. Storm mains will also be designed to convey the controlled release rate from NE 26 while providing temporary pick up of overland drainage from adjacent quarter sections until they are built out.

As previously discussed in this report, there is a large existing wetland feature situated in the middle of the development area. The north portion of this wetland is proposed to be reconstructed in order to act as the primary storm water management facility for the Evergreen development. In order to allow for a conventional City of Red Deer storm pipe system, complete with gravity weeping tile connections to all the

homes, the reconstruction will consist of re grading this area to lower the normal water level in the wetland by approximately 2.0m. All storm sewer pipes in Evergreen will connect to this facility, which will provide both water quality enhancement and storm detention, before the storm water outlets into the 30th Avenue trunk system and ultimately into the Red Deer River.

It is proposed that a majority of the south component of the wetland feature be retained in its natural state. This includes maintaining the current normal water elevation in order to protect the existing plant ecology along edge of the wetland. In order to enhance the water quality, it may be necessary to deepen this wetland area though the normal water level elevation will be maintained. To ensure a source of water to recharge this wetland area, some surface runoff from the development will be introduced into the wetland at certain low points in the roadway. These locations are illustrated on **Figure 27 - Stormwater Servicing** on page 54.

Also, to maintain some base flow into the existing ravine, which stretches into the north end of this development, some consideration should be made to installing a small pipe connection from the proposed storm pond facility. This would allow from some water recharge into the ravine but at a very low rate that would prevent downstream erosion which has been an issue in other ravine areas in the City.

All the storm sewer facilities will be designed in accordance with The City of Red Deer Design Guidelines and will be developers responsibility to maintain until the end of the two year maintenance period when this infrastructure will be turned over to The City of Red Deer.

Stormwater Runoff Initiatives

As part of a continuing effort to reduce stormwater runoff in the neighbourhood, home owners will be encouraged to design their lots to capture stormwater and reduce runoff, as shown above. This education program could include how to best utilize their rain barrel, how to construct rain gardens, or how to increase the amount of organic materials in their yard to absorb more water. By providing this information to new home buyers, residents would be encouraged to continue to reduce stormwater runoff throughout the life-cycle of their homes.

The developer may work with home builders to create this information package.

SANITARY SERVICING

Similar to the stormwater servicing, the City of Red Deer has installed a sanitary trunk up the escarpment of the Red Deer River Valley. This trunk line services most of the future development lands in east Red Deer. The City has extended this trunk servicing south, along 30 Avenue, in conjunction with the intersection improvements at the intersection of 30th Avenue and 67 Street. The Evergreen development will connect to this 30 Avenue trunk sewer at the northwest corner of the development. The sanitary sewer system will also be designed to convey the design flows generated in NE 26.

All the sanitary sewer facilities will be designed in accordance with The City of Red Deer Design Guidelines and will be the developer's responsibility to maintain until the end of the two year maintenance period when this infrastructure will be turned over to The City of Red Deer. The overall conceptual sanitary sewer system for this development is shown on **Figure 28 - Sanitary Servicing** on page 55.

Sanitary Reduction Initiatives

Sanitary reduction will take place on a household basis by encouraging builders to install more efficient plumbing solutions during the time of home building.

WATER SERVICING

There is an existing 300mm watermain that is located in 30 Avenue that will provide water service to the Evergreen development area. There will be a minimum

of two connections to this 300mm water line along the west boundary of the neighborhood in order to provide water looping throughout the development. Ultimately there will be an additional looping provided to the future development area to the south. Also as shown there are future water stubs provided to the adjacent land parcel to the east.

All waterlines will be designed in accordance with the City of Red Deer Guidelines and will become the responsibility of The City of Red Deer to maintain after a two year maintenance period.

Water Reduction Initiatives

Reduction in water use will take place on a household basis by encouraging builders to install more efficient appliances during time of home construction, and encouraging home owners to utilize water-efficient landscaping techniques. In addition, the Developer will also be utilizing landscaping techniques throughout the neighbourhood's public spaces that will reduce the amount of water needed for its maintenance.

SERVICING EFFICIENCIES

Evergreen has been designed to utilize front servicing rather than the City of Red Deer's standard lane servicing model. This has been done for the following reasons:

- minimize the use of lanes thereby increasing the amount of developable land and increasing residential density
- allow for enhanced streetscapes
  - » provide separated sidewalks on both sides of all collector and two-way local roadways
  - » include landscaped boulevards to increase visual appeal, provide future shade to pedestrians, and increase safety by providing a barrier between pedestrians and motorists
  - » create strong pedestrian connections by increasing pedestrians' comfort level within the roadway network
- maximize the amount of homes backing onto green spaces
- increase the level of interaction between homes and open spaces

SHALLOW UTILITIES

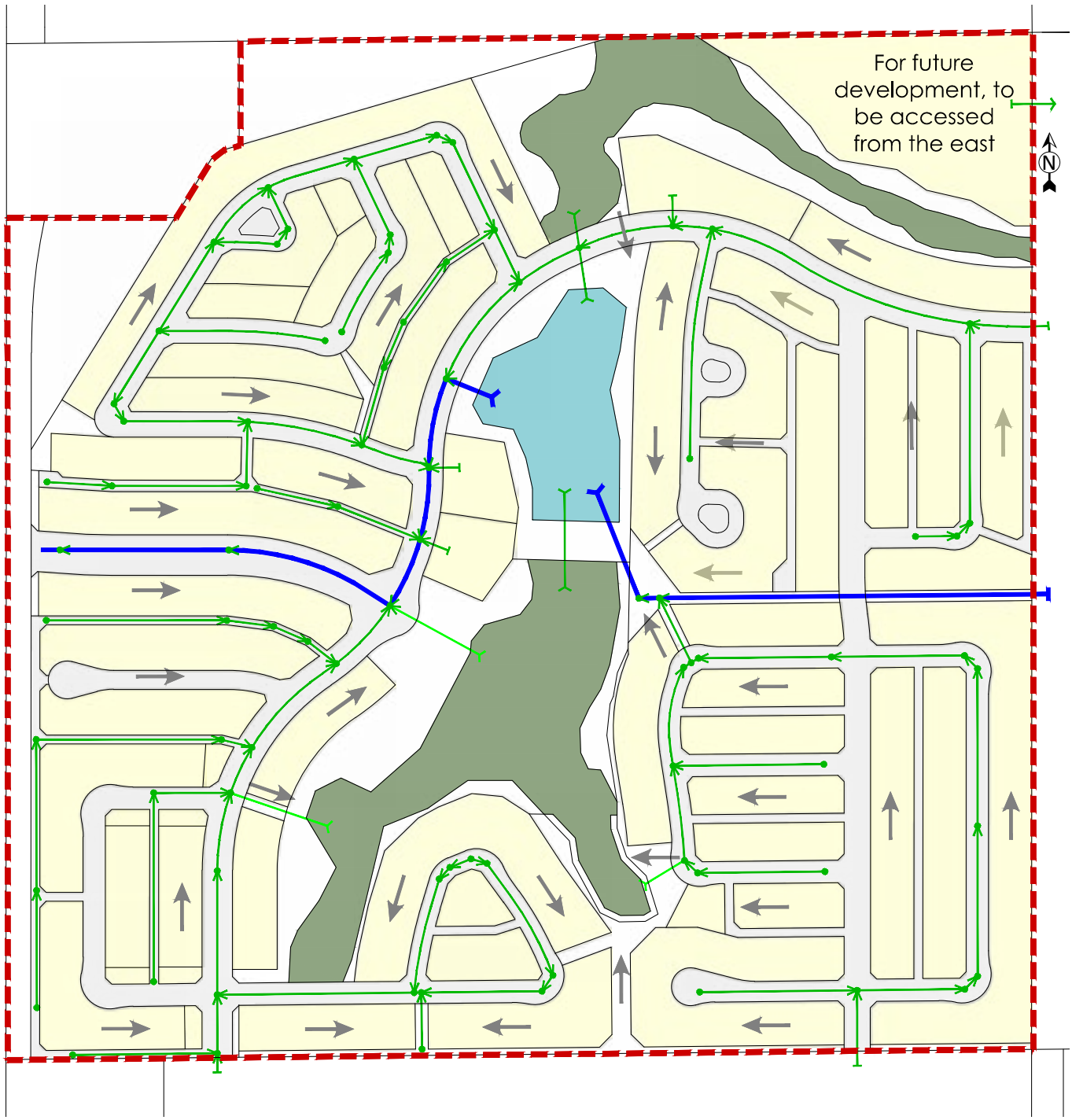
Shallow utility services will be provided by the following companies:

- ATCO Gas (Natural Gas)
- The City of Red Deer E.L. & P. Department (Electricity and Streetlights)
- Telus Communications (Telephone)
- Rogers (Cable Television)

These utility providers are intended to extend their infrastructure from the North Highway Connector in order to service the Plan Area. The shallow utility alignments will be established during preparation of the servicing study of Evergreen.

Location of all shallow and deep utilities within roadway rights-of-way will be determined during the Servicing Study stage in association with roadway cross-section review and finalization.

Figure 27 - Stormwater Servicing



LEGEND

- Storm Water Servicing
- Flow Direction
- Storm Trunk
- Storm Outlet/Inlet
- Storm Stub
- Major Overland Drainage

Figure 28 - Sanitary Servicing

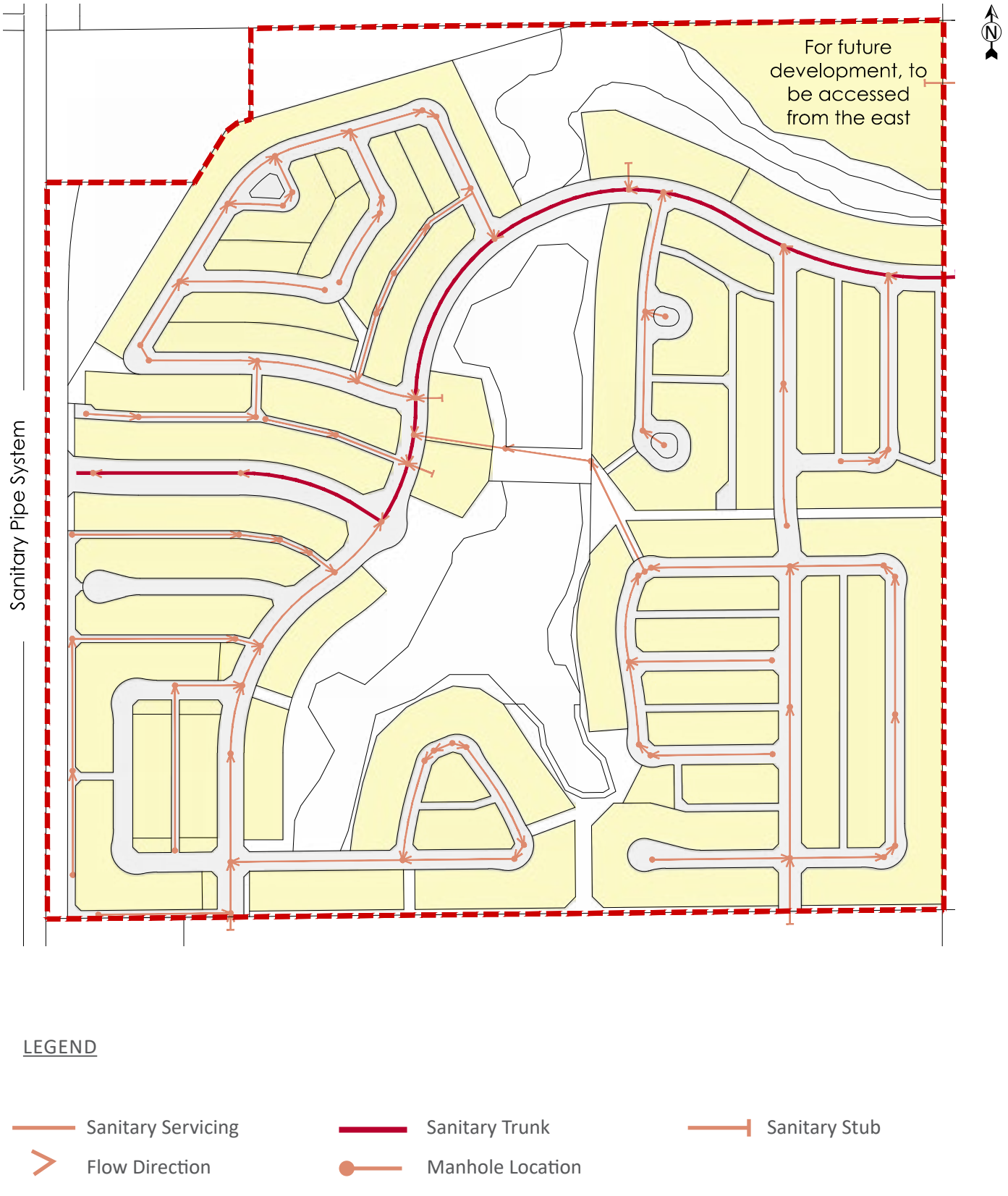
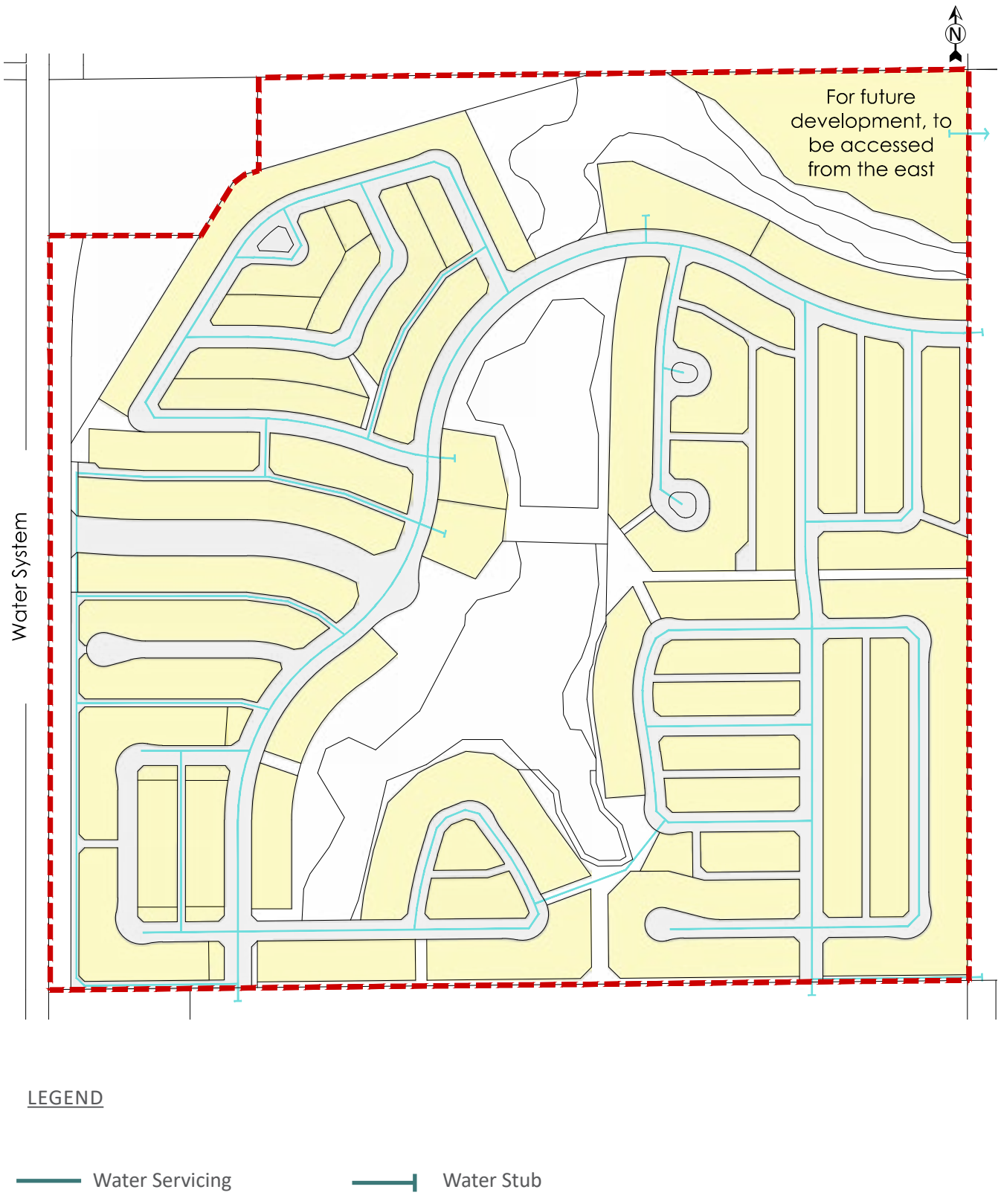
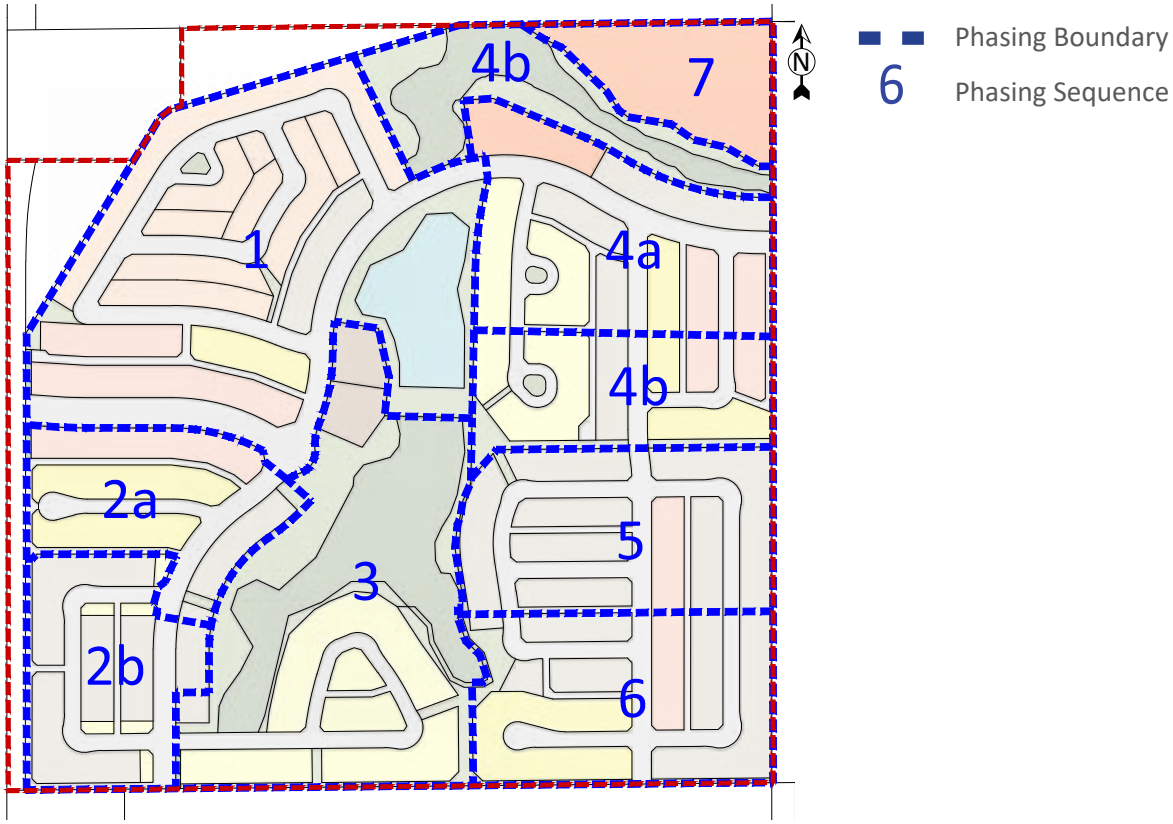


Figure 29 - Water Servicing



implementation

Figure 30 - Phasing Plan



PHASING

Infrastructure to service the first phase of Evergreen will be extended east from the sanitary and storm trunks located along 30th Avenue. Each successive stage will be developed with the logical and economical extension of municipal services with the intent of meeting the needs of the regional and local housing market.

The early phases are expected to start along the gateway roadway into Evergreen, including the main stormwater pond, and proceed south, north, and west. The phasing boundaries shown are conceptual in nature and may vary from those shown when redesignation and subdivision applications are made. Phasing boundaries also may be adjusted to accommodate the abandonment and removal of the Conserve Oil pipeline running north to south along the western boundary of the Plan Area. Portions of separate phases may be developed concurrently if there is sufficient demand and/or if municipal servicing is made more efficient as a result.

To minimize the impact to the existing ravine, Phase 8 is intended to be developed in cooperation with the adjacent quarter section to the east. This coordination would facilitate providing access and servicing to the area.

In areas adjacent open space, a construction boundary will be set prior to home construction to protect existing vegetation and prevent encroachment.

The Developer shall work with the City of Red Deer to determine a solution for snow storage.

Connections into Adjacent Areas

Evergreen's Developer may be required to register City of Red Deer rights-of-way to facilitate the installation of roadway extensions connecting to the adjacent east quarter section, if development is anticipated to proceed on this adjacent parcel prior to roadways reaching the quarter section boundary.

This requirement will be imposed by way of a Supplementary Condition in a future Development Agreement for a development phase in Evergreen if the City's Development Section determines it to be necessary in order to allow the adjacent quarter to the east timely access.

REDESIGNATION AND SUBDIVISION

Redistricting and subdivision applications, to conform to the land use designations described in this NASP, will be undertaken as necessary. Guided by The City of Red Deer Municipal Development Plan, The City of Red Deer East Hill Major Area Structure Plan, and the Evergreen NASP, redesignation and subdivisions must conform to The City of Red Deer Zoning Bylaw and all applicable statutory plans in addition to the informational requirements necessary for each application.

DETAILED DESIGN AND MAINTENANCE

Design Report & Architectural Guidelines

To guide the visual aesthetic of the neighbourhood, subsequent design documents will be created. These documents will not be approved by the City of Red Deer as they are intended for Developer use only.

Community Conceptual Design Report

The Community Conceptual Design Report describes the overall theme and feeling of the community's public spaces. Topics addressed within this Report may include

but will not be limited to the following:

- Explanation of community name and logo
- Entry feature locations and design
- Areas of enhanced landscaping with design
- Description and design of streetscape
- Identification of lighting style and decorative banners
- Identification of streetscape furniture
- Description of trail and open space network
- Location and design of community fencing

Architectural Guidelines

Architectural Guidelines will be created for the Evergreen community to guide home builders towards the outlined vision for the neighbourhood. Topics covered in these guidelines will include the following:

- Site planning: house placement, setbacks, grades, walkways, driveways, etc
- Architectural design: housing product, style, repetition, corner lot requirements, backing onto public green space, walkout lots, roof pitch, chimneys, windows, dormers, exterior lighting, porches, etc
- Building materials: primary and secondary walls, masonry, trim, roofing, doors, colours, etc
- Built Green guidelines

CPTED

All parks and public spaces will be designed using the principles of Crime Prevention Through Environmental Design. Such design features may include:

- Increasing natural surveillance by facing house windows toward public areas
- Utilizing semi-transparent fencing around park spaces
- Reducing glare by choosing appropriately scaled lighting
- Implementing a high quality maintenance program to reinforce pride and ownership of public spaces

These design features will be integrated into the design of Evergreen during the detailed design process for public open spaces and may be incorporated into the Architectural Controls where appropriate to enhance safety in private areas such as the commercial site.

Home Owners' Association

The Evergreen community may be run via a Home Owners Association (HOA). An HOA provides the opportunity for long term maintenance for enhancements of the Evergreen neighbourhood, which are over and above the standards set by the City of Red Deer's *Neighbourhood Planning and Design Standards*. Residents pay an annual fee which contributes to the management and maintenance of Evergreen. Details regarding what the HOA will provide for residents will be determined by the Developer prior to lot sales.

It should be noted that a Home Owners Association is registered as a Restrictive Covenant on the title of each home.

An agreement with the City of Red Deer would required to identify what the responsibility of the City and the HOA will be. Although Evergreen's amenities will be partially funded by an HOA, access of the open space system and trails will be open to everyone.