

Calgary



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ATTACHMENT 2

Glacier Ridge Area Structure Plan

Proposed

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CORE IDEAS OF THE GLACIER RIDGE ASP

1. Transform Symons Valley Road into Symons Valley Pathway to enhance the riparian area of West Nose Creek.
2. Provide residential uses to complement nearby large-scale employment areas.
3. Transit service, supported by intensified nodes of development, directly connects to existing/future LRT stations in Tuscany and Keystone.
4. Walkable Activity Centres and corridors stitch together the communities and provide pathway connections into Symons Valley, the heart of the Plan Area.



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1 INTRODUCTION

In the future, Symons Valley Road, shown on the photo, will become a trail for pedestrians and cyclists. Without highway traffic it will reconnect West Nose Creek with the south escarpment of Symons Valley. This area will also become the central green space for 50,000+ residents looking to escape city sounds and demands. Welcome to the Plan for Calgary's future communities around the West Nose Creek area.



Plan Area

1290 haEstimated
Population**58,800**

Estimated Jobs

10,900

1.1 PLAN LOCATION

LOCATION

This Plan Area comprises 1290 hectares (3187 acres) along the northwest boundary of Calgary continuing Calgary's growth up the West Nose Creek corridor. Located west of the developing Keystone Hills Plan Area, Glacier Ridge is bounded on the south by 144 Ave NW and extends north for 1.6 km to its north boundary, which along the west half of the Plan Area, is also the city limits. Its east and west boundaries are 14 St NW and 85 St NW respectively. Existing communities to the south include Nolan Hill, Sage Hill and Evanston, as shown in **Map 1: Plan Area Location**.

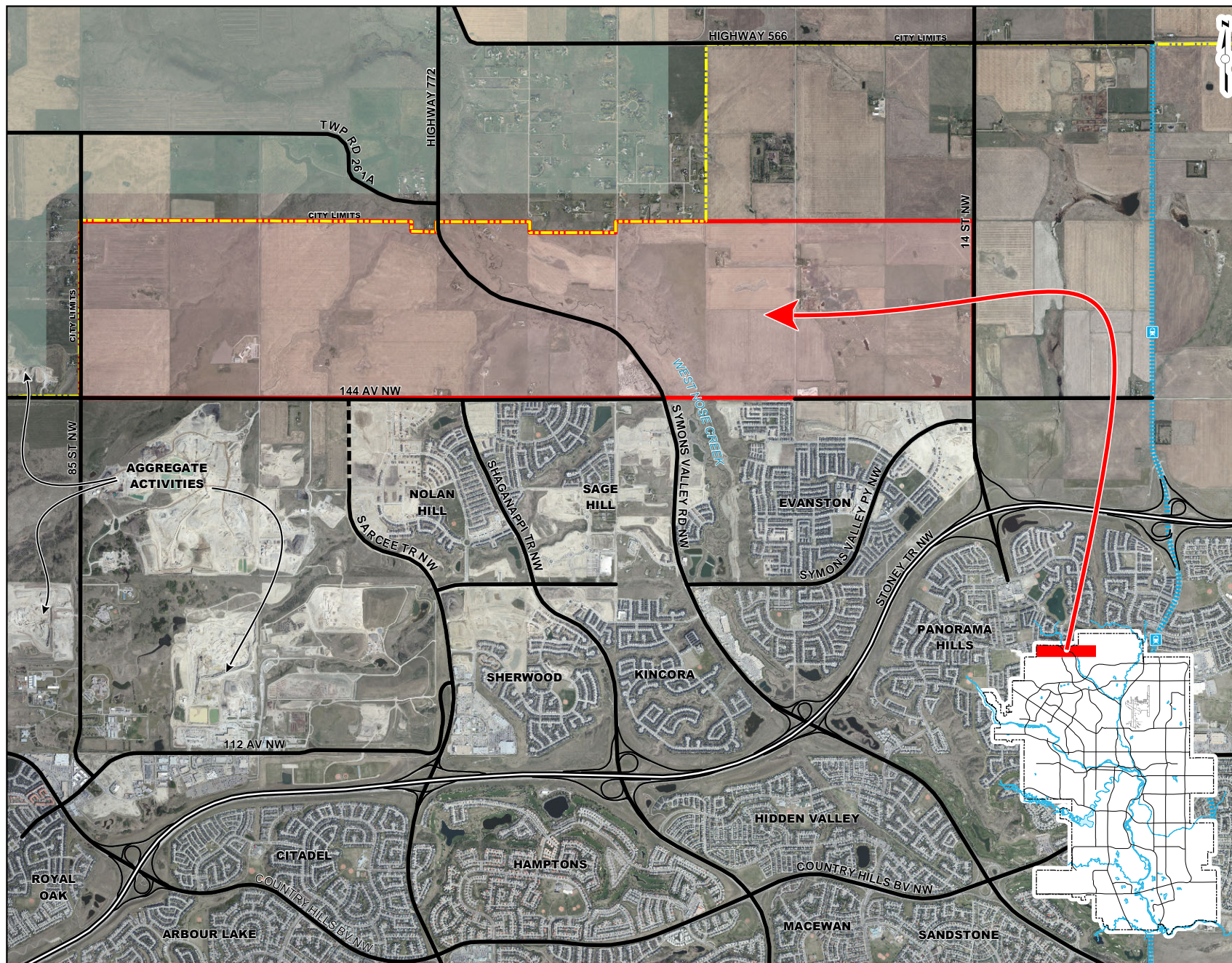


1.2 VISION AND PRINCIPLES

VISION

The Plan Area will benefit from its connections to Symons Valley to create a shared natural focal point for four new communities. Bisected by the meandering West Nose Creek, Symons Valley drains multiple coulees that come in from the future new communities. Symons Valley Road will become Symons Valley Pathway, as new streets nearby eventually allow the rural highway adjacent to West Nose Creek to become pedestrian and cyclist only. A newly restored, more contiguous natural corridor will enhance wildlife habitats and provide passive recreational opportunities for residents. West and east of the valley, each community will contain a rich mix of housing, schools and commercial opportunities to support daily needs. A well-designed street and pathway network will provide efficient connections for residents, whether by vehicle, transit, bicycle or foot, to access three nearby employment centres, each located north of Stoney Trail. Edge development will integrate with existing communities and provide opportunities for communities not yet planned to integrate seamlessly with Glacier Ridge.





GUIDING PRINCIPLES



1. **Community Focus** Symons Valley, including West Nose Creek and adjacent lands will be the signature feature of the Plan Area, providing for recreation opportunities and community connections.



4. **Neighbourhood Focal Points** Preserved coulees that are accessible and other retained natural features will be a hallmark of activity centres across the Plan Area.



2. **Design with Nature** The Plan Area's multiple natural features, especially preserved coulees, will be integrated into new Neighbourhoods through: diverse land uses; attractive, publicly accessible viewsheds; and multiple connections into the coulees ensuring the natural features are shared by all.



5. **Landscape Ecology** Significant natural and historic landscapes, including sites with Aboriginal significance will be preserved where possible and integrated with the open space network. Moreover, neighbourhood design will incorporate natural storm water management strategies to minimize impact of environmental risks.



3. **Movement** An adaptive grid street and pathway network will be provided throughout the Plan Area to link together the neighbourhoods and connect residents to major employment nodes and two LRT lines nearby (NW and Greenline North Central) while respecting the natural topography of the area.



6. **Interface** Neighbourhoods within the Plan Area will be designed to create visual and physical connections with neighbourhoods in surrounding communities by minimizing the requirement for noise walls along arterial streets.

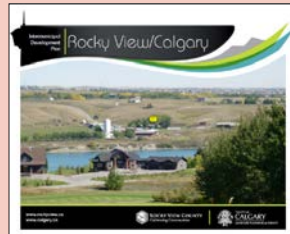
1.3 POLICY FRAMEWORK

1. This Area Structure Plan is to be read in conjunction with the:



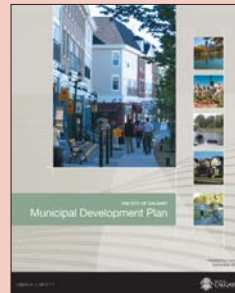
South Saskatchewan Regional Plan (SSRP)

establishes a long-term vision for the region using a cumulative effects management approach to guide local decision-makers in land use management to achieve Alberta's economic, environmental and social goals.



Rocky View County/Calgary Intermunicipal Development Plan (IDP)

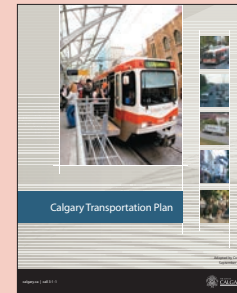
contains objectives and policies directing collaborative planning between The City of Calgary and Rocky View County.



Municipal Development Plan (MDP)

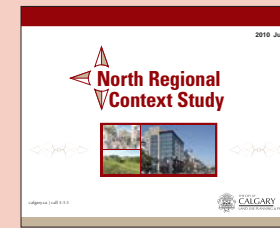
Volume 1 – contains city-wide objectives and specific direction for typologies and is the foundation for community planning.

Volume 2: The New Community Planning Guidebook – translates Volume one's vision and core policies into implementation level policies and forms the basis for new communities/Area Structure Plans.



Calgary Transportation Plan (CTP)

contains city-wide objectives and specific direction for moving people and goods throughout Calgary.



North Regional Context Study (NRCS)

provides overall direction that is specific to the Glacier Ridge Plan Area and surrounding areas north of Stoney Trail.



Other City of Calgary Guidelines and Policies

other City policies also need to be consulted for direction on specific topics.

1.4 PLAN AREA ATTRIBUTES

TOPOGRAPHY AND NATURAL FEATURES

Glacier Ridge is characterized by a varied topography. Symons Valley, with a variety of sandstone outcroppings forms the boundary where the coulees and rolling terrain of the west half of the Plan Area transitions to gently undulating prairie landscape on the east side. Currently, much of the landscape displays its history of cultivation and ranching with some coulees and creek areas left in a natural or semi-natural state.

Glacial erratics and a glacial scour are located east of the creek. The erratics are part of the 10,000 year old Foothills Erratic Train that stretched in a narrow belt from a rock outcrop in the Mount Edith Cavell area of Jasper National Park over 600 km to southwestern Alberta.

HISTORICAL RESOURCES

The Plan Area contains historic resources that are regulated by the provincial government. Historical Resource Clearance will be required prior to Outline Plan/Land Use Amendment approval.

REGIONAL CONTEXT

Glacier Ridge is located at the northwestern boundary of Calgary, and is part of a larger comprehensively planned regional context. The North Regional Context Study (NRCS) covers 5,660 hectares (14,000 acres) across the north end of Calgary. It provides high level planning objectives for the entire area including this Plan Area.

Immediately south and southwest of the Plan Area, existing and future gravel extraction lands are an important resource for Calgary's growth. It will be several decades before those resources are exhausted. Once extracted, the NRCS directs that the lands redevelop for industrial/employment-based uses. To the east, Centre St is planned as an urban corridor anchored by a Major Activity Centre in the south and a Community Activity Centre in the North. The Centre St N corridor may also include future light rail transit if supported by future land use intensity. At the east end of the NRCS Plan Area is the Nose Creek industrial/employment district. Although the Glacier

GLACIAL ERRATIC

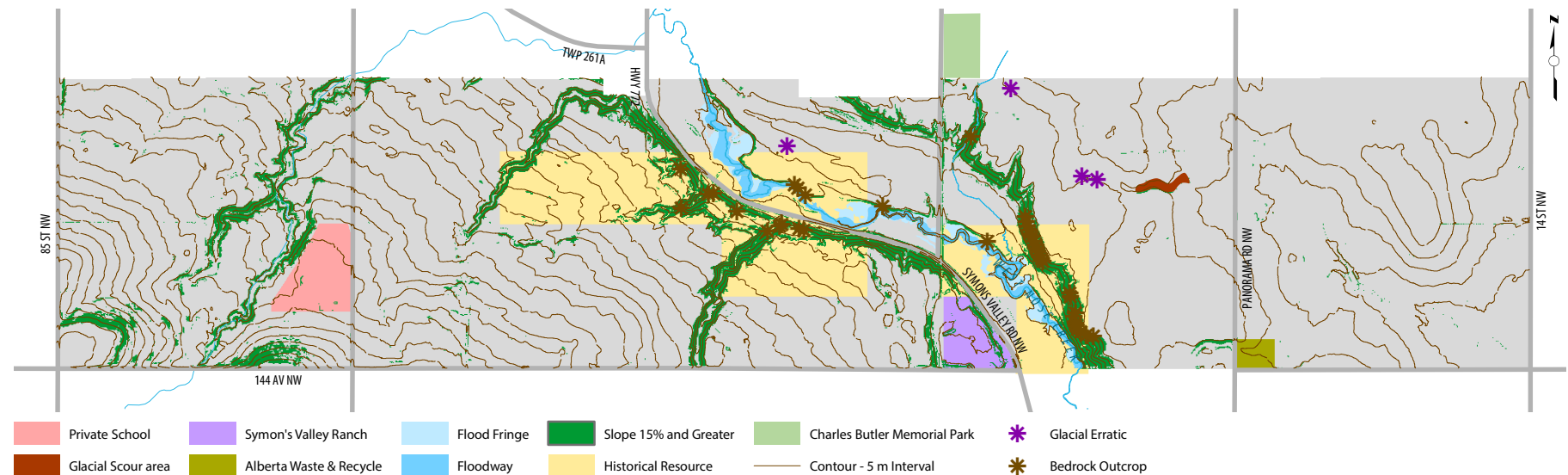


SYMONS VALLEY



Introduction

MAP 2: PLAN AREA ATTRIBUTES



Ridge Plan Area itself will not contain a large employment centre, the above noted centres and others, all located north of Nose Hill Park are projected (2015) to accommodate over 130,000 jobs.

EXISTING USES

The Bears paw Christian School, Symons Valley Ranch, containing a year round market, restaurant and RV park, and a construction waste and recycling facility are existing uses in the Plan Area. In 2015 landowners for the school and Ranch property have expressed interest in expansion/redevelopment. There are also acreages (approximately 11) spread across the Plan Area. With the exception of Symons Valley Ranch, which has a Direct Control District zoning, the entire Plan Area is designated S-FUD – Future Urban Development.



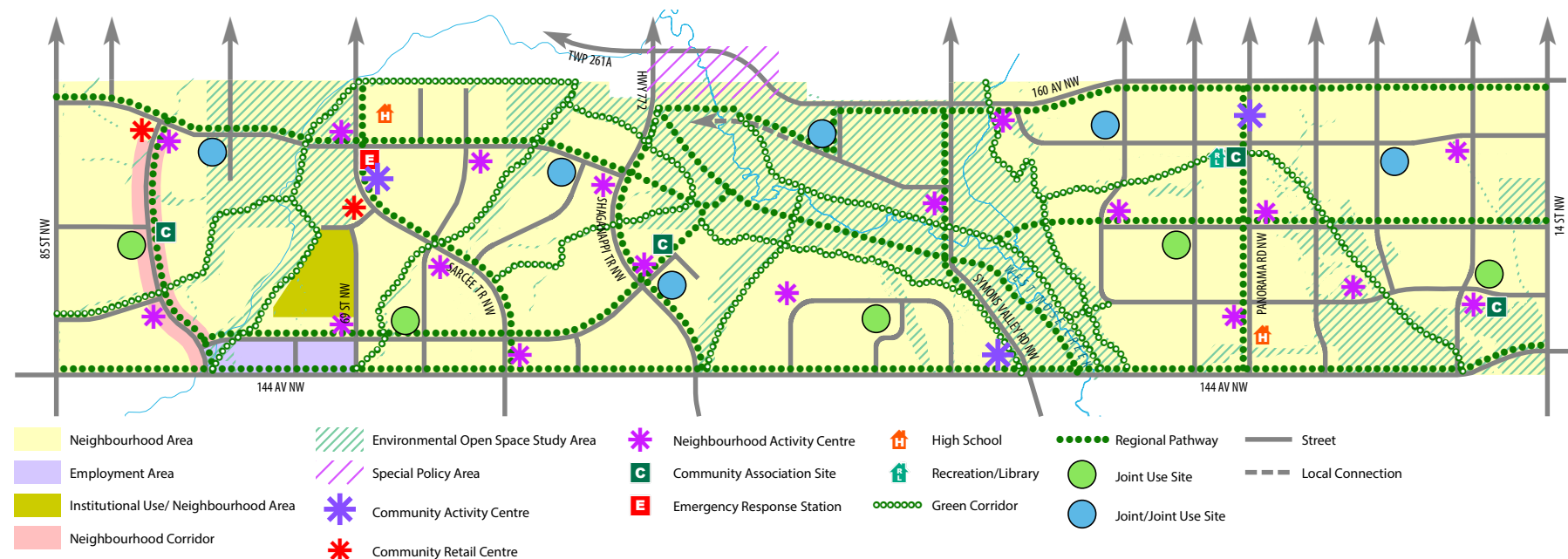
2 | THE LAND USE CONCEPT

The land use concept for this Area Structure Plan shows the types and general location of land uses and street network within the Plan Area.



The Land Use Concept

MAP 3: LAND USE CONCEPT












INTENT

To set the framework for the development of four communities that provides a mix of uses consistent with City of Calgary planning and growth objectives.

POLICIES

1. The elements on **Map 3: Land Use Concept** should be located as shown.
2. Refinements to locations may be made at the Outline Plan/Land Use Amendment application stage in accordance with Section 7.1 Area Structure Plan Interpretation.

TABLE 1: LAND USE CONCEPT ELEMENTS

	<p>Neighbourhood Area</p> <p>Surrounding the activity centres, Neighbourhood Areas allow for an appropriate mix of residential and non-residential uses.</p>		<p>Environmental Open Space Study Area</p> <p>The Environmental Open Space (EOS) Study Area identifies environmentally significant areas. Where lands do not qualify as Environmental Reserve, development may occur. Refer to Appendix A for more information.</p>		<p>Community Activity Centre</p> <p>Community Activity Centres (CAC) provide convenient locations for a range of higher density housing types, local employment and retail services to the surrounding community.</p>
	<p>Employment Area</p> <p>Employment Areas consist mainly of non-retail employment uses that provide local job opportunities for community residents.</p>		<p>Community Retail Centre</p> <p>Community Retail Centres provide local goods and services to serve the community and provide an area for future intensification.</p>	 <p><i>photo by: Audrey Smith</i></p>	<p>Community Association Site</p> <p>A Community Association Site provides a location for Community Association uses.</p>
	<p>Neighbourhood Corridor</p> <p>Neighbourhood Corridors (NC) are "main streets" for one or more communities. They are places to focus a mix of uses and housing densities within a pedestrian friendly environment to create local destinations adjacent to streets with transit service.</p>		<p>Neighbourhood Activity Centre</p> <p>Neighbourhood Activity Centres (NAC) are located in each Neighbourhood. They are the focal points of Neighbourhoods and will feature higher density multi-residential housing, a central amenity area, a transit stop and non-residential use(s).</p>		<p>Emergency Response Station</p> <p>An Emergency Response Station provides for adequate fire and emergency response.</p>

The Land Use Concept



High School Site



High School Sites serve a larger region for the educational needs of public and catholic high school students and provides recreational space for residents.



Green Corridor



Green Corridors connect natural areas through a variety of ecological corridors and also provide places for people to walk and cycle in a natural environment.



Joint Use Site



Joint Use Sites (JUS) provide locations for an elementary or junior/middle school as well as public recreation and community uses.



Joint Joint Use Site



Joint Joint Use Sites provide combined locations for elementary and junior/middle schools, with shared playing fields, as well as public recreation and community uses.



Recreation Facility/Library



The Recreation Facility/Library will serve the recreational, leisure, and cultural needs of residents in the surrounding areas.



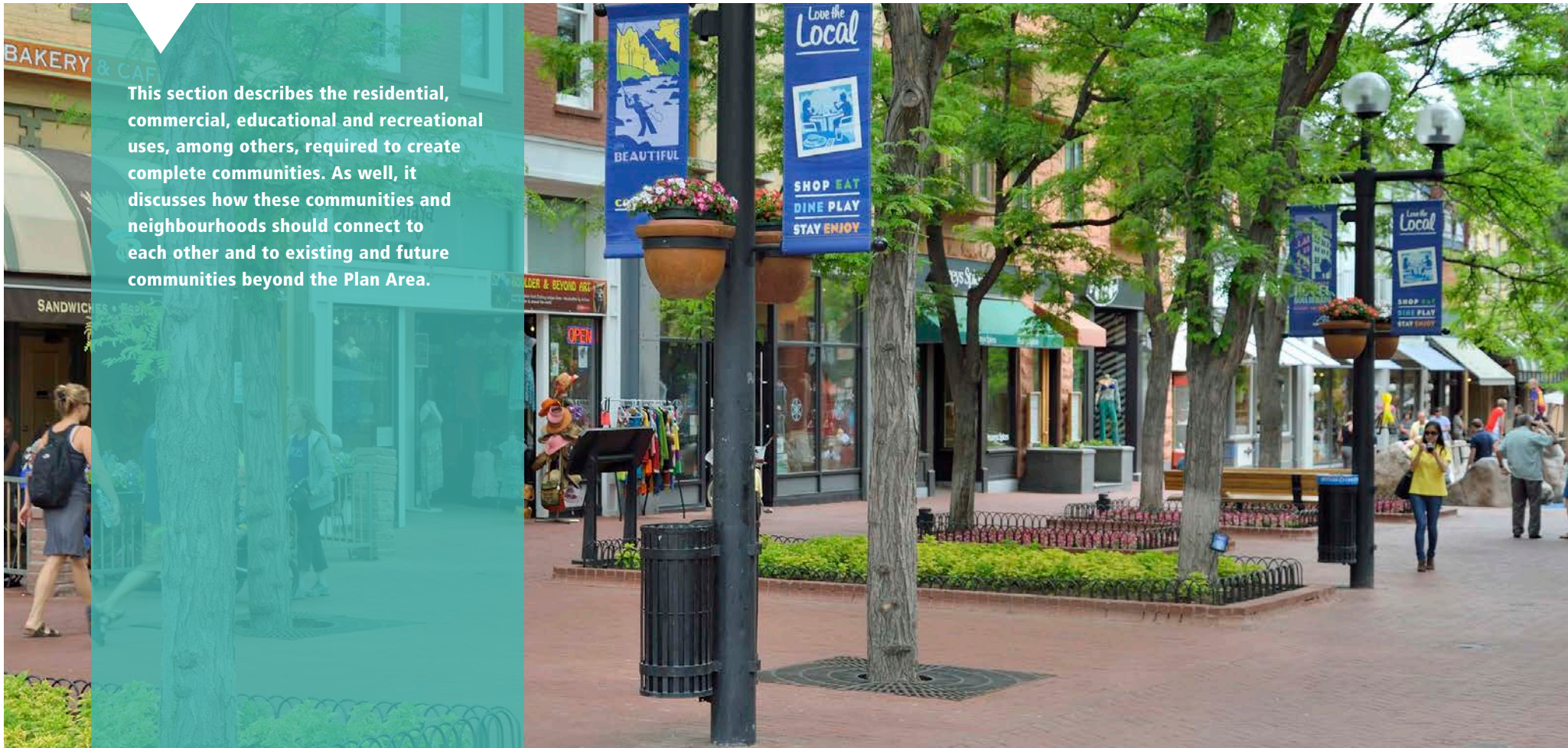
Regional Pathway



The Regional Pathway system provides cycling and walking connections within the Plan Area and to surrounding Communities.

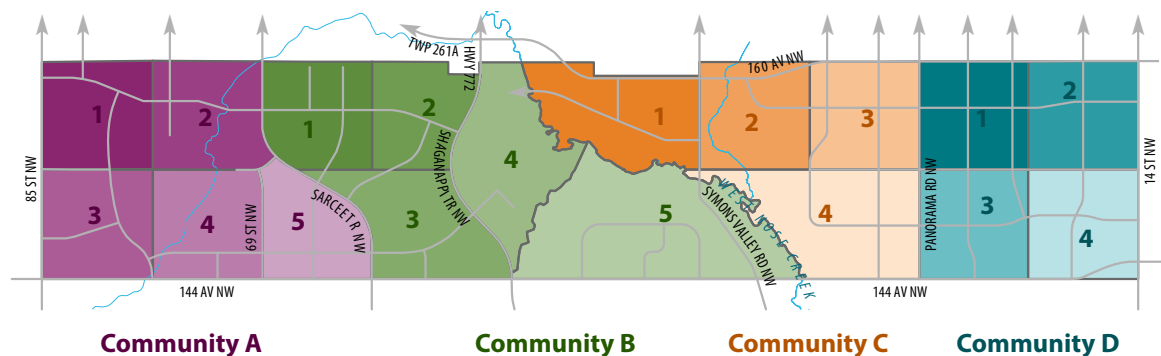
3 | COMMUNITY AND NEIGHBOURHOOD FRAMEWORK

This section describes the residential, commercial, educational and recreational uses, among others, required to create complete communities. As well, it discusses how these communities and neighbourhoods should connect to each other and to existing and future communities beyond the Plan Area.



Community and Neighbourhood Framework

MAP 4: COMMUNITIES AND NEIGHBOURHOODS



3.1 COMMUNITIES AND NEIGHBOURHOODS

INTENT

Provide the framework for the development of complete and distinct communities and neighbourhoods.

POLICIES

1. The Plan Area should create four Communities and 18 Neighbourhoods as shown on **Map 4: Communities and Neighbourhoods**.
2. Notwithstanding the New Community Planning Guidebook policy on neighbourhood size, some neighbourhoods may exceed the maximum size of 75 ha (185 ac) due to the significant area of natural features included within those neighbourhoods.
3. Opportunities for urban agriculture and community gardens are encouraged to retain and enhance the Plan Area's agricultural heritage and contribute to more complete communities.
4. Co-location and facility co-development of civic uses will be pursued where feasible and where it contributes to community development and cost savings.
5. Distinct community and neighbourhood identities should be established, where feasible, by designing the NACs to relate to unique features of the Plan Area such as coulees, glacial erratics, valley escarpments, sites of Aboriginal significance and other natural and cultural elements.

1290 ha

Complete Community: "A community that is fully developed and meets the needs of local residents through an entire lifetime. Complete communities include a full range of housing, commercial, recreational, institutional and public spaces. A complete community provides a physical and social environment where residents and visitors can live, learn, work and play." — Municipal Development Plan

Community A

317 gross hectares

Estimated

14,000 people, 3,000 jobs

Community B

360 gross hectares

Estimated

16,600 people, 3,700 jobs

Community C

353 gross hectares

Estimated

14,600 people, 1,600 jobs

Community D

260 gross hectares

Estimated

13,600 people, 2,600 jobs

3.2 COMMUNITY ACTIVITY CENTRES

A CAC serves multiple neighbourhoods by providing a mix of residential and non-residential uses integrated with an appropriate amount of amenity space.

INTENT

Facilitate a variety of compatible residential and non-residential uses within a comprehensively designed site.

POLICIES

General

1. CACs should be located as shown on **Map 3: Land Use Concept**.
2. Drive-thrus should not be permitted within a CAC.

Site Specific

West CAC

3. The west CAC should incorporate street-oriented development to create an attractive entrance to the CAC and node in conjunction with the adjacent High School Site, Emergency Response Station and NAC.
4. In order to strengthen pedestrian connectivity and integration with the adjacent community, opportunities should be explored to enable CAC development adjacent to Sarcee Trail NW to be street oriented by exploring the interface strategies proposed in section 3.14.
5. Parking facilities should not front Sarcee Trail NW or the east-west street on the north side of the CAC.
6. Loading and waste and recycling facilities should be designed to avoid negative visual impact on Sarcee Trail NW and the east-west street on the north side of the CAC.

Central CAC

7. Throughout redevelopment, the central CAC is encouraged to retain ties to its historical association as the site of Symons Valley Ranch, either symbolically or, if possible, by repurposing the existing building.
8. The central CAC should utilize multiple views overlooking Symons Valley and West Nose Creek to provide public and private amenity spaces. Private amenity spaces will use visually permeable fencing to enhance the perceived amount of open space.
9. Future development should be designed to respect the existing land topography and provide pedestrian connections into Symons Valley and with the surrounding area.
10. Buildings should provide entry into amenity areas overlooking Symons Valley.
11. Given the transit opportunities along 144 Avenue NW, strong pedestrian connections should be incorporated to provide direct access from the CAC to transit.
12. Parking facilities, loading areas and recycling and waste facilities should not be located between a building and the escarpment edge.

East CAC

The east CAC is located at the intersection of 160 Ave NW and Panorama Rd NW. Recent commercial and employment studies supported a larger than typical CAC. Increasing the CAC size provides more local employment opportunities for residents in the adjacent communities. This will ease traffic on 14 St NW during peak travel periods by reducing the number of residents leaving or returning to the east half of the Plan Area. The future civic and employment focused CAC will be planned given the surrounding context including consideration of both the

Centre St Major Activity Centre and adjacent Keystone employment areas to the east.

13. The CAC will activate the intersection of 160 Ave NW and Panorama Rd NW by bringing transit- supportive densities of people and jobs to the area.
14. Notwithstanding the New Community Planning Guidebook's regulations on site size and mix of uses, the minimum site size for the east CAC is 8 ha (19.8 ac) and the residential requirement for a CAC may be relaxed to accommodate a minimum 5.3 ha (13.1 ac) dedicated to commercial and employment uses.
15. To support transit along 160 Ave NW, the CAC development should be concentrated within a 5 minute walk (400 m) of the intersection of 160 Ave NW and Panorama Rd NW; extending the CAC beyond that distance may be considered if supported by a commercial market/employment study and the Approving Authority.
16. CAC development should be street-oriented along both sides of Panorama Rd NW
17. Due to the increased size requirements of the east CAC, a detailed concept plan for the CAC area shall be submitted in conjunction with the first development permit application within the CAC lands.
18. A detailed concept plan for the east CAC site shall
 - a) show the proposed
 - land use parcels and their design and pattern;
 - internal street network;
 - open space/Regional Pathway system
 - utility services;
 - transit plaza / stop(s);

Community and Neighbourhood Framework

- building locations within parcels;
 - landscape plan; and
 - pedestrian and cycling connectivity
- b) delineate convenient pedestrian connections to transit stops given the transit opportunities along 160 Ave NW.
- c) Indicate how development fronting both sides of Panorama Rd NW will be able to interface to ensure appropriate pedestrian connections and attractive urban design by creating a corridor of horizontal or vertical mixed uses.
- d) Include a location for the Recreation Facility / Library that enables it to integrate seamlessly with the residential and non-residential components of the site and be within 400 m of the transit plaza/stop(s).

19. The transit plaza should be integrated with the Green Corridor that connects Symons Valley to the future Keystone Hills Plan Area.
20. If development of the CAC proceeds prior to the Recreation Facility / Library, a shadow plan of those sites should be provided to ensure development will be complementary and integrated.
21. Loading and waste and recycling facilities should be designed to avoid negative visual impact from Panorama Rd NW or 160 Ave NW.

3.3 NEIGHBOURHOOD ACTIVITY CENTRES *

NACs are the focal points of neighbourhoods and areas of concentrated higher density residential development, formal open space, non-residential use and a transit stop. They assume different identities and characteristics based on their context.

INTENT

Differentiate the unique identities and characteristics of NACs based on local features.

POLICIES

General

1. NACs should be located as shown on **Map 3: Land Use Concept**.
2. Notwithstanding the New Community Planning Guidebook (NCPG), the 700 m walking distance from the surrounding Neighbourhood Area may be exceeded in cases where the neighbourhood is larger or an irregular shape due to natural features.
3. NACs located next to a CRC should be integrated with the CRC and act primarily as the pedestrian-focused area. The multi-residential component of the NAC may be located in the CRC.
4. Notwithstanding the NCPG requirement to have development on all sides of an amenity space, where opportunities exist NACs should provide views and/or convenient pedestrian and bicycle connections from its public amenity space to nearby coulees.
5. Drive-thrus should not be permitted in a NAC.

NEIGHBOURHOOD ACTIVITY CENTRE

NEIGHBOURHOOD FOCAL POINT

central amenity space + multi-residential + non-residential use + transit stop

local **goods** and **services**

700 m walking distance from all areas of the neighbourhood

NACs contain an amenity space, higher density housing and non-residential use.



Neighbourhood-Specific NAC Policies

6. Neighbourhoods A1 and A3: These NACs are provided in addition to the adjacent Neighbourhood Corridor and will ensure a NAC sized node at each location.
7. Neighbourhoods B4 and D4: These NACs should be designed comprehensively to create unique and attractive gathering spaces by
 - a) integrating the Community Association Site with the amenity space; and
 - b) connecting with the adjacent Regional Pathway. Green Corridor and Environmental Reserve.
8. Neighbourhood C1: The NAC identified within Symons Valley adjacent to Mountain View Road should
 - a) provide a public amenity space incorporating views of Symons Valley and West Nose Creek;
 - b) be integrated or connect directly with the intersection of the Green Corridor and Regional Pathway; and
 - c) provide interpretive signage which may include, but is not limited to Aboriginal, geological, and geographical history, as well as, place making and way finding for the Symons Valley system.
9. Neighbourhoods C4 and D1: These two NACs may be adjusted to locate along Panorama Rd NW to create a neighbourhood corridor development without requiring an amendment to the ASP.

3.4 NEIGHBOURHOOD CORRIDORS

INTENT

Stitch together adjacent neighbourhoods with a Neighbourhood Corridor using a blend of various housing types and commercial uses fronting onto the street.

POLICIES

1. The Neighbourhood Corridor should be located as shown on **Map 3: Land Use Concept**.
2. Buildings on the JUS and Community Association Site should front the Neighbourhood Corridor street with off-street parking and/or drop-off areas located in the rear.
3. The intersection of the Neighbourhood Corridor with 144 Ave NW should be comprehensively designed with the adjacent employment area to create a gateway entry into the community.
4. The intersection at the north end of the Neighbourhood Corridor should include a landmark or multi-storey development on the north side to create an attractive terminating vista for the Neighbourhood Corridor.
5. Drive-thrus shall not be accessed from the neighbourhood corridor to maintain continuous pedestrian connections.
6. Loading and waste and recycling facilities should be designed to avoid negative visual impact on the neighbourhood corridor.
7. Townhouses or rowhouses extending west from the centre of the neighbourhood corridor along both sides of the collector street is encouraged to create an attractive west entry to the neighbourhood corridor.

NEIGHBOURHOOD CORRIDOR

3.5 COMMUNITY RETAIL CENTRES

**INTENT**

Provide local goods and services in vibrant and attractive centres serving one or more communities with potential for future Intensification.

POLICIES

1. CRCs should be located as shown on **Map 3: Land use Concept**.
2. Buildings within the CRC sites should
 - a. front two streets whether external or internal; and
 - b. include public entrances from buildings onto the sidewalk.
3. CRCs should be comprehensively planned to integrate:

Community and Neighbourhood Framework



- a. small and medium sized retail uses, office uses, community uses and other similar uses; and
- b. an amenity space
- 4. CRCs may contain:
 - a. multi-residential development;
 - b. a community-scaled food store;
 - c. cultural, recreational and institutional uses; and
 - d. other compatible uses
- 5. A CRC should meet the following intensity requirements
 - a. provide 1,900 m² to 9,300 m² (20,450 ft² to 100,100 ft²) of retail uses; and
 - b. A floor area ratio (FAR) of a minimum 0.3.
- 6. A CRC should be designed to evolve with increased intensity in the future through use of
 - a. a fine grain block structure on public and private streets to allow for future intensification; and
 - b. site design that allows for future infilling and structured parking.
- 7. Publically accessible amenity space within a CRC will be provided and maintained privately with the following characteristics:
 - a. adjacent retail frontage or other uses that activate the space;
 - b. prominent location and connections to bicycle and pedestrian infrastructure; and
 - c. a mix of hardscaped plazas, landscaped green areas and widened walkway areas that could accommodate outdoor retail uses and patio uses.

3.6 EMPLOYMENT AREA

INTENT

Provide a variety of office, light industrial uses, and supportive goods and services in a form that accommodates access by all modes of travel.

POLICIES

1. The Employment Area should be located as shown on **Map 3: Land use Concept**.
2. The predominant land use should be employment uses achieving a minimum 50 jobs per gross developable hectare.
3. Limited retail uses, that provide goods and services to employees and business clients, and that are complementary to the predominant employment uses, may also be allowed. Retail uses serving the surrounding Neighbourhood Area should be directed to the Neighbourhood Corridor and NACs in proximity to the Employment Area.
4. A Market Impact Assessment may be required at the Outline Plan/Land Use Amendment stage to demonstrate the feasibility of employment uses and the effect they would have on the Plan Area's CACs, CRCs, NACs and employment areas in proximity to the Plan Area.
5. Where it is determined by The City, in consultation with the landowner, that employment uses as required by Policy 3.6.2 are not viable or cannot be developed under the requirements of Policy 3.6.4 above, residential, institutional and retail uses should be allowed without requiring an amendment to this ASP.
6. Street oriented development should be a priority with physical and visual permeability for people to access the adjacent Green Corridors, Regional Pathways, transit stops, Neighbourhood Corridor to the west and NAC to the east.

EMPLOYMENT AREA



JOINT USE SCHOOL SITES



3.7 JOINT USE (SCHOOL) SITES

INTENT

Provide locations for JUS and JJUS for elementary and junior/middle schools and public outdoor recreation areas to serve the Plan Area. Appendix B: Joint Use Sites and Municipal Facilities Requirements provides non-statutory guidance on school site sizes and assignments.

POLICIES

1. JUS should be located as shown on **Map 3: Land Use Concept**.
2. JJUS, which accommodate two schools, should be located as shown on **Map 3: Land Use Concept**.
3. School building envelopes should be located along a street abutting the site. Buildings should offer direct pedestrian access to primary entrances from the sidewalk without crossing a parking lot or drive aisle.
4. It may be necessary to reduce the size of a site where there is not enough Municipal Reserve land for other uses, and/or where topographical constraints limit the ability to provide an adequate site. This will be assessed at the Outline Plan/Land Use Amendment stage.

3.8 HIGH SCHOOL SITES

INTENT

Provide for up to two High School Sites that are well integrated into the design of the community. Walking, cycling and transit will be the preferred travel mode choices to serve High School Sites.

POLICIES

1. High School Sites should be located as shown on **Map 3: Land Use Concept**.
2. Each High School Site should require from 8 to 9.3 ha (20 to 23 ac) of land.
3. Each High School Site should have direct access to a Regional Pathway and a transit stop to minimize mid-block crossings and traffic conflicts.
4. Enhanced pedestrian facilities (for example, wider sidewalks) and enhanced transit waiting amenities (minimum standard to large shelter(s)) should be provided on adjacent streets identified as having transit service.
6. The west high school should front or flank the adjacent collector streets and locate parking and sports fields in behind to contribute to an activated intersection with the adjacent Activity Centres.
7. The east high school should front onto Panorama Rd NW to provide convenient access for people arriving by transit along 144 Ave NW. Entrances and exits for vehicles on Panorama Rd NW should be avoided if feasible.
8. It may be necessary to reduce the size of a site where there is not enough Municipal Reserve land for other uses, and/or where topographical constraints limit the ability to provide an adequate site. This will be assessed at the Outline Plan/Land Use Amendment stage.

Community and Neighbourhood Framework



3.9 INSTITUTIONAL / NEIGHBOURHOOD AREA

The Bears paw Christian School, shown as “Institutional / Neighbourhood Area” on Map 3: Land Use Concept is a 15.7 ha (39 ac) site that provides private Christian-based learning for students, as well as a multi-purpose fitness facility.

INTENT

Provide for alternative uses should the existing institutional use cease operating.

POLICIES

1. Acceptable alternative uses for the Institutional/Neighbourhood Area as indicated on **Map 3: Land Use Concept** are those uses contained within a Neighbourhood Area.
2. The private school site may redevelop to Neighbourhood Area uses subject to approval of an Outline Plan/Land Use Amendment without requiring an amendment to this ASP.
3. The ASP supports the retention of the Bears paw Christian School.



3.10 RECREATION FACILITY/ LIBRARY



INTENT

Provide for a combined multi-use Recreation Facility/Library that will function as a community gathering space and be responsive to the recreational, leisure and cultural needs of the residents living within and near the Plan Area.

POLICIES

1. A Recreation Facility/Library should be located approximately as shown on **Map 3: Land Use Concept**.
2. The site should require a minimum of 5.3 ha (13 ac) of land.
3. Opportunities to share facilities, parking and fields with the adjacent Community Association Site should be explored at the Outline Plan/Land Use Amendment stage in pursuit of more efficient use of Municipal Reserve land.

4. Integrating the facility with the adjacent CAC is encouraged. Methods include but are not limited to
 - a. shared access and building structure;
 - b. pedestrian and cyclist access ;
 - c. shared parking lots; and
 - d. shared public and private amenity area
5. A Regional Pathway will have a direct connection to the facility's primary entrance.
6. A transit stop will be adjacent to the facility's primary entrance.
7. Loading and waste and recycling facilities should be designed to avoid negative visual impact from Panorama Rd NW.
8. Should the JJUS in Neighbourhoods C2 and C3 be downsized or removed, the Recreation Facility / Library should be comprised of creditable Municipal Reserve.

EMERGENCY RESPONSE STATION



COMMUNITY ASSOCIATION SITE



COMMUNITY GARDEN



3.11 EMERGENCY RESPONSE STATION **E**

INTENT

Provide for an Emergency Response Station and routes connecting stations outside the Plan Area to ensure proper coverage for emergency services.

POLICIES

1. The Emergency Response Station should be located as shown on **Map 3: Land Use Concept**.
2. The Emergency Response Station may be co-located with or integrated within a multi-use facility or development.
3. Within any multi-use development the Emergency Response Station requires a dedicated 0.8 ha (2 ac) site.
4. Developers are encouraged to engage The City regarding the location and size of the Emergency Response Station parcel at the initiation of the Outline Plan/Land Use Amendment stage.

3.12 COMMUNITY ASSOCIATION SITES **C**

INTENT

Provide for future Community Association (CA) sites, which could include recreation surfaces and fields, community gardens, and other community structures.

POLICIES

1. Four Community Association sites should be allocated approximately as shown on **Map 3: Land Use Concept**.
2. Co-locating CA sites with uses on adjacent sites is encouraged. Such sites include but are not limited to the Emergency Response Station, Joint Use Sites, Recreation Facility/Library, NACs or CACs. In such instances, a CA Site may be relocated without an amendment to this ASP.
3. CA Sites should be within 400 m of a transit stop.
4. CA Sites should have direct access to a Regional Pathway or Green Corridor.

3.13 COMMUNITY GARDENS

Community gardens can play an integral role in the development of neighbourhood identity. Opportunities for social interactions with neighbours, food education for children, low-impact physical activity, and local, sustainable food sources are provided when community gardens form part of a community's fabric. All of this contributes to the long-term resiliency of communities.

INTENT

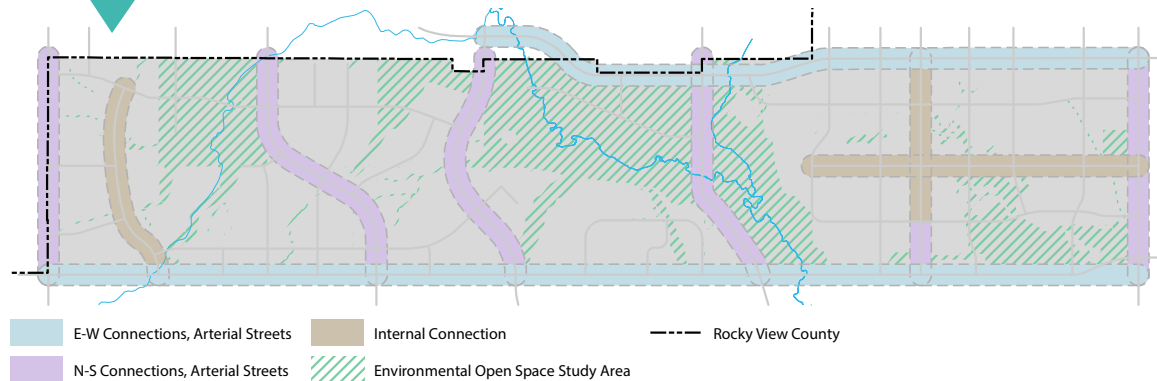
Provide opportunities for community members to grow their own food on public and/or private sites, participate in urban agriculture and have access to locally grown food in order to establish and celebrate the Plan Area's reputation as a destination for locally produced fresh food. The intent is also to increase people's access to healthy and self-reliant food sources in their neighbourhoods.

POLICIES

1. Subject to the requirements of the Land Use Bylaw and other City of Calgary bylaws,

Community and Neighbourhood Framework

FIGURE 1 Identifies areas where interface planning will greatly benefit the area.



interim or permanent use of land for the purposes of urban agriculture is encouraged.

- Private communal gardening spaces and/or edible landscaping opportunities, such as fruit bearing trees and shrubs, should be incorporated into multi-residential developments for residents/tenants of the site.
- CA Sites are encouraged to provide community garden opportunities.
- The central amenity space in a NAC may contain areas for community gardens and edible landscaping.
- Subject to the requirements of the Land Use Bylaw and other City of Calgary bylaws, public buildings, such as the Emergency Response Station, are encouraged to incorporate edible landscaping opportunities, green roofs or roof-top gardens, which can help reduce energy use and may provide locally grown produce for building occupants or the wider community.

3.14 INTERFACES WITHIN AND ADJACENT TO THE PLAN AREA

The Plan Area's south boundary, 144 Ave NW, offers a tremendous opportunity to complete a corridor with nodes of intensified development that supports Primary Transit Service. Several activity nodes are already established along the south side of 144 Ave NW through the development of the Symons Valley Community Plan.

The Plan Area's north boundary, 160 Ave NW offers an opportunity to initiate a corridor of intensified node development to support primary transit service. It can be incorporated in the future when ASP level work for the area north of 160 Ave NW is undertaken.

The interface between buildings and streets is an important factor in determining the character of that street. Street-oriented development should be provided at each

node and intersection. The different uses and the nature of the surrounding neighbourhoods will impact the way this interface should be treated.

The north-south arterial streets, as indicated on Figure 1, within the Plan Area will function as unifying elements to integrate the adjacent communities.

INTENT

Provide a selection of design strategies and scenarios to choose from at the Outline Plan/Land Use Amendment stage to integrate land uses and transportation networks within the Plan Area and between adjoining communities.

POLICIES

- Lands identified as Neighbourhood Area adjacent to the intersections listed below should consist of multi-residential uses, mixed-use (residential/commercial) and/or commercial uses to support higher frequency transit service and limit the need for noise walls along arterial streets:
 - 144 Ave NW and 85 St NW;
 - 144 Ave NW and Shaganappi Trail NW;
 - 144 Ave NW and Sage Valley Dr NW;
 - 144 Ave NW and Panorama Rd NW;
 - 144 Ave NW and 14 St NW; and
 - 160 Ave NW and 14 St NW.
- Land uses adjacent to areas identified in 3.14.1 and interface areas identified in Figure 1 as north-south and east-west connections, should be varied so that a continuous application of a noise wall is not required.

3. Where noise walls are required, they should be designed to incorporate pockets of vegetation, consist of durable, high quality materials and incorporate selected areas of articulation to blend with the surrounding context.
4. Noise walls should be avoided in proximity to transit stops unless there is direct access from the transit stop into the adjoining Neighbourhood Area.
5. The following street design strategies may be explored in coordination with Transportation and Parks to mitigate the need for noise walls:
 - a. multi-way boulevards: explore this option where adjacent land uses would benefit from fronting an arterial street such as commercial uses and multi-residential uses
 - b. window streets: explore this option where residential uses are located along arterial streets to allow permeability and avoid noise walls. A local street and a treed boulevard buffer the residential uses from the adjacent arterial street and a pedestrian walkway connects the neighbourhood to the arterial street sidewalk; and
 - c. landscaped berms: used to provide noise attenuation for residential private amenity areas.
6. Buildings should front the collector streets where possible.

3.15 INTERFACE WITH NATURAL AREAS

Natural areas in this ASP are areas within the Environmental Open Space Study Area that end up being preserved following the Outline Plan / Land Use Amendment stage. These natural areas should become community identifiers and places for citizens to decompress and recreate. In Glacier Ridge, such areas include Symons Valley and its adjacent escarpments, West Nose Creek, Coulees and glacial erratics. These areas also provide habitat and travel corridors for animals such as deer and birds.

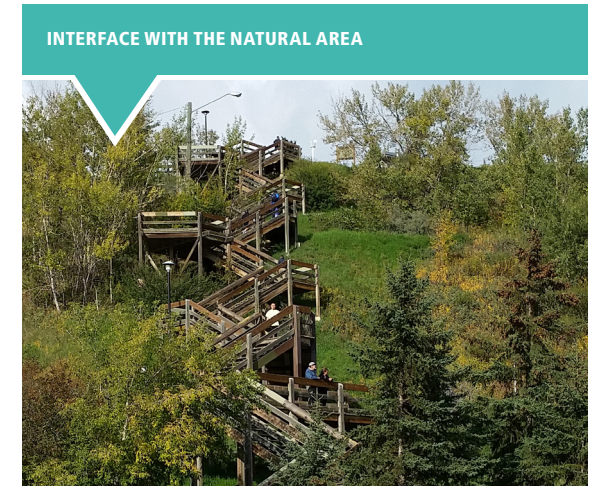
INTENT

Provide outstanding social benefit of natural areas by ensuring public access and views into them and celebrate the existing natural areas.

POLICIES

Residential

1. Design of residential developments adjacent to Symons Valley, West Nose Creek and other preserved natural areas should consider the following:
 - a. visually permeable fencing to increase the perceived amount of space, such as but not limited to, chain-link, post and cable, and wrought iron, or vegetation (e.g. hedges);
 - b. connecting internal pathways of multi-residential developments to nearby Regional Pathways and Green Corridors;



- c. strategic design of public access into and around coulees, streams, escarpments and other retained features, to allow for the buffering of habitat wildlife within and along these retained features;
- d. integrating multi-residential sites with adjacent natural areas by incorporating design elements that provide the residents access and views to the natural areas; and
- e. providing access and views from Neighbourhood Areas by establishing a permeable block design that allows for green pockets to open onto adjacent natural areas.

Commercial

2. Design of commercial areas adjacent to Symons Valley, West Nose Creek and other preserved coulees should

Community and Neighbourhood Framework

- a. feature public amenity space that is adjacent to or within view of the natural areas and connected to Regional Pathways and Green Corridors;
- b. allow multiple direct pedestrian connections from commercial uses to adjacent Regional Pathways and/or Green Corridors;
- c. orient buildings so that parking, loading, and recycling and waste areas are screened from natural areas;
- d. locate off-street parking areas away from the edges of natural areas;
- e. include opportunities for public and private patios or seating areas adjacent to retained natural areas; and
- f. minimize negative impacts on environmentally significant areas.

3.16 INTERFACE WITH ROCKY VIEW COUNTY

The Glacier Ridge Plan Area abuts Rocky View County along the north and west boundaries. Interface principles and transition tools outlined in Section 6.0 of the Rocky View County/City of Calgary Intermunicipal Development Plan (IDP) will be applied between proposed urban development and existing country residential development to achieve appropriate transitions across the municipal boundary.

INTENT

Ensure that Rocky View County and The City of Calgary work collaboratively to develop coordinated planning for geographical areas of mutual interest.

POLICIES

West Boundary

1. Alternative design options should be considered to transition from existing and future Rocky View County acreages and gravel extraction operations on the west side of 85 St NW to urban-style development in the Plan Area.
2. In accordance with the IDP, transition to an arterial street cross-section will be implemented over time in consultation with Rocky View County administration.

North Boundary

3. The IDP identifies land north of the Plan Area as a future City of Calgary growth area. Therefore, development along the Plan Area

INTERFACE AREAS WITH ROCKY VIEW COUNTY NEEDS TO CONSIDER EXISTING AND FUTURE USES



boundary should provide opportunities for attractive and functional integration with urban-style development that may occur in the future north of the Plan Area. Elements to achieve such integration include but are not limited to

- a. streets, pathways and open spaces that could be extended in the future to north of the Plan Area; or
 - b. a single loaded street adjacent to the Plan Area boundary to create an attractive edge to integrate future urban development.
4. Design of Neighbourhood Areas and sections of 160 Ave NW adjacent to existing acreages along the north boundary will be required to minimize nuisances for existing acreage owners. Edge conditions should be defined by a variety of different methods including local streets or green spaces that will act as buffers.

4 | OPEN SPACE NETWORK

The escarpment areas of Symons Valley and the West Nose Creek corridor are the signature natural features of this Plan. Preservation of environmentally significant areas, where possible, and incorporation into neighbourhoods via pathways and green corridors are described in this chapter.



4.1 SYMONS VALLEY AND WEST NOSE CREEK

Symons Valley is home to the West Nose Creek. The valley provides opportunities for recreational amenities and pathway connections within the Plan Area and to the south, where West Nose Creek joins Nose Creek at the junction of Beddington Trail and Deerfoot Trail.

West Nose Creek and its tributaries are part of the Nose Creek Watershed and subject to the Nose Creek Watershed Water Management Plan.

INTENT

Provide for Symons Valley to become the signature feature of the Plan Area, offering recreation opportunities, access to West Nose Creek and cross community connections.

POLICIES

1. Development in Symons Valley should comply with the policies of the Nose Creek Watershed Water Management Plan.
2. Subject to the requirements of the Land Use Bylaw and other City of Calgary bylaws, opportunities for urban agriculture on public lands and private sites should be explored at the Outline Plan/Land Use Amendment stage to increase opportunities for local food production.
3. In accordance with Section 5.3 Streets, Symons Valley Road west of Mountain View Road should be closed and a new Regional Pathway in the vicinity created to restore and enlarge a featured natural open space destination of the Plan Area.
4. Regional Pathways will provide convenient connections north-south and east-west for bicycle and pedestrian commuters.
5. Green Corridors will provide access to key features and viewpoints of Symons Valley.

EAST ESCARPMENT EDGE OF SYMONS VALLEY



SANDSTONE OUTCROPPINGS



FIGURE 2 Disturbed Escarpment Lands south of Mountain View Road.



6. Where feasible and in accordance with recommendations of the Province and/or a Historical Resources Impact Assessment sites containing historical resources related to Aboriginal heritage in the area should be preserved and commemorated.
7. A connection from Symons Valley to Charles Butler Memorial Park (shown on Map 2: Plan Area Attributes), currently in Rocky View County but identified in the IDP as part of The City of Calgary's growth areas, should be considered so that it could be integrated into the Regional Pathways of the Plan Area.

4.2 ENVIRONMENTAL OPEN SPACE STUDY AREA

The Environmental Open Space (EOS) Study Area identifies environmentally significant areas that require further study and refinement at the Outline Plan/Land Use Amendment stage. Where lands do not qualify as Environmental Reserve, development may occur. Lands within the EOS Study Area have the potential to be incorporated into neighbourhoods to provide for amenity value and ecological services. Refer to Appendix A Biophysical Background Information for more information about the Plan Area.

INTENT

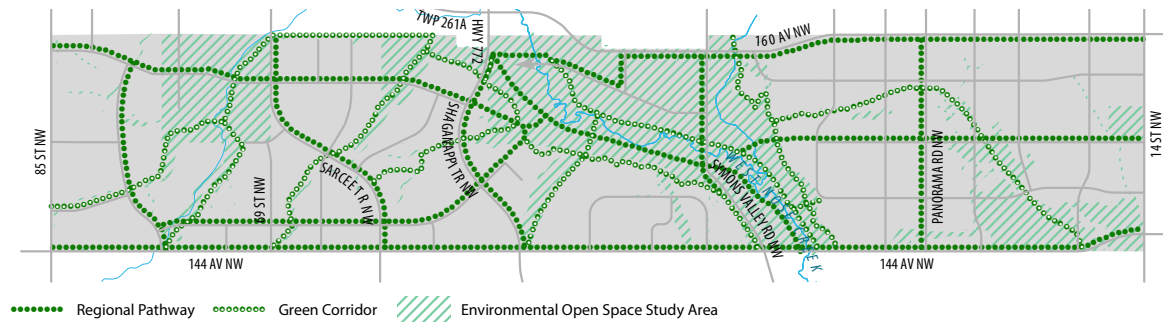
Provide for natural amenities and ecological services within the Plan Area by retaining environmentally significant areas and undevelopable land in a connected ecological network.

POLICIES

1. Sites that are identified as EOS but do not qualify as Environmental Reserve should be protected where feasible by incorporating them into the neighbourhood through site and building designs, and the strategic location of Municipal Reserve land.
2. Where a street is proposed to cross Green Corridors or natural areas including Coulees and West Nose Creek, studies may be required at the Outline Plan/Land Use Amendment stage to:
 - a. ensure that any potential changes to existing natural conditions are minimized;
 - b. consider the most appropriate technique to maintain the ecological quality of the area; and
 - c. mitigate negative impacts, both during construction and in the final design.

Open Space Network

MAP 5: REGIONAL PATHWAYS AND GREEN CORRIDORS



Escarpment Disturbance

At the existing intersection of Mountain View Road and Symons Valley Road, there is evidence of human disturbance to the escarpment south of the intersection (see Figure 2: Disturbed Escarpment Lands). The disturbance creates a break in continuity of the escarpment and future Green Corridor and should be repaired where feasible.

3. Where Environmental Open Space (EOS) lands have been disturbed prior to Outline Plan/Land Use Amendment, land owners and The City are encouraged to restore the lands through the use of habitat restoration techniques in accordance with City requirements.

4.3 REGIONAL PATHWAYS AND GREEN CORRIDORS



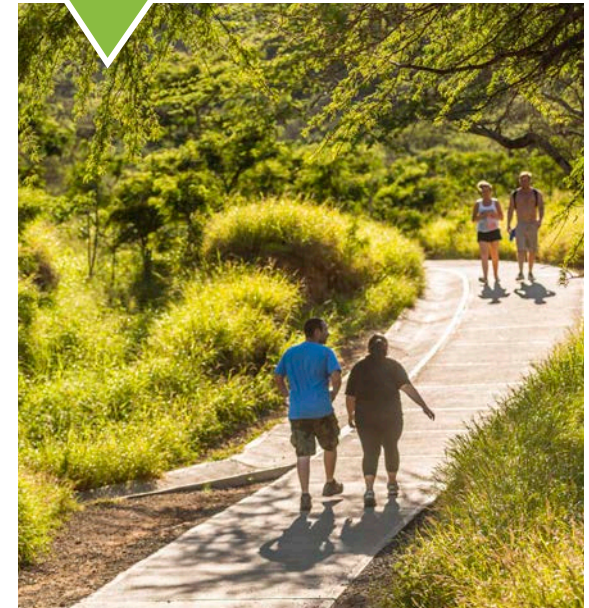
INTENT

Provide pedestrian and bicycle connectivity within the Plan Area and connect it to existing and future urban areas adjoining the Plan Area.

POLICIES

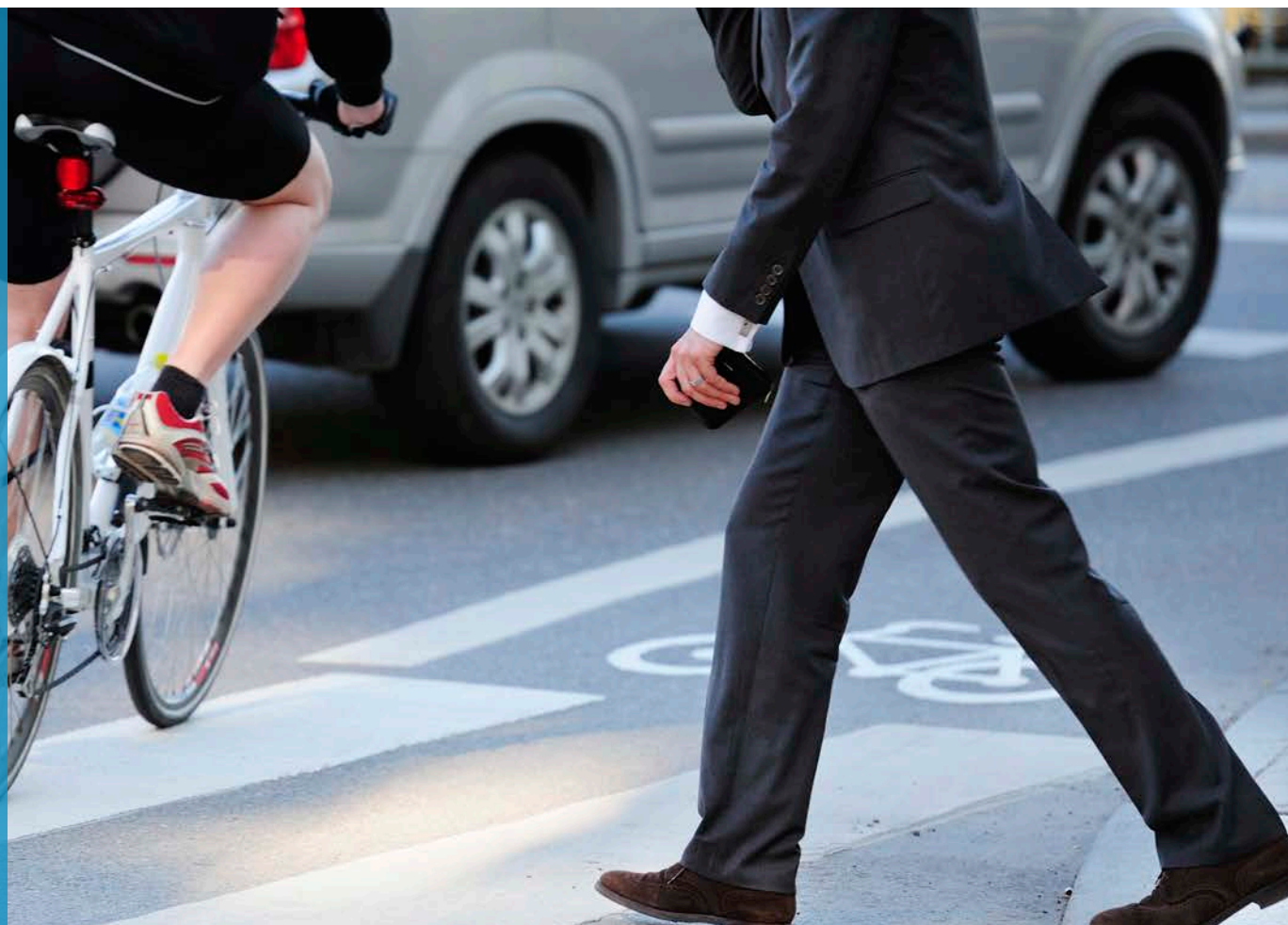
1. The Regional Pathway and Green Corridor network should be located as shown on **Map 5: Regional Pathways and Green Corridors**.
2. Where portions of the Environmental Open Space Study Area are not retained, the presence of the Green Corridor may be removed without amendment to this ASP provided that:
 - i. a Regional Pathway is provided within approximately 200 metres of where the Green Corridor is shown on **Map 5: Regional Pathways and Green Corridors**; and
 - ii. those Environmental Open Space Study Areas that are retained are still connected to the pathway network.
3. Alignment of Regional Pathways may be refined but not removed at the Outline Plan/Land Use Amendment stage.
4. The alignment and/or necessity of the Green Corridor between Sarcee Trail NW and Shaganappi Trail NW along the north boundary of the Plan Area will be reviewed at the Outline Plan/Land Use Amendment stage.
5. A Green Corridor should connect to Charles Butler Memorial Park in Rocky View County if agreed to by The City and Rocky View County at the Outline Plan/Land Use Amendment.

PEDESTRIAN AND BICYCLE CONNECTIVITY



5 | MOBILITY

Providing routes for residents to connect to local goods and services, schools, parks as well as significant employment areas just outside the Plan Area is essential to its success. This chapter describes how pedestrians, cyclists, transit users and motorists will be accommodated as they move about the Plan Area and beyond.



5.1 PEDESTRIANS AND BICYCLES

INTENT

Provide for efficient and attractive routes to encourage increased walking and cycling in neighbourhoods.

POLICIES

1. Convenient bicycle and pedestrian connections from CACs and NACs to preserved coulees should be provided where opportunities exist.
2. Shaganappi Trail NW is an important north-south street for the Plan Area and beyond. To ensure great east-west pedestrian and cyclist connectivity, options should be explored to take advantage of the Plan Area's topography to provide a raised crossing where the street comes down the escarpment before connecting to Highway 772. This would enhance pedestrian and cyclist safety and efficiency of movement for vehicles.

There is a tradeoff between a linear transit route and capturing population / area within a 400 m radius of transit. The preference is for a linear route.



5.2 TRANSIT

Calgary Transit has identified two levels of service that will be supported in the Glacier Ridge ASP: Primary Transit Network (PTN) service and local transit service. Specific routes are not identified as they will evolve over the build-out of the Plan Area and ultimately change to accommodate growth in adjacent areas. Instead, corridors are identified with a corresponding level of service as indicated on **Map 6: Transit Network**.

The timing and design of both interim and ultimate transit routes, including Bus Rapid Transit service, will be determined by Calgary Transit and is subject to ridership demand in the plan area and available funding for service

INTENT

Provide direct, convenient and efficient transit service both within the Plan Area and connecting to the rest of Calgary to encourage increased transit use.

POLICIES

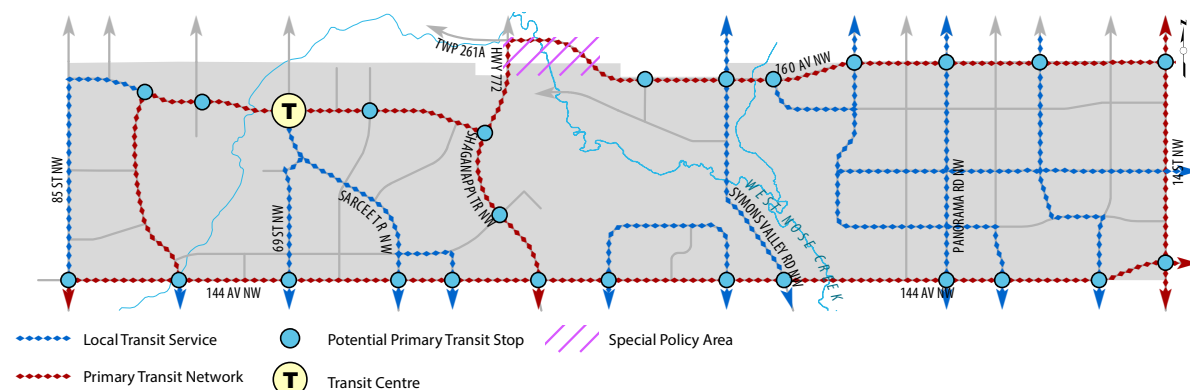
Primary Transit Network

1. PTN routes provide a high level of service in terms of frequency, speed, directness, and connectivity. They do not imply a particular type of technology (bus, LRT, etc.) or infrastructure (mixed traffic, transit-only lanes, dedicated streets, etc.). Potential PTN stop locations are shown in **Map 6: Transit Network** and are located to serve major land use nodes, connecting routes, and intersections with collector or arterials streets.
2. PTN stops should be spaced a minimum of 400m apart with 800m preferred where intersection spacing and land use permit.

3. Higher intensity land uses should be located in close proximity to potential PTN stops shown on **Map 6: Transit Network**.
4. Local transit services should connect through adjacent communities outside of the Plan Area including but not limited to: Evanston; Sage Hill; and Nolan Hill.

Connectivity

5. The PTN shall provide direct connections within the Plan Area:
 - a) between CACs, High School Sites, the Recreation Centre/Library, and Employment Areas; and
 - b) across West Nose Creek between the east and west sides of the Plan Area on 144 Ave NW and 160 Ave NW.
6. The PTN shall provide direct connections between the Plan Area and:
 - a) the Red Line and Green Line of the LRT network;
 - b) Sage Hill Transit Hub; and

MAP 6: TRANSIT NETWORK

c) Keystone ASP and Nose Creek ASP areas.

Local Transit Service

7. Local transit services shall connect to:
 - a) Adjacent communities (Evanston, Sage Hill, Nolan Hill, and future communities); and
 - b) PTN routes and/or transit hubs (e.g., Sage Hill Transit Hub).

Transit Centre

8. A transit centre will be required as conceptually shown on Map 6 Transit Network. Specific requirements for this facility will be determined at the Outline Plan/Land Use Amendment stage.
9. Opportunities should be explored to co-locate the transit centre with other uses.

5.3 STREETS**INTENT**

Provide a direct, convenient street network that is sensitive to the topography of the area and that minimizes environmental impacts on the preserved coulees.

POLICIES

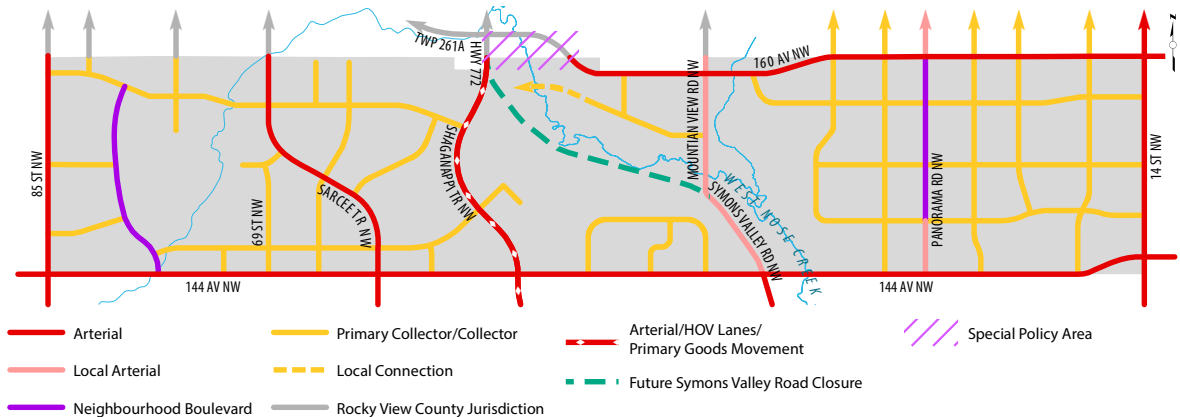
1. The street network should be generally located as shown on **Map 7: Street Network**. Alternate classifications for the two north-south collector streets, adjacent to Panorama Road NW, between 144 Ave NW and 160 Ave NW, may be approved at the Outline Plan/Land Use Amendment stage without requiring an amendment to this ASP if a Transportation Impact Assessment supports this change.

Regional Transportation Network Integration

The Glacier Ridge Plan Area benefits from good connections to the provincial highway network. Four north-south arterial streets through Glacier Ridge (Sarcee Trail NW, Shaganappi Trail NW, Symons Valley Rd, and 14 St NW) have interchanges with Stoney Trail within a few kilometres to the south; as well a fifth street (85 St) provides indirect access. To the north, the Plan Area currently connects to Highway 566 via Symons Valley Road/ Highway 772. Parts of Highway 772 and Highway 566, along with Symons Valley Road from Stoney Trail to the north City boundary, are currently designated (as of 2015) as a high load corridor for oversized trucks. Stoney Trail, Highway 566 and Highway 772 are under the jurisdiction of Alberta Transportation.

2. Full build-out of the Glacier Ridge and North Regional Context Study area will require a number of major transportation network improvements. These improvements include infrastructure under the jurisdiction of Alberta Transportation, Rocky View County and The City of Calgary. Decisions regarding the regional transportation network will be made in consultation with these jurisdictions as appropriate. In accordance with section 7.2 Growth Management, the need for major transportation network improvements will be reviewed at the Growth Management Overlay removal and Outline Plan/Land Use Amendment stage for each proposal in Glacier Ridge. In the case that the infrastructure components listed below are not funded or in place, the transportation infrastructure components of a growth management overlay removal process may be deemed to be satisfied if alternatives are determined that are to the satisfaction of the City through the completion of a TIA.

MAP 7: STREET NETWORK



- a. The following currently unfunded improvements to Alberta Transportation infrastructure are subject to this review:
 - i. widening of Highway 566;
 - ii. improvements to Highway 772
- b. The following improvements to Alberta Transportation infrastructure are included in the The City's 10 year plan
 - i. interchange at Stoney Trail and 14 Street NW (the north ramps are already constructed);
 - ii. upgrades to Stoney Trail and Shaganappi Trail interchange;
- c. The following improvements in Rocky View County will be subject to this review:
 - i. upgrading Township Road 261A to accommodate increased traffic from Glacier Ridge and a four-leg intersection with Shaganappi Trail; and
- ii. construction of a connection between the future west limit of 160 Ave NW and Township Road 261A (see Special Policy Area below)
- d. The following City of Calgary infrastructure projects within the Plan Area, are currently unfunded (as of 2015), and will be subject to this review:
 - i. 144 Ave NW bridge over West Nose Creek;
 - ii. 160 Ave NW bridge over West Nose Creek (may be physically located north of City of Calgary boundary); and
 - iii. improvements to the connection from 85 St NW to Country Hills Boulevard NW.
- e. The following represents infrastructure outside of the Glacier Ridge Plan Area. These projects connect the GRASP residential area to the major employment locations within the NRCS area. If unfunded at the time of an application in GRASP, these are subject to this review:
 - i. construction of 160 Ave NW between Deerfoot Trail (Highway 2) and 14 St NW;
 - ii. widening of 144 Ave NW between 14 St NW and its eastern limit west of Deerfoot Trail (Highway 2);
 - iii. upgrading of Panorama Road NW to a paved street between 160 Ave NW and Highway 566; and
 - iv. upgrading of 14 St NW to a paved street between 160 Ave NW and Highway 566.
- 3. Any transportation improvements determined to be required to support each specific Outline Plan/Land Use Amendment proposal must be addressed to the satisfaction of The City of Calgary.

Special Policy Area

A Special Policy Area is shown on **Map 7: Transportation Network**, in the vicinity of the future intersection of 160th Ave and Highway 772. The street connection in the Special Policy Area is essential to development within the Glacier Ridge Plan Area. The area is further complicated by the Plan Area and City boundary in the immediate vicinity. Practically, the preferred alignment is for 160th Ave to create a 4-way intersection with Township Road 261A. To create this connection, street and intersection design will need to be completed to the satisfaction of each of: The City of Calgary, Alberta Transportation, and Rocky View County

4. Further transportation planning and design shall be required within the Special Policy Area identified on **Map 7: Street Network** prior to the Outline Plan/Land Use Amendment stage for neighbourhood areas that require the 160 Ave NW connection to Highway 772.
5. Any development in the Glacier Ridge Plan Area shall be limited to that which can be supported, in the City's sole discretion, by the capacity of existing transportation infrastructure until such time as a 160 Ave NW connection to Highway 772 is made to the satisfaction of The City of Calgary. The need for these improvements will be reviewed at the Outline Plan/Land Use Amendment stage and any improvements determined to be required will be addressed to the satisfaction of The City of Calgary.
6. It is intended that the construction of any 160 Ave NW connection to Highway 772 be the responsibility of the proponent(s) of development.
7. To ensure that the 160 Ave NW connection to Highway 772 will be in place and operational

in order to serve the proposed development, prior to Outline Plan/Land Use Amendment approval that relies on the connection, a mutual understanding regarding the design, construction, operation and maintenance of the relevant sections of 160 Ave NW that are not located within The City of Calgary's municipal boundaries shall be in place between The City of Calgary, Alberta Transportation, and Rocky View County.

Symons Valley Road

Symons Valley Road is an existing two-lane rural road in the Plan Area and is the current connection from Highway 772 into Calgary. Symons Valley Road is also, as of 2015, a designated truck route and high load corridor. In order to increase the amount of naturalized spaces in the Plan Area, analysis was undertaken to determine if the section of Symons Valley Road from west of Mountain View Road to the City boundary could be removed and traffic redirected to new streets proposed in the ASP. In particular, a logical extension of Shaganappi Trail NW to connect it to Highway 772 is proposed.

8. Symons Valley Road west of Mountain View Road should be converted to a Regional Pathway subject to completion of the following:
 - a. provision of alternate access for properties whose primary access is via Symons Valley Road
 - b. construction of Shaganappi Trail NW to connect with Highway 772;
 - c. designation of Shaganappi Trail NW as a high load corridor;
 - d. construction of 160 Ave NW from 14 St NW to Township Road 261A/Shaganappi Trail NW; and
 - e. City Council approval to close Symons Valley Road.

9. Subject to the above conditions, the closure of Symons Valley Road may occur in stages if an appropriate staging plan is developed to the satisfaction of The City of Calgary.

High Occupancy Vehicle Corridor

The Calgary Transportation Plan outlines a high occupancy vehicle (HOV) network. Shaganappi Trail NW, between 16 Ave NW and 144 Ave NW, is designated as a route in the primary HOV network. This facilitates future designation of traffic lanes for the use of transit and HOV only, which encourages increased transit ridership and ride sharing.

10. Shaganappi Trail NW will be designated as an HOV corridor through the Plan Area.

High Load Corridors and Truck Routes

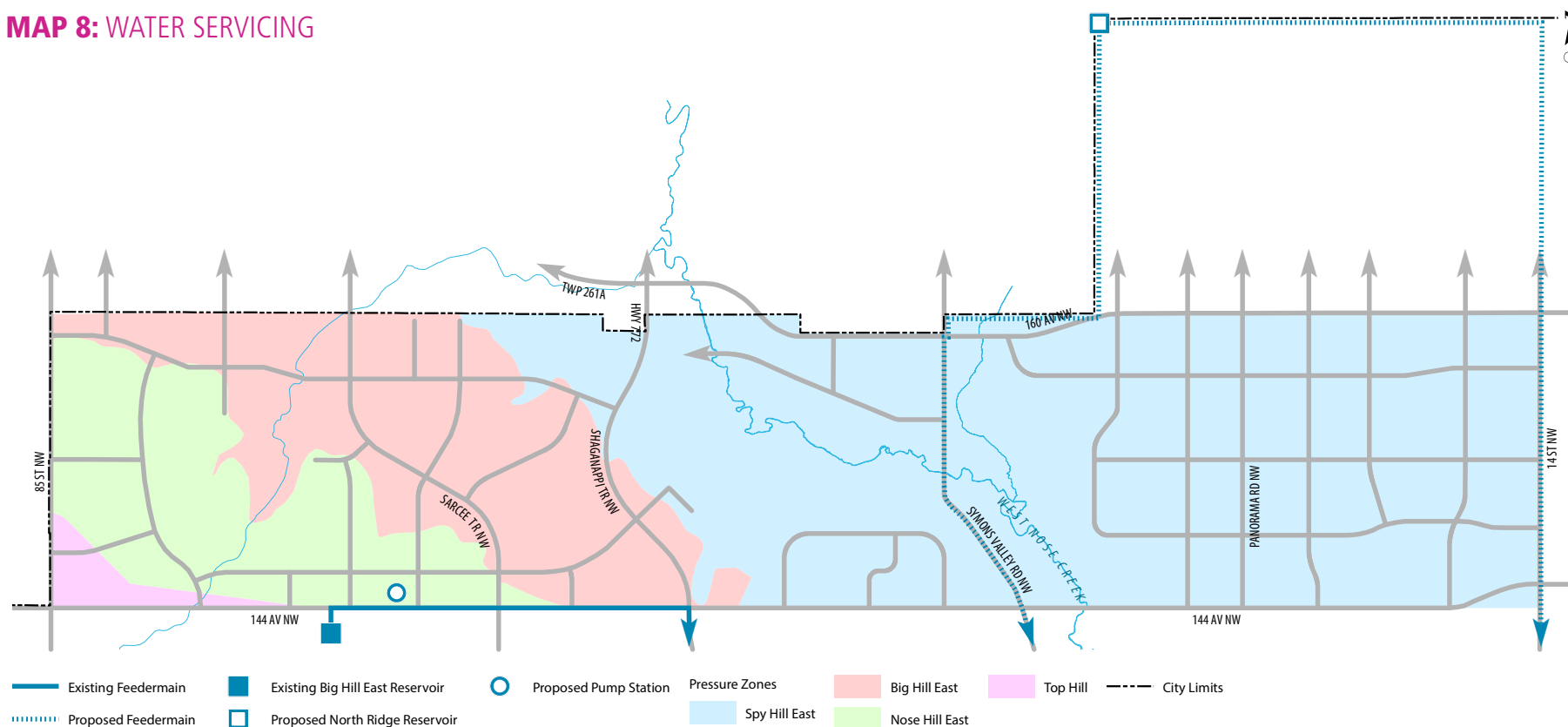
Shaganappi Trail NW is an important route through the Plan Area because it will connect Highway 772 with a high capacity interchange at Stoney Trail. The accommodation of trucks on Shaganappi Trail NW is important now and will be for the future. Currently, Shaganappi Trail NW is a designated truck route from Bowness Road to the north city limits, which includes the unbuilt segment within the Plan Area.

11. Subject to designation in accordance with The City of Calgary Truck Route Bylaw, it is intended that Shaganappi Trail NW act as a high load corridor between Stoney Trail and the city's north limit, to provide a connection between Stoney Trail and Alberta Transportation Highway 772.
12. Shaganappi Trail NW will be the designated truck route through the Plan Area. Until Shaganappi Trail NW is constructed, Symons Valley Road north of 144 Ave NW shall remain the truck route through the Plan Area.

6 | UTILITIES

Water, sanitary and stormwater requirements to provide these essential services to the Plan Area are covered in this chapter.



MAP 8: WATER SERVICING**6.1 WATER**

Population projections, topography, and land use designations, together with the proposed road layout described in the Glacier Ridge ASP, provide the basis for the ultimate water supply network concept for the Plan Area. The Plan Area is comprised of four water pressure zones: Spy Hill East, Big Hill East, Nose Hill East, and Top Hill.

Full build-out in the Plan Area will require the development of one off-site water reservoir, one pump station, multiple water feeder mains, and a local distribution network.

INTENT

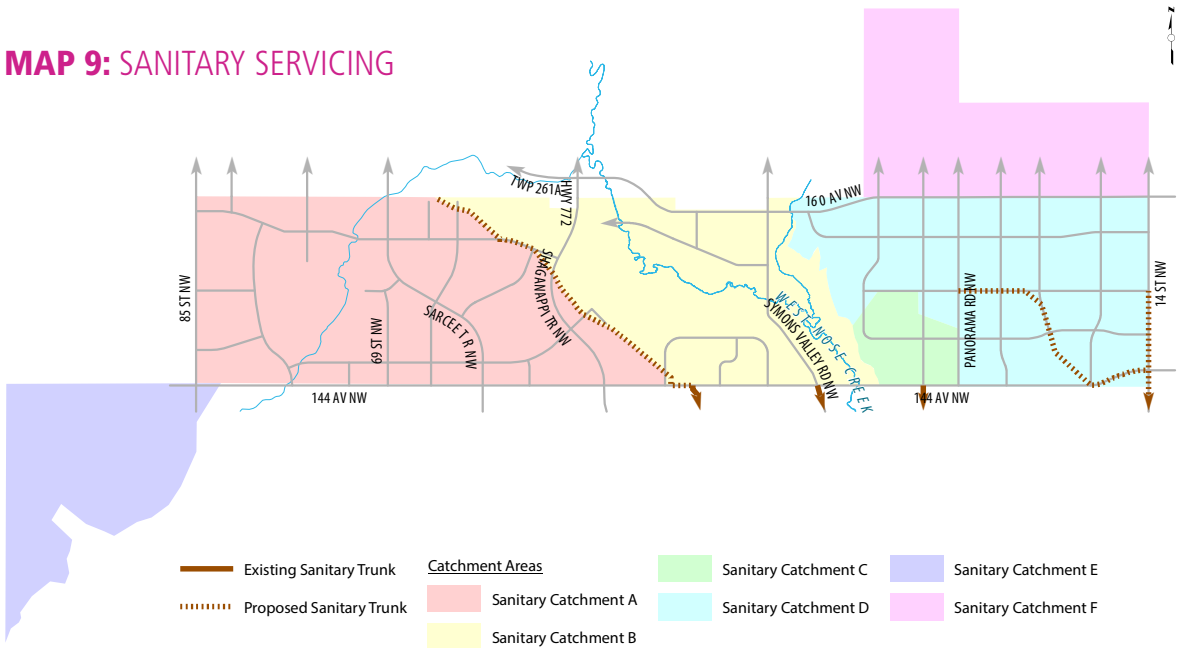
Provide a safe, suitable and efficient potable water system to serve the full build out of the Plan Area.

City of Calgary staff work collaboratively with environmental consultants to perform a site assessment of the Plan Area



Utilities

MAP 9: SANITARY SERVICING



POLICIES

1. The conceptual locations of the future water feeder mains, pump station, and off-site water reservoir required to service the Plan Area are identified on **Map 8: Water Servicing**, with ultimate servicing to be confirmed by The City of Calgary's Water Resources Business Unit, prior to Outline Plan/Land Use Amendment approval
2. Due to significant elevation changes throughout the Plan Area, water servicing shall meet the following criteria in accordance with each specific pressure zone:
 - a. The portion of the Plan Area located within the Spy Hill East Pressure Zone shall be serviced by the future off-site North Ridge Reservoir, the proposed North Ridge Feedermain, and the proposed west leg of the feedermain loop.
 - b. The portion of the Plan Area that is located within the Big Hill East Pressure Zone will

be serviced from the existing Shanganappi Feedermain, existing Big Hill East Reservoir, and the extension of the existing distribution network.

- c. To service the portion of the Nose Hill East Pressure Zone within the Plan Area, a new pump station is required at a location close to the Big Hill East Reservoir. Land for the pump station location shall be identified at Outline Plan/Land Use Amendment stage, and confirmed by The City of Calgary's Water Resources Business Unit.
 - d. The portion of the Top Hill Pressure Zone within the Plan Area can be serviced through the extension of the future Top Hill Pressure Zone distribution network.
3. The location of proposed utility rights-of-way must be identified at the Outline Plan/Land Use Amendment stage.
 4. Utility alignment should minimize impact to Environmental Open Space.

5. Any proposed land use or transportation network changes to the approved ASP may require re-evaluation or modification of water infrastructure.
6. Any proposed distribution system for an Outline Plan/ Land Use Amendment area shall be reviewed and, if required, modelled by The City of Calgary's Water Resources Business Unit as part of an Outline Plan/Land Use Amendment application submission.

6.2 SANITARY

INTENT

Provide a suitable and efficient sanitary collection system to serve the full build out of the Plan Area.

POLICIES

1. The general alignment of the sanitary trunks required to service the Plan Area are identified on Map 9: Sanitary Servicing. These alignments are conceptual and will need to be confirmed at the Outline Plan/Land Use Amendment stage.
2. The Plan Area consists of two (2) major sanitary basins - the West Basin and East Basin. Each basin includes several sub-catchments, based on topography and proposed land use. Four consolidated catchment areas (A-D) are shown on Map 9: Sanitary Servicing.

The West Basin will discharge into the Beddington Sanitary Trunk system at three locations within the Plan Area. The West Basin includes the following catchment areas:

- a. Catchment A will be serviced by the proposed trunk extension of the existing 900 mm

diameter Beddington Sanitary Trunk at 144th Avenue NW. This trunk extension may require the construction of siphon(s) to cross under the existing ravine system;

- b. Catchment B will be serviced by a sanitary pipe network discharging into the existing 600 mm diameter trunk at Symons Valley Road at 144th Avenue NW; and,
- c. Catchment C will be serviced by a sanitary pipe network discharging into the existing 375 mm diameter pipe at 144th Avenue NW.

The East Basin will be discharging into the Panorama Hills Sanitary Trunk system. The East Basin includes the following major catchment area:

- d. Catchment D servicing will require extensions of the future West Keystone Trunk system, which will discharge into the existing Panorama Hills Sanitary Trunk system.
- 3. The location of proposed utility rights-of-way shall be identified at the Outline Plan/Land Use Amendment stage.
- 4. Utility alignment should minimize impact to Environmental Open Space.
- 5. Any proposed land use or transportation network changes to the approved ASP may require re-evaluation and modification of sanitary infrastructure.
- 6. Any proposed distribution system for an Outline Plan/ Land Use Amendment area shall be reviewed and, if required, modelled by The City of Calgary's Water Resources Business Unit as part of an Outline Plan/Land Use Amendment application submission.
- 7. To service the full build-out of the Plan Area, downstream sanitary trunk upgrades and wastewater treatment plant expansions may be required.

- 8. The proposed sanitary trunks have been designed to service the Plan Area and two major sanitary catchments (E and F) outside of the Plan Area. The proposed sanitary trunk size and alignment, identified in **Map 9: Sanitary Servicing**, may be revised at the Outline Plan/Land Use Amendment stage, without amendment to this ASP, provided that the target density and intensity of parcels in all Neighbourhoods is considered.

6.3 STORMWATER MANAGEMENT

The Plan Area is located in the Nose Creek watershed basin. West Nose Creek, a tributary to Nose Creek, flows through the central portion of the Plan Area. The Nose Creek watershed faces challenges due to the cumulative effects of increasing agricultural activity, as well as residential, commercial, and industrial growth, generating an increase in stormwater discharge and creek channelization. Water quality, potential for erosion, and risk of flooding are concerns in the Nose Creek watershed basin, and in the connected downstream stormwater conveyance systems.

Stormwater management and watershed health should be considered within the broader regional context of adjacent biophysical systems and development plans. There are opportunities to incorporate sustainable stormwater management techniques in the Plan Area to promote resilient, healthy communities.

INTENT

Provide a suitable and efficient stormwater management system to serve the full build-out of the Plan Area and protect the stream network within and beyond the Plan Area from excessive loading.

POLICIES

- 1. The Master Drainage Plan for the Plan Area must be approved by The City of Calgary's Water Resources Business Unit prior to Outline Plan/Land Use Amendment Approval.
- 2. The approved Master Drainage Plan may identify requirements for the monitoring of natural drainage systems prior to, or at, Outline Plan/Land Use Amendment stage.
- 3. Conveyance of existing overland drainage patterns, wetlands, and watercourses should be integrated into the post-development plans, where possible, as per the approved Master Drainage Plan.
- 4. Recommendations for mitigation of potential adverse impacts of development to watercourses shall be included in the approved Master Drainage Plan.
- 5. Outputs of the approved Master Drainage Plan significant enough to alter land use may require an amendment to the ASP.
- 6. A Staged Master Drainage Plan, referencing and remaining consistent with all relevant stormwater management policies and plans at the time of application, must be submitted as part of an Outline Plan/Land Use Amendment Application.
- 7. Integrated Low Impact Development stormwater management practices should be implemented within the Plan Area to improve stormwater quality and to mitigate the potential impacts of urban development.
- 8. Treated stormwater may be allowed in Environmental Open Space provided that the criteria in the Alberta Wetland Policy, the Calgary Wetland Conservation Plan, the Calgary Open Space Plan, the approved Master Drainage Plan, and all other relevant City of Calgary and Province of Alberta policies and plans in place at the time of application, are met.

7 | IMPLEMENTATION

Implementing the Plan requires clarity about how this Plan should be interpreted. As well the chapter discusses growth management requirements, obtaining historic resources clearance, applications for subsequent development plans and coordinating applications with Rocky View County.



7.1 INTERPRETATION

INTENT

Assist with accurate interpretation of this ASP, which is paramount to achieving its goals. The policies below are intended to clarify the interpretation of this ASP.

POLICIES

1. Map Interpretation

- a. Unless otherwise specified in this ASP, the boundaries or locations of any symbols or areas shown on a map are approximate only, not absolute, and will be interpreted as such. They are not intended to define exact locations except where they coincide with clearly recognizable physical features or fixed boundaries such as property lines or road or utility rights-of-way. The precise location of these boundaries, for the purpose of evaluating development proposals, will be determined by the Approving Authority at the time of application.
- b. No measurements of distances or areas should be taken from the maps in this ASP.

- c. All proposed Land Use Areas, neighbourhood boundaries, road and utility alignments, and classifications may be subject to further study and may be further delineated at the Outline Plan/Land Use Amendment stage in alignment with applicable policies. Any major changes may require an amendment to this ASP.
- d. In the case of the EOS Study Area, where adjustments to the extent of the EOS are made, the policies of the adjacent Land Use Area apply without requiring an amendment to maps within this ASP, including but not limited to **Map 3: Land Use Concept**.

2. Policy Interpretation

- a. Where an intent statement accompanies a policy, it is provided as information only to illustrate the intent and enhance the understanding of the subsequent policies. If an inconsistency arises between the intent statement and a policy, the policy will take precedence.
- b. The word “should” is explicitly used to further clarify the directional nature of

the statement. Policies that use active tense or “should” are to be applied in all situations, unless it can be clearly demonstrated to the satisfaction of The City that the policy is not reasonable, practical or feasible in a given situation. Proposed alternatives will comply with the applicable policies and guidelines to the satisfaction of The City with regard to design and performance standards.

- c. Policies that use the words “shall,” “will,” “must,” or “require” apply to all situations, without exception, usually in relation to a statement of action, legislative direction or situations where a desired result is required.

3. Appendix Interpretation

The appendices do not form part of the statutory portion of the ASP. The intent of the appendices is to provide information and illustrate the policies of the ASP.

4. Illustrations and Photo Interpretation

All illustrations and photos are intended to illustrate concepts included in the ASP and are not an exact representation of an actual intended development. They are included

solely as examples of what might occur after implementation of the ASPs policies and guidelines.

5. Monitoring, Review and Amendments

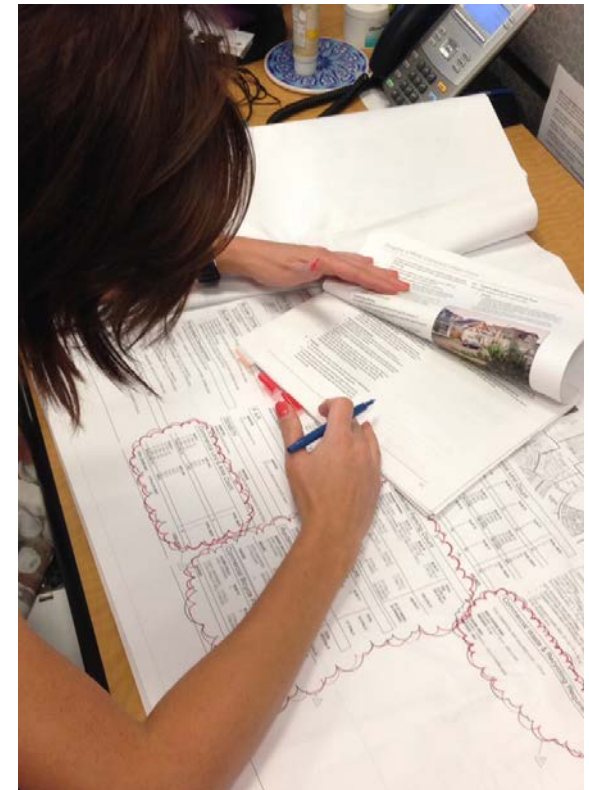
- a. The ASP is future oriented and depicts how the Plan Area is to be developed over an extended time period through a series of public and private sector initiatives. The time frame of this ASP will be determined by the criteria for prioritization and sequencing of growth areas determined as part of the Corporate Framework for Growth and Change and the policies within this ASP.
- b. The policies within the ASP will be monitored over time in relation to development and monitoring of the MDP and Calgary Transportation Plan (CTP). Where determined necessary, these policies will be updated through the plan amendment process either generally or in response to a specific issue.

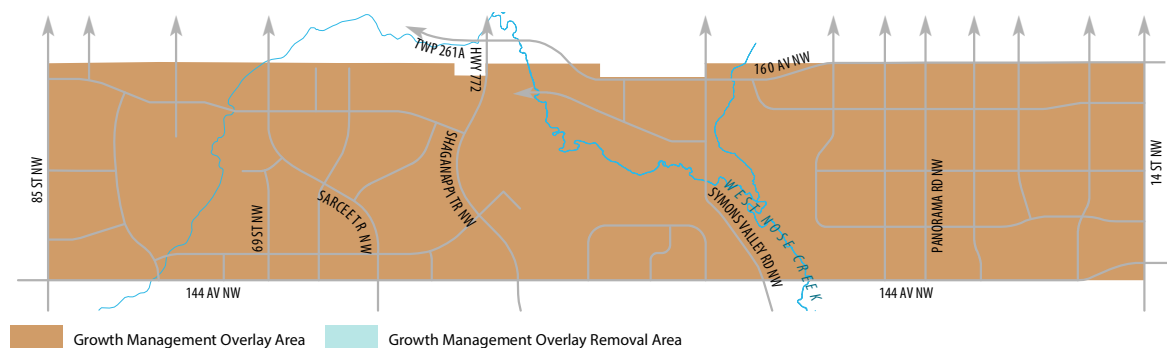
- c. To ensure the ASP is a living document that reflects new policies adopted by Council over time, it should be reviewed and updated every 10 years from the time it is initially adopted until such time as the Approving Authority determines the Plan Area is fully built out.

6. Plan Limitations

ASPs are long-term planning documents. As such, they promote a vision for a community and put in place policies and guidelines that work towards achieving that vision over time. ASPs may be amended from time to time, either in relation to a City initiative or an Outline Plan/Land Use Amendment application.

Policies and guidelines in this ASP are not to be interpreted as an approval for a use on a specific site. No representation is made herein that any particular site is suitable for a particular purpose as detailed site conditions or constraints, including environmental constraints, must be assessed on a case-by-case basis as part of an application for outline plan, land use amendment, subdivision or development permit.



MAP 10: GROWTH MANAGEMENT OVERLAY**7.2 GROWTH MANAGEMENT**

The Plan Area will accommodate approximately 58,800 residents and 10,900 jobs. As directed by the North Regional Context Study, this Plan Area has a high proportion of residential development. This will be balanced on a regional basis by some of the neighbouring areas that are intended to be solely employment areas.

The typical considerations for removing Growth Management Overlays (see **Map 10: Growth Management Overlay**) are outlined in the New Community Planning Guidebook.

This evaluation will include a Transportation Impact Assessment (TIA). The Approval Authority will determine the scope the TIA, including whether and which of the projects described in section 5.3.2.e service the proposed development area, and therefore must be considered in the evaluation.

The TIA results will be considered along with analysis and information on the other leading infrastructure components including water, sanitary, stormwater, transportation, and emergency services to form a recommendation for growth management overlay removal.

INTENT

Ensure that development of the Plan Area is aligned with The City of Calgary's municipal budgeting and growth management prioritization process.

POLICIES

1. Development shall not occur until the Growth Management Overlay is removed.
2. An amendment to the ASP approved by Council is required to remove a portion of the Growth Management Overlay.



7.4 INTERMUNICIPAL COORDINATION

The Plan is bordered by Rocky View County to the north and west. Annexation of these lands from Rocky View County by the City in 2007 resulted in the present municipal boundary. The 2006 annexation agreement between Rocky View County and The City led to the identification of planning principles that were refined in the 2011 Rocky View County/ City of Calgary Intermunicipal Development Plan (IDP). The Glacier Ridge ASP falls entirely within the IDP Policy Area.

INTENT

Ensure that The City of Calgary and Rocky View County work collaboratively to coordinate planning for areas of mutual interest.

POLICIES

1. The City will consult with Rocky View County on intermunicipal planning, transportation and servicing matters that may arise within the IDP Policy Area of the Plan Area to achieve cooperative and coordinated outcomes.
2. The City will circulate all development and planning proposals within the IDP Policy Area in accordance with current IDP policies.

7.3 APPLICATION REQUIREMENTS

INTENT

Applicants must meet a number of requirements when submitting a development application for the Plan Area.

POLICIES

Application-Based Plan Amendments

1. Any changes to the text or maps in this ASP may require an amendment, in accordance with the Municipal Government Act (MGA). Where an amendment to this ASP

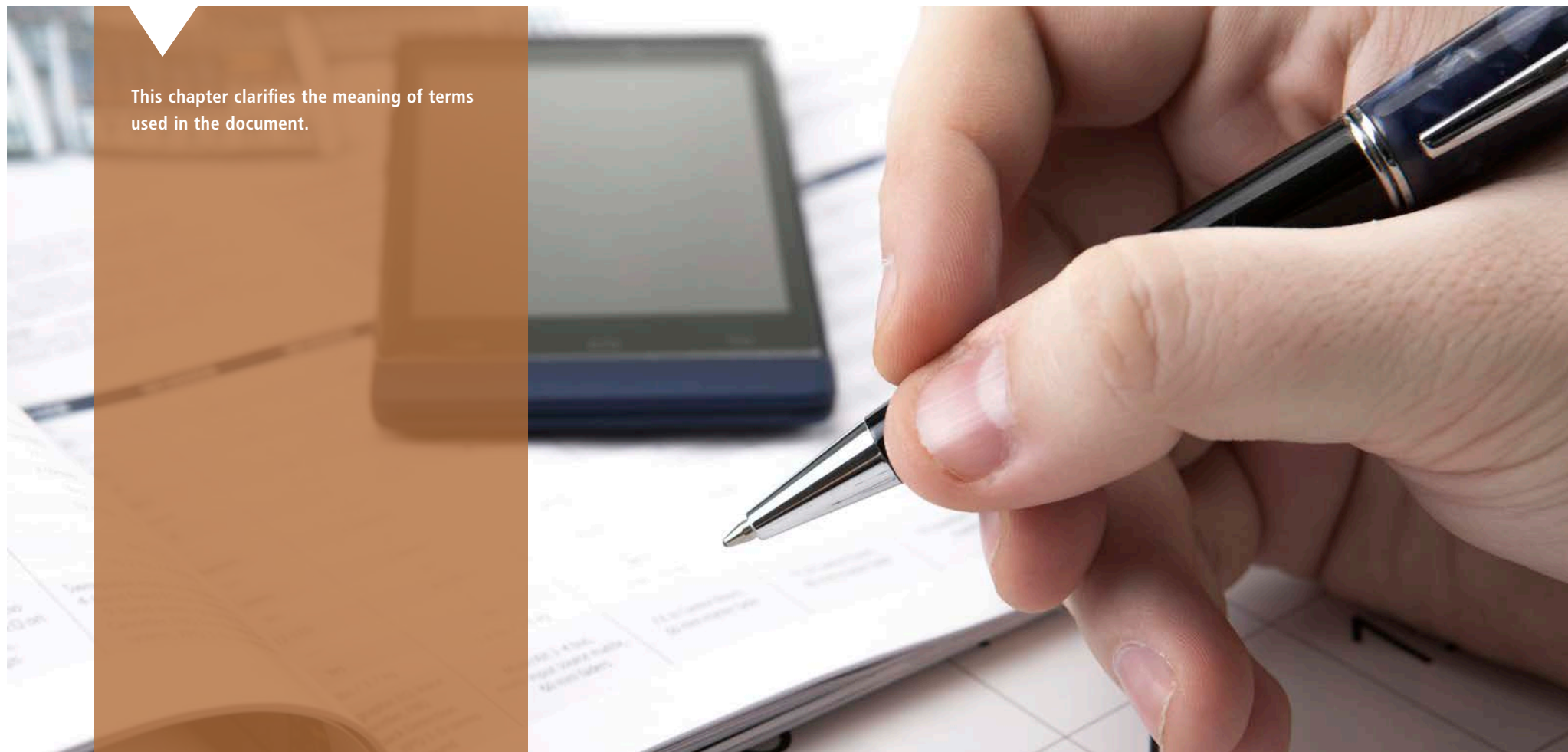
is requested, the applicant shall submit the supporting information necessary to evaluate and justify the potential amendment and ensure its consistency with the MDP and other relevant policy documents.

Historical Resources Act Clearance

2. Prior to Outline Plan/Land Use Amendment application approval, a Historical Resources Impact Assessment (HRIA) report may be required by the Province, as determined by Alberta Culture and Tourism.
3. Where required, the applicant shall, to the satisfaction of Alberta Culture and Tourism, undertake protective or mitigative measures identified in an HRIA report.

8 | GLOSSARY

This chapter clarifies the meaning of terms used in the document.



Glossary

ABBREVIATIONS

ASP	Area Structure Plan
CAC	Community Activity Centre
CTP	Calgary Transportation Plan
CRC	Community Retail Centre
EOS	Environmental Open Space
ER	Environmental Reserve

GDHa	Gross Developable Hectare
HRIA	Historical Resources Impact Assessment
IDP	Intermunicipal Development Plan
JUCC	Joint Use Coordinating Committee
JJUS	Joint Joint Use Site
JUS	Joint Use Site
LUB	Land Use Bylaw

MDP	Municipal Development Plan
MGA	Municipal Government Act
MR	Municipal Reserve
NAC	Neighbourhood Activity Centre
NCPG	New Community Planning Guidebook
NRCS	North Regional Context Study
PTN	Primary Transit Network

DEFINITIONS

The following definitions shall apply. In the case where a definition differs from The City of Calgary Land Use Bylaw (1P2007), the Land Use Bylaw shall prevail.

A

Adaptive Grid: A street grid network that responds to natural topography and features; is adaptable in orientation and block pattern; supports a diversity of land uses, housing types and neighbourhood character; and provides high connectivity and legibility for all modes of transportation.

Alberta Culture and Tourism: A provincial department that supports the development and sustainability of Alberta's cultural industries, tourism, the arts, recreation and sport, heritage and nonprofit/volunteer sector.

B

Biophysical Impact Assessment (BIA): Report used to define the environmental impact of a project on the biophysical features of an area. In preparing a BIA, baseline data is usually collected on soil, vegetation, wetlands, wildlife and hydrology.

C

Calgary Transportation Plan: Council approved document that guides the transportation system and its development in Calgary.

The City: The Corporation of The City of Calgary.

Commercial Uses: Establishments selling goods and services that support the day to day needs of citizens. These typically include retail and restaurant uses.

Community: A series of distinct neighbourhoods

Community Association Site (CA): Provides a location for community association uses.

Community Garden: A piece of land gardened by a group of people for the purpose of providing a public and private garden experience and education to citizens of Calgary. They are offered in partnership between City of Calgary Parks and community-based organizations and are subject to all policies and bylaws governing public lands

Community Retail Centre (CRC): Provides local goods and services to serve the community as well as area for future Intensification.

Coulee: A ravine or valley that has been formed by running water, but is usually dry or has intermittent flows.

Council: The elected Council of The City of Calgary.

D

Development Permit: Permission from the Approving Authority for construction or changes of use in accordance with the Land Use Bylaw.

E

Emergency Response Station: A building housing equipment for fire and emergency response

Emergency Services: Provides for adequate fire and emergency response

Employment Area: Land areas where mainly non-retail employment uses are provided

Employment Uses: Uses which are employment intensive and determined to be compatible and appropriate in the context of Employment Areas such as Activity Centres. Employment uses may include, but are not limited to, offices, manufacturing plants, colleges and laboratories. They do not include retail uses.

Environmental Open Space Study Area: Identifies lands that are environmentally significant. Where land identified within the EOS Study Area is not protected or acquired, it may be developable according to the policies of this ASP.

Environmental Reserve: Environmental Reserve as defined in the MGA.

G

Grid Network: Streets that run at right angles to each other, forming a grid.

H

High Load Corridor: Designated streets that have had utility lines raised to accommodate high loads.

Historical Resources Act Clearance: Permission required from Alberta Culture and Tourism prior to the onset of development activities.

Historical Resources Impact Assessment (HRIA): An assessment that evaluates the presence of historical resources in an area and provides recommendations for whether preservation should take place.

I

Institutional Use: Use of land, buildings or structures for the purpose of religious, charitable, educational, health, welfare or correctional activities. Institutional uses may include, but are not limited to, places of worship, public or private schools, post-secondary institutions, hospitals, reformatory or correctional facilities, medical clinics, cemeteries and child care facilities.

Intermunicipal Development Plan (IDP):

A statutory plan that is jointly prepared by The City of Calgary and Rocky View County which includes areas of land lying within the boundaries of the municipalities, as they consider necessary. Intermunicipal Development Plans are further defined in the Municipal Government Act..

J

Joint Use Coordinating Committee (JUCC): A co-member group between The City, the Calgary Board of Education and the Calgary Separate School District to manage planning and operational issues associated with school sites.

L

Land Use Area: One of the categories of land uses delineated on the Land Use Concept Map and described in one of the policy sections of the ASP.

Leading Infrastructure: The core infrastructure required at the start of development, including water, sanitary sewer, stormwater, transportation and emergency response facilities.

M

Multi-Residential Development: A residential development of one or more buildings, each containing a minimum of three units in total.

Multi-Way Boulevard: A street design that handles large amounts of arterial street level traffic as well as slower moving local traffic within the same right-of-way but on separate but closely connected streets.

Municipal Development Plan (MDP): The planning policy document guiding growth and development within The City of Calgary. It reflects the kind of community Calgarians would like to see in the future. It is visionary, strategic and long-term, and provides the basis for actions and decisions to both protect and improve quality of life for all Calgarians, present and future.

Municipal Reserve: Municipal Reserve as defined in the MGA

N

Neighbourhood: A portion of a community generally based on a quarter section of land or equivalent area (65 ha; 160 ac), in which most residents are within a five-minute walk of a Neighbourhood Activity Centre.

Neighbourhood Activity Centre (NAC): Centre providing opportunities for residential intensification, local jobs, retail services and civic activities. In new communities, NACs should be planned at the outset through the ASP process.

Neighbourhood Area: The residential catchment area outside of the NAC. It consists of primarily residential uses with a variety of housing types and a street network that connects residents, jobs and commercial services through direct automobile, transit, bicycle and pedestrian routes.

Neighbourhood Corridor: Main streets for one or more communities. They are places to focus a mix of uses and housing densities within a pedestrian-friendly environment to create local destinations adjacent to transit streets.

New Community Planning Guidebook (NCPG): – Volume 2 of the Municipal Development Plan (MDP), it translates the MDP's vision and core policies into implementation level policies and forms the basis for new communities and ASPs.

North Regional Context Study (NRCS): The planning study guiding development and growth of an area in the north end of Calgary.

Nose Creek Watershed Water Management Plan:

A plan to help guide the municipal jurisdictions and Alberta Environment in day-to-day decision making related to water management in the Nose Creek Watershed and link the issues of water quality, water quantity and riparian habitat with the economic and social priorities in the region.

O

Office Use: A land use where business, professional, clerical and administrative staff work in fields, other than medical or counselling, that provide services to either select clients or no clients, and therefore has limited contact with the public at large.

P

Patio Uses: A land use where food and drink seating areas are located outside on private property or public property with the permission of the municipality.

Plan Area: The land that is the subject of the ASP.

Glossary

Private School Site: A school supported by a private organization or private individuals rather than the government.

The Province: The government of the Province of Alberta.

R

Recreational Use: The use of land, buildings or structures for the purpose of active or passive leisure pursuits, cultural activities, sporting activities and other customary and usual recreational pursuits which may include, but are not limited to, golf courses and driving ranges, ice skating rinks, sport fields, recreational centres, and parks and playgrounds.

Regional Pathway: A city-wide linear network that facilitates non-motorized movements for recreation and transportation purposes. It connects communities by linking major parks, recreation facilities and natural features. The Regional Pathway system may also link other major community facilities such as schools, community centres and commercial areas.

Residential Use: The use of land, buildings or structures for dwelling units

S

Street-Oriented Development: Design that supports orienting building frontages and primary entranceways towards the street rather than internal to a site.

T

Transit Centre: A type of Transit Mobility Hub. See Appendix A of the Calgary Transportation Plan.

Transportation Impact Assessment (TIA): A study required to support the transportation aspects of a proposed development that has the potential of generating significant amounts of new transit users, pedestrians, and bicycle and vehicular traffic, or that

could potentially change the mobility patterns in the area where it is proposed.

Truck Route: A street that is designated for use by trucks and may restrict the type and weight of trucks in accordance with The City of Calgary's Truck Route Bylaw.

U

Urban Agriculture: The raising, growing, processing and distribution of food and non-food products within city boundaries or in the semi-urban areas and around cities for both food and fuel production.

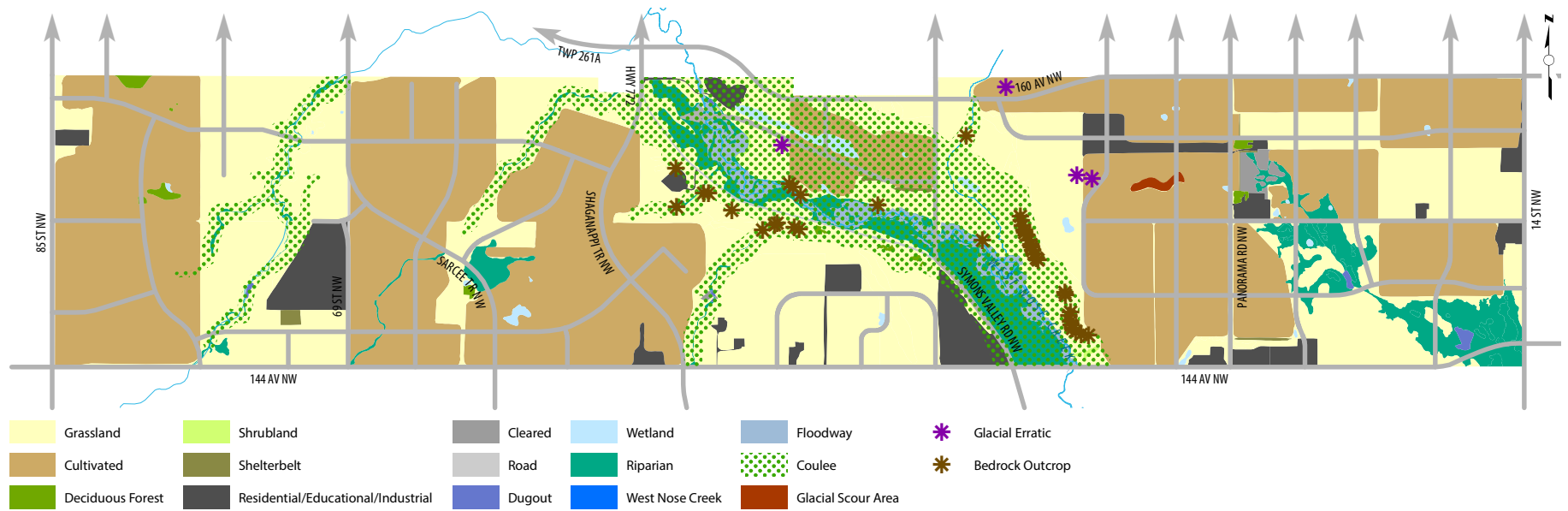
9 | APPENDICES

These appendices do not form part of the statutory portion of the ASP. The intent of the appendices is to provide information and illustrate the policies of the ASP.



Appendices

MAP A1: BIOPHYSICAL FEATURES



BEFORE - DISTURBED AREA DURING REHABILITATION



RESTORED - FORMER DISTURBED AREA REHABILITATED IN 2015



9.1 APPENDIX A: BIOPHYSICAL BACKGROUND INFORMATION

In 2015 a landowner coordinated the removal of several tons of concrete debris from an old building dumped in this Coulee in the south central Plan Area as well as the restoration of the coulee to where it has been restored to a natural state.

The Plan Area is characterized by cultivated cropland and grasslands used as pasture for livestock. Several rural residences are distributed throughout the Plan Area along with the Bears paw Christian School, a recycling plant, and RV park. A portion of Symons Valley runs through the Plan Area. Symons Valley contains the meandering channel of West Nose Creek and other biophysical features such as bedrock outcrops, groundwater seeps, native grasslands, remnant tree stands, and the West Nose Creek riparian area (flood plain). Other smaller coulees containing less permanent streams, glacier erratics and a glacier erratic scour are also found in the Plan Area. As a result of the diversity of terrain, vegetation, and hydrology, the Plan Area contains habitat for various wildlife species.

A goal of the Area Structure Plan is to ensure that development is sensitive to the existing topography, wildlife habitat and waterbodies, while allowing for development opportunities consistent with The City's broader strategic plans to develop. A Biophysical Inventory was conducted on the Glacier Ridge ASP area throughout 2014/ 2015. The Biophysical Inventory provided an overview of biophysical features, including soils, terrain, wetlands, stream, vegetation, and wildlife habitat, within the ASP area.

The biophysical information was used to determine which features and areas are considered to be Environmentally Significant Areas (ESAs), and included in the ASP as the Environmental Open Space (EOS) Study Area shown on the land use concept map. The EOS Study Area includes features such as coulees, wildlife habitat, streams, wetlands, etc. The goal of the EOS Study Area mapping is to highlight areas that may require further studies or consideration during later phases of the development planning process.

The requirements and realities of urban development limit the retention of all features included in the EOS Study Area mapping. Where the lands within the EOS Study Area are not dedicated as Environmental Reserve, development may occur

The following important biophysical resources were identified in the Plan Area by Stantec Consulting Ltd. (2015):

- Coulees (Symons Valley and smaller coulees);
- Bedrock outcrops along Symons Valley and coulees;
- Glacial erratics and glacial scour;
- Groundwater seeps (confirmed and potential locations);
- Streams (West Nose Creek and other ephemeral, intermittent and small permanent streams);
- Wetlands (Class I, II, III , and IV);
- Reference native vegetation community types associated with the riparian zones of West Nose Creek and escarpments of Symons Valley;

- Provincially-listed rare plant species: smooth cliffbrake, 17 lichen species, 4 moss species ; and,
- Wildlife species of management concern: Baird's sparrow, sora, Sprague's pipit, least flycatcher, great blue heron, barn swallow, Swainson's hawk, northern harrier, wandering garter snake, and garter snake (species unknown).

The general biophysical features in the Plan Area are shown on **Map A1: Biophysical Features**. The environmental significance of each biophysical feature in the Plan Area was ranked as Nil, Low, Moderate or High. Features ranked Moderate and High were considered Environmentally Significant Areas (ESAs). The Environmental Open Space Study Area shown on the Land Use Concept corresponds to the ESAs identified in the Biophysical Inventory. These ESAs are summarized in Table 1, and Map A2 and are described in detail in the Biophysical Inventory report (Stantec 2015). Planning considerations for each ESA are also included in Table 1.

Biophysical Impact Assessments (BIAs) completed at Outline Plan/Land Use Amendment will support the delineation of areas to be preserved as EOS, areas to be modified as other types of open space, and areas to be developed. The BIAs will also supplement the biophysical inventory completed for the ASP and identify mitigation measures.

Reference:

Stantec Consulting Ltd. 2015 (final report in preparation). Glacier Ridge Area Structure Plan: Biophysical Inventory. Prepared for Glacier Ridge Land Owner Group. Calgary, AB. 256 pages.

Appendices

MAP A2: ENVIRONMENTALLY SENSITIVE AREAS

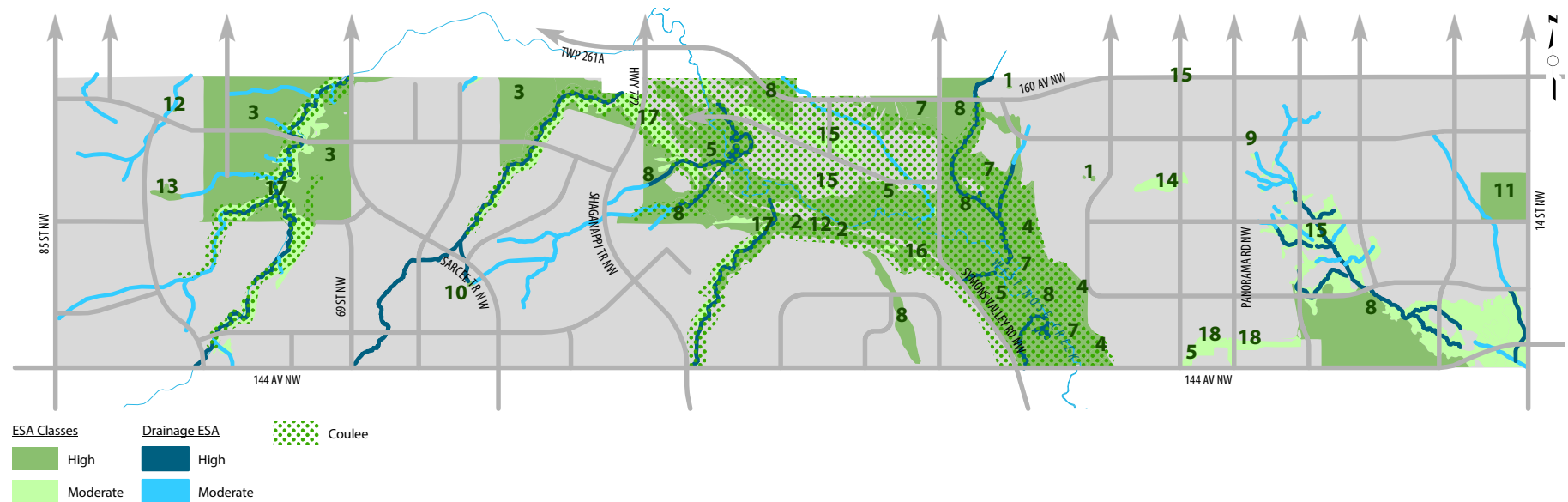


TABLE A1: ENVIRONMENTALLY SIGNIFICANT AREAS (ESAS) WITHIN THE ENVIRONMENTAL OPEN SPACE (EOS) STUDY AREA, LISTED BY COMMUNITY

Community	Map ID ¹	Primary Characteristic(s) ²	Environmental Significance Ranking	Description and Planning Considerations
A, B, C, D	Multiple watercourses; not individually numbered	Small permanent and intermittent streams and reaches	High	Small-permanent and intermittent streams that are hydrologically connected beyond the Plan Area with riparian areas providing significant wildlife habitat. <i>Priority for preservation.</i>
A, B, C, D	Multiple watercourses; not individually numbered	Ephemeral streams and reaches.	Moderate	Ephemeral streams convey precipitation and groundwater to more permanent streams. <i>Further study required to understand function and post-development viability.</i>
A, B, C, D	Multiple features; not individually numbered	Riparian areas of streams providing wildlife habitat and hydrologic value.	Moderate	Riparian areas of streams that have notable livestock and anthropogenic disturbances still provide important wildlife habitat and hydrologic value. <i>Further study required.</i>
A	10	Rare plant species.	High	Class III Seepage Wetland, 1 tracked moss species observed in wetland. <i>Further study required to understand function and post-development viability.</i>

Community	Map ID ¹	Primary Characteristic(s) ²	Environmental Significance Ranking	Description and Planning Considerations
A	3	Baird's Sparrow and Sprague's Pipit (SOMC ³) habitat.	High	Three observations of SOMC; Baird's Sparrow, and Sprague's Pipit. Portion within an active territory of Sprague's Pipit (SOMC). <i>Further study required.</i>
A	13	Rare plant species.	High	Poplar and willow stand where 3 ACIMS tracked lichens were found. <i>Further study required.</i>
A, B	12	Rare plant species.	High	Aspen tree stand along the south slope of Symons Valley supporting 3 tracked lichen species. Poplar tree within cropland supporting a tracked lichen. <i>Further study required</i>
A, B	Coulee 6	Corridor providing excellent connectivity	High	Corridor providing excellent connectivity. Includes steep slopes, an intermittent stream (S13), riparian zones, and reference and successional vegetation communities. <i>Priority for preservation.</i>
A, B	17	Reference and successional vegetation community on steep slopes.	Moderate	Reference and successional vegetation communities present on stronger slopes and/or level areas where livestock disturbance was controlled. Surrounded by successional vegetation communities. Some introduced vegetation species. Nesting cover, movement, and hunting habitat for wildlife. Habitat for Swainson's hawk and northern harrier (SOMCs). <i>Further study required.</i>
B	Coulee 2	Corridor providing excellent connectivity	High	Corridor providing excellent connectivity. Includes steep slopes, a small permanent stream, riparian zones, rock outcrops, and reference and successional vegetation communities. <i>Priority for preservation.</i>
B	Coulee 3	Corridor providing excellent connectivity	High	Corridor providing excellent connectivity. Includes steep slopes, an intermittent stream, riparian zones, rock outcrops, and reference and successional vegetation communities. <i>Priority for preservation.</i>
B	Coulee 4	Corridor providing excellent connectivity	High	Corridor providing excellent connectivity. Includes steep slopes, a small permanent stream, riparian zones, rock outcrops, and reference and successional vegetation communities. <i>Priority for preservation.</i>
B	2	Rare plant species	High	Three observations of a rare vascular plant species, smooth cliffbrake, found growing in crevices of rock outcrops. 6 ACIMS tracked lichen and 2 ACIMS tracked moss growing in rock outcrops. <i>Further study required.</i>
B	16	Tree stand with diverse forb component.	Moderate	Deciduous tree stands along the south slope of Symons Valley with a diverse forb component. <i>Further study required.</i>

Appendices

Community	Map ID ¹	Primary Characteristic(s) ²	Environmental Significance Ranking	Description and Planning Considerations
B, C	Coulee 1 (Symons Valley)	Corridor providing excellent connectivity	High	Regional corridor providing excellent connectivity. Includes steep slopes, West Nose Creek, an extensive riparian area of West Nose Creek, various tributaries to West Nose Creek, rock outcrops, reference and successional vegetation communities. Direct observations of wildlife SOMCs, including Sprague's Pipit, Swainson's hawk, Garter Snakes, Sora, Barn Swallow and Great Blue Heron (SOMCs). While not all features within Coulee 1 are of high environmental significance when analyzed alone, they are a part of an ecosystem of high significance. <i>Priority for preservation. Further study required to address valley-bottom lands.</i>
B, C	5	Extensive riparian zone dominated by native vegetation and Sora (SOMC) habitat.	High	Areas adjacent to West Nose Creek. Extensive riparian zone dominated by native vegetation. Sora, a SOMC, was observed using this habitat. <i>Priority for preservation.</i>
B, C, D	8	Sprague's Pipit (SOMC) habitat and reference vegetation community.	High	Direct observations of Sprague's Pipit, a SOMC, using this habitat throughout Symons Valley. Active territories of Sprague's Pipit (SOMC) were noted and a direct Garter Snake observation. Reference vegetation community (fescue dominated grassland). <i>Further study required.</i>
C	Coulee 5	Corridor providing excellent connectivity	High	Corridor providing excellent connectivity. Includes steep slopes, an intermittent stream, riparian zones, rock outcrops, and reference and successional vegetation communities. <i>Priority for preservation.</i>
C	1	Unique geological feature (glacial erratics)	High	The large glacial erratics are regionally uncommon. 1 ACIMS tracked lichen found on one erratic. <i>Priority for preservation.</i>
C	4	Garter snake (SOMC) habitat, and reference vegetation community	High	Shrubland. Reference or successional vegetation community surrounded by a successional vegetation community. Species of management concern (garter snake) directly observed within the rock outcrops. <i>Further study required.</i>
C	6	Reference vegetation community.	High	Reference vegetation community found on steep slope. <i>Further study required.</i>
C	7	Reference vegetation community, rare plant species, and Great Blue Heron (SOMC) observation.	High	Reference vegetation community surrounded by reference and successional vegetation communities. Extensive area found along strong slopes of Coulee 1 (Symons Valley). Great Blue Heron, a SOMC, was observed in this area. Several ACIMS tracked lichen and moss species observed within coulees on rock outcrops. <i>Further study required.</i>

Community	Map ID ¹	Primary Characteristic(s) ²	Environmental Significance Ranking	Description and Planning Considerations
C	14	Unique geological feature (glacial erratic erosional feature [scour]).	Moderate	An uncommon geological feature located in close proximity to two glacial erratics. <i>Further study required.</i>
C, D	15	Wetlands dominated by native species but surrounded by modified vegetation communities or cropland.	Moderate	Provide wetland functions, such as habitat and flood water attenuation within modified vegetation communities or cropland. <i>Further study required to understand function and post-development viability.</i>
C, D	18	Successional vegetation communities on slopes providing wildlife habitat.	Moderate	Successional vegetation communities present on crest to top of steep/moderate slopes. Some introduced vegetation species. Movement and hunting habitat for wildlife. Potential habitat for Swainson's hawk and northern harrier (SOMCs). <i>Further study required.</i>
D	9	Least flycatcher (SOMC) habitat.	High	Deciduous tree stand adjacent to rural residential area where a direct observations was made of Least Flycatcher (SOMC). <i>Further study required.</i>
D	11	Rare plant species.	High	ACIMS tracked moss observed on soil in Hayfield. <i>Further study required.</i>

Notes:

¹See labels on Map A2: Environmentally Sensitive Areas

²Only criteria from the highest applicable ranking are included. For additional detail, see Stantec 2015.

³SOMC = Species of Management Concern

Appendices

9.2 APPENDIX B: JOINT USE SITES AND MUNICIPAL FACILITIES REQUIREMENTS

The number of JUS and JJUS, as indicated in **Table B1** (beside) and on **Map B1: Joint Use Sites** may be reviewed by the Joint Use Coordinating Committee (JUCC) when detailed planning for communities is undertaken through review of Outline Plan/Land Use Amendment applications. Should it be determined that an additional site is required, then an amendment to the ASP will be necessary.

Once reserves are assessed at the Outline Plan/Land Use Amendment stage, it may be necessary to reduce the size of a Joint Use Site as little or no reserve is available for other community open space uses, including but not limited to Neighbourhood or sub-Neighbourhood parks and lands not provided as Environmental Reserve but determined significant as to enhance the Community's overall green footprint. This should be determined on a case-by-case basis with the Subdivision Authority, and consider input from the JUCC.

TABLE B1: JUS REQUIREMENTS

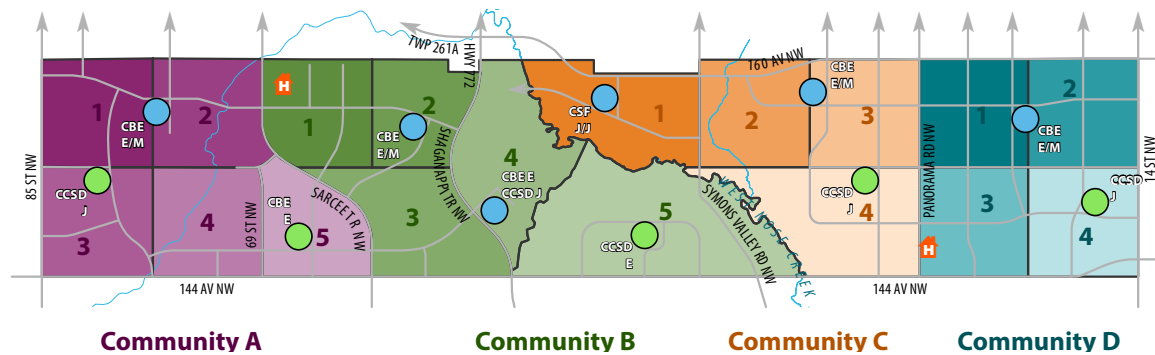
Community/ Neighbourhood	School Type	School Board/Map Symbol	Maximum Site Size	
			ha	ac
Community A				
A1/2	Elementary/Middle	CBE E/M	7.3	18
A3	Kindergarten - 9	CCSD J	4.9	12
A5	Elementary	CBE E	3.2	8
Community B				
B1	High School	H	9.3	23
B2	Elementary/Middle	CBE E/M	7.3	18
B4	Elementary / Kindergarten - 9	CBE E / CCSD J	7.3	18
B5	Kindergarten - 6	CCSD E	3.2	8
Community C				
C1	Joint Public/Catholic	CSF	5.7	14
C2/3	Elementary/Middle	CBE E/M	7.3	18
C4	Kindergarten - 9	CCSD J	4.9	12
Community D				
D1/2	Elementary/Middle	CBE E/M	7.3	18
D3	High School	H	9.3	23
D4	Kindergarten - 9	CCSD J	4.9	12

CBE Calgary Board of Education

CCSD Calgary Catholic School Division

CSF Conseil Scolaire FrancoSud

MAP B1: JOINT USE SITES



9.3 APPENDIX C: DEVELOPMENT STAGING

The extensive lands covered by this plan and their east-west orientation at the northwest edge of existing developed areas, creates a unique flexibility in potential arrangements for lead infrastructure servicing that affect development phasing. More specifically, transportation connections are identified through several north-south oriented roads that link to existing communities. Water and wastewater servicing may be serviced through connections in existing communities and future communities to the east likely to build out at an earlier time. Emergency Services coverage already exists for some areas of the ASP but will require new stations to service larger portions of the Plan Area, the order of which is not yet firm.

With the number of possibilities open for lead infrastructure servicing, a map has not been provided, as a map may unreasonably limit considerations of the order of land development.

From a growth and planning perspective, the lands should generally build out in a contiguous manner from existing communities east and south of the Plan Area. As well, development phasing should consider options to minimize conflicts between new residential development and permitted gravel extraction operations in the vicinity of the Plan Area.

Following that, areas to be serviced would be dependent on available budget and competing priorities. As land development progresses there may be merit in amending this section to add a phasing map as the details and location of lead infrastructure become more predictable.