

Nose Creek

area structure plan

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EXECUTIVE SUMMARY

NOSE CREEK ASP

The Nose Creek Area Structure Plan is focused on the principles of health in planning. Through realizing its vision, health principles and policies, along with the supporting Health Impact Assessment, Nose Creek will be a health-focused, inclusively planned community.

How to use the ASP: The Healthy Planning Principles in **Section 3.2** and the general policies outlined in **Section 3.3** are intended to be applied throughout the entire Plan Area. In addition, any general policies at the start of each section apply to that entire chapter.



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1

INTRODUCTION

Buffalo Rubbing Stone

The Nose Creek ASP is the assembly of research, technical analysis, and stakeholder and public engagement that provides the framework for the physical, social, environmental and economic aspects of this Plan Area. The policies contained within this ASP guide development to realize the core values and the vision.

1.1. POLICY FRAMEWORK

The Municipal Government Act (MGA) outlines the purpose and scope of powers for municipalities. The Nose Creek ASP must be read in conjunction with the Municipal Development Plan (MDP) Volumes 1 and Volume 2, Part I; The New Community Planning Guidebook (NCPG); the Calgary Transportation Plan (CTP); and other City of Calgary source policy and guiding documents, unless otherwise indicated.

The policies contained in this ASP and the NCPG apply concurrently, but where there is a discrepancy, the policy of this ASP prevails (see Figure 1: Policy Framework).

FIGURE 1: POLICY FRAMEWORK

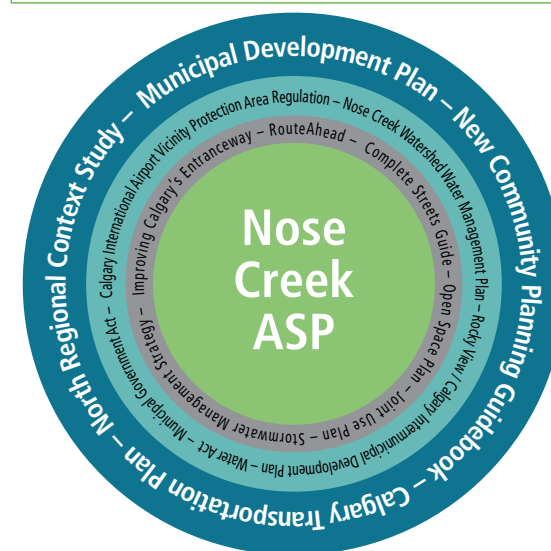


FIGURE 2: CORE VALUES AND VISION



1.2. CORE VALUES AND VISION

The vision and core values for Nose Creek are high-level concepts that guide planning in the plan area (see **Figure 2: Core Values and Vision**). The foundation of the Nose Creek ASP is to create a healthy community. Decisions for Nose Creek ASP in all subsequent stages of planning and development will use the most current and pertinent health research to guide outcomes and to showcase that all communities, regardless of geographic location, can and should be healthy.

CORE VALUES

Nose Creek ASP is the northern gateway to Calgary and will:

Integrate and Celebrate the natural and cultural landscapes;

Mobilize and Connect people, places and communities within and beyond Nose Creek; and

Grow and Exemplify a diverse, well-balanced community for all Calgarians, present and future.

VISION

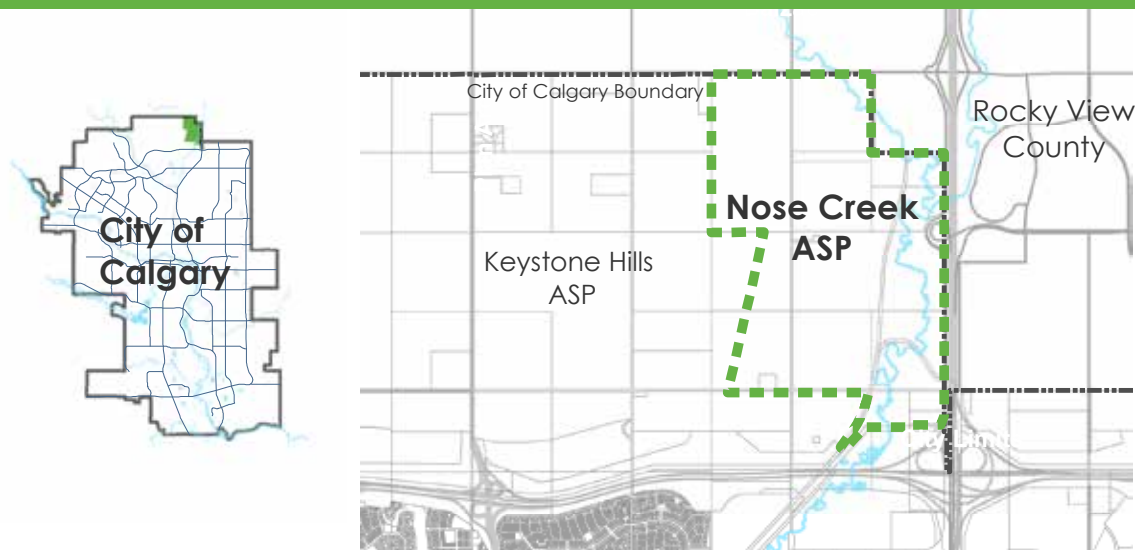
Nose Creek will be a leading health-focused, inclusively planned community.

2

THE PLAN AREA

Nose Creek

MAP 1: LOCATION AND REGIONAL CONTEXT

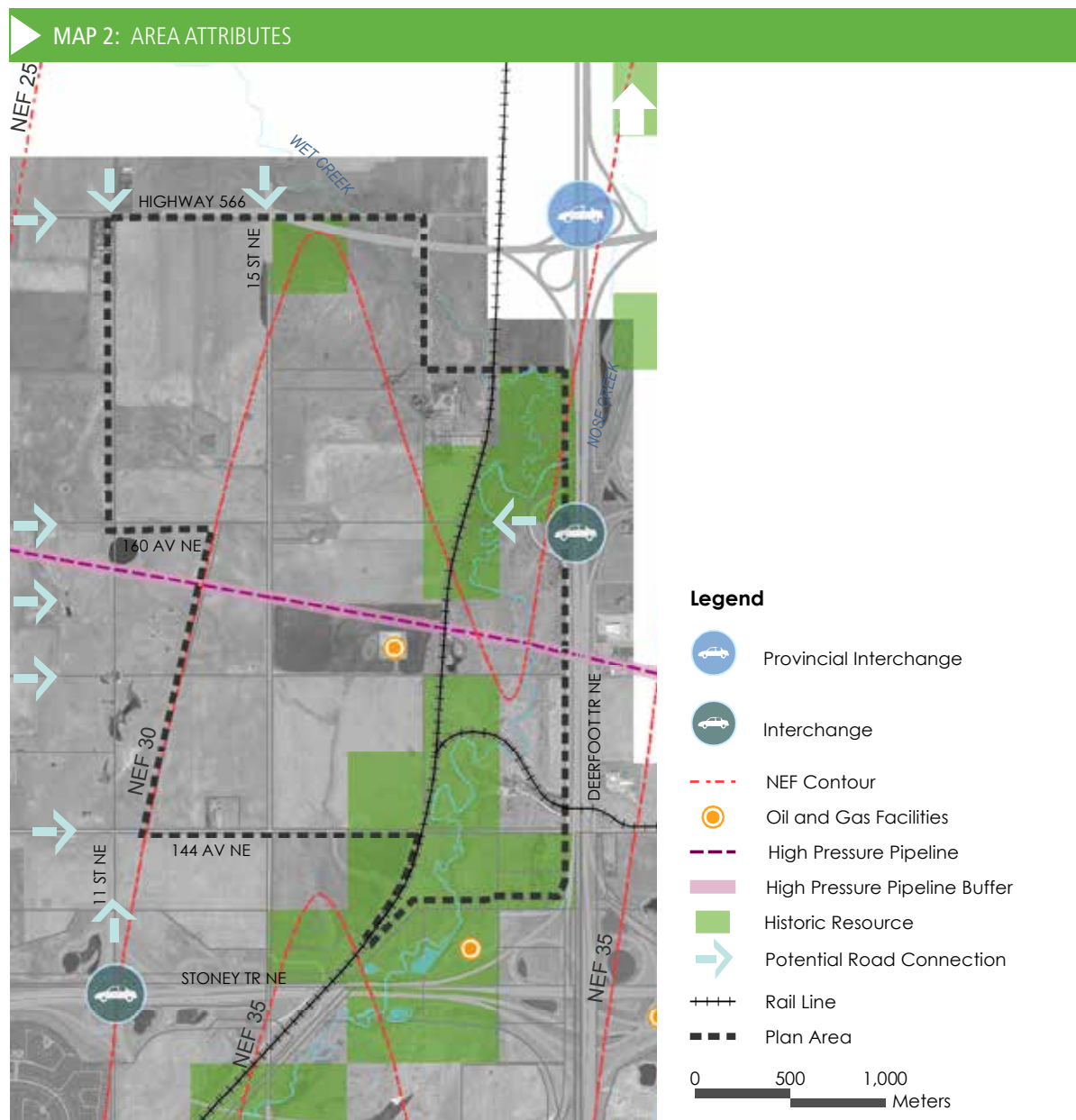


2.1. PLAN AREA LOCATION

The Nose Creek Plan Area consists of 679 ha (1,678 ac) located in northeast Calgary at the northern city limit, bordering Rocky View County including the Hamlet of Balzac along its northern boundary, as shown in **Map 1: Location and Regional Context**.

2.2. ATTRIBUTES

The Plan Area contains a number of attributes, as shown in **Map 2: Area Attributes**, that were considered in the development of this ASP and must be considered in future planning and development in the Plan Area.



AVPA: The Plan Area falls within the Calgary International Airport Vicinity Protection Area Regulation (AVPA) Noise Exposure Forecast (NEF) 25 and 30 contours. Each contour includes a set of use and development restrictions.

Oil and Gas: Oil and gas facilities are present within the Plan Area and will require appropriate setbacks. A high-pressure pipeline runs through the Plan Area and will require appropriate setbacks.

Natural Features: The primary natural features in the Plan Area are related to the Nose Creek watershed and include Nose Creek, Wet Creek, the Keystone Hills overland drainage channel and other associated drainages.

These landforms drain into the larger Bow River system. The primary features identified within the Plan Area also relate to other features that include ravines, coulees and gullies. The landforms provide unique slopes, vegetation and ecosystems, as well as a component of capturing rainfall and replenishing local waterways and groundwater.

Historical Resources: An application for Historical Resources clearance was submitted for the Plan Area and sites have been identified within the Plan Area which could impact development.

CP Rail Line: A heavy rail line runs the entire length of the Plan Area and requires appropriate setbacks for various uses and infrastructure design. A rail risk assessment was completed as part of the development of this ASP, which has guided policies related to development in close proximity to the rail line. These policies are included throughout the ASP.

2.3 LAND USE CONCEPT

The land use concept plan illustrates the general location and relationships between the different land uses, arterial and collector streets, key community elements, environmental open space and green corridors in the Plan Area, providing guidance for development at the Outline Plan/Land Use Amendment stage.

Map 3: Land Use Concept shows the location of land uses and community amenities throughout the Plan Area and identifies the general location of arterial and collector streets. The following land use concept details provide a general description of the elements and reference their location.

2.3.1. INTENT

The policies provide a framework for the development of two complete communities. See **Section 11.1: Area Structure Plan Interpretation** for further information on the interpretation of this ASP.

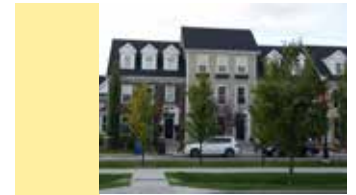
2.3.2. POLICY

The elements on **Map 3: Land Use Concept** should be located as shown. Refinements to exact location may be made without amending the ASP at the Outline Plan/Land Use Amendment Stage provided they best achieve the overall principles and vision of the Plan Area and use the Healthy Planning Principles as the metric for determining a solution (see **Appendix A for Land Use Compilation Map**).

Typologies

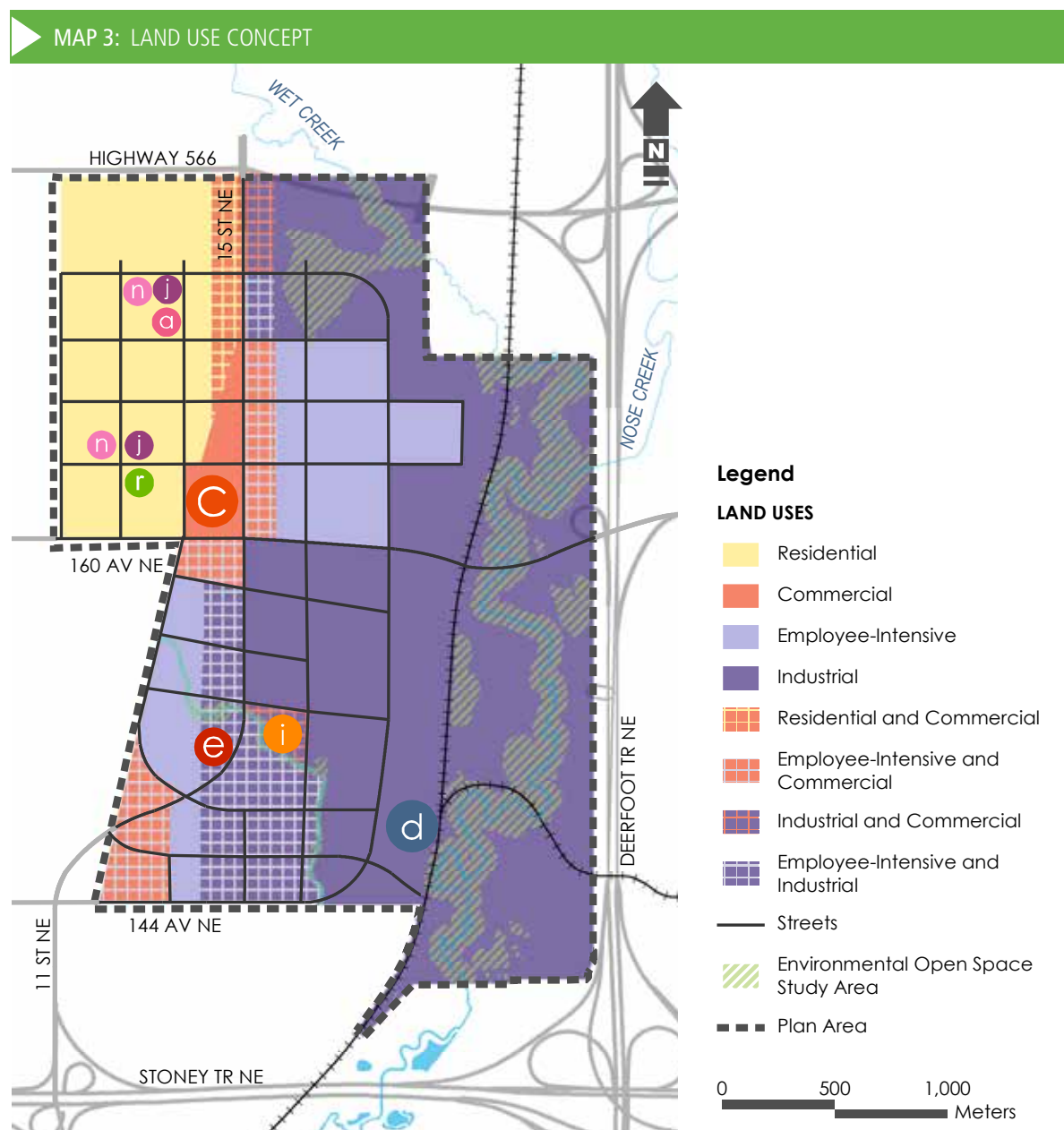
1. A key feature of a healthy community is to include a well integrated mix of **Residential** unit types that connect to destinations which include open space, amenities, trails, employment uses and commercial uses.
2. The **Commercial** typology provides retail land uses to support the needs of the community and industrial districts. Vertical and horizontal mixed-use should be developed throughout the evolution of the Plan Area.
3. The **Employee-Intensive** typology provides office spaces and should be planned to create a campus-type environment that uses open spaces, natural features of the Plan Area and multimodal pathway systems to create cohesive places of employment.

Supportive amenities should also be integrated into the Plan Area to provide a full complement of uses for employees. Employee-intensive uses are compatible with being located adjacent to all other land uses.
4. **Industrial** areas provide a range of uses, such as warehousing, manufacturing, institutional, and storage, that typically require larger land parcels with a lower intensity. Industrial uses should not share property lines or streets with residential uses, but are suitable adjacent to the employee-intensive typology and some commercial development.
5. **Transition Areas** allow for an equal mix of two land use typologies and should be planned comprehensively for the entire hatched area to ensure that an equal blend is achieved. Adjacencies should be as per **Figure 7: Land Use Adjacencies Guide**. Any variation to the mix towards the higher intense use would require a market study scoped and accepted by The City. The streetscape quality of architecture and level of articulation should be seamless regardless of the different uses.



Features

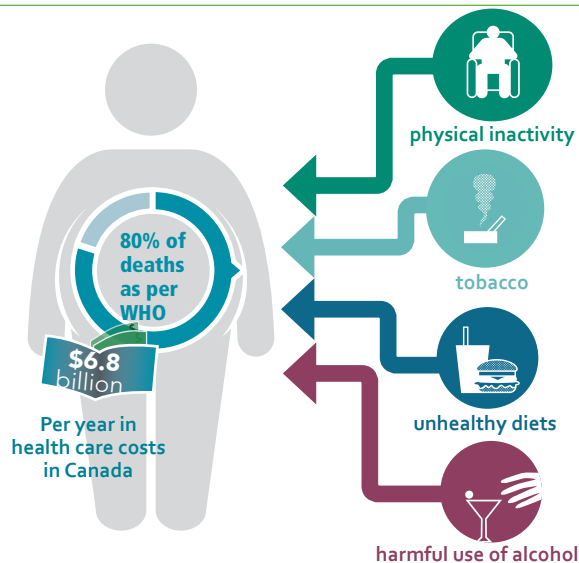
- n** 6. A local destination for the neighbourhood, the **Neighbourhood Activity Centre (NAC)** provides uses that allow for social gatherings and interaction.
- c** 7. The main focal point for the community, the **Community Activity Centre (CAC)** provides mixed-use retail and social gathering needs for the community such as access to healthy food that is within walking or cycling distance.
- i** 8. The social heart of the industrial area, the **Industrial Hub** acts as a healthy destination for workers and residents to congregate.
- j** 9. **Joint Use Sites (JUS)** provide the community with elementary and middle school sites and also opportunities for additional neighbourhood programs that could use both the school building and sports fields.
- r** 10. The **Recreation and Library Site** will provide residents of the Nose Creek Plan Area and the Keystone Hills Plan Area to the west with opportunities for recreation and cultural activities.
- e** 11. The **Emergency Response Station (ERS)** provides facilities for fire and emergency response. Its location is optimal for meeting targeted response times. The ERS can be co-located with other community uses.
- d** 12. The **Roads Facility Site** will accommodate a Snow Removal Storage Site and a Construction and Materials Depot that will service the needs of The City. The Roads Facility Site will be screened to integrate into the streetscape.
- a** 13. The **Community Association Site** provides for recreational, cultural, physical and social needs of community residents.



3

HEALTHY COMMUNITIES

FIGURE 3: LEADING RISK FACTORS FOR CHRONIC DISEASES



3.1. HEALTH AND PLANNING

This section outlines key principles and policies required to create a healthy community in the Nose Creek Plan Area.

3.1.1. INTENT

One of the key determinants of health is physical activity, and by extension the physical environment; physical inactivity is a risk factor for chronic diseases (see **Figure 3: Leading Risk Factors for Chronic Diseases**). Just as the quality of the natural environment supports better health, so does the built environment, which includes residences, workplaces and road design.

Literature and research in numerous fields from public health to medical sciences have connected the built form and land use planning to aspects that affect health.

The Healthy Planning Principles contained in this ASP were established using current research and industry best practice. The intent of this section is to outline key aspects of health and planning that will guide development in the Plan Area.

3.2. HEALTHY PLANNING PRINCIPLES

3.2.1. POLICY

The following Healthy Planning Principles are the key drivers of this ASP and should be used to direct future decisions within the Plan Area for the lifecycle of this community. Outcomes should be guided by the listed principles and encourage shifting standards and behaviours to support them.



1. ACTIVE AREAS

Plan to encourage physical activity by integrating supporting land uses so people are able and drawn to travel without being auto-dependant. Consider active living strategies at the building design stage.

2. PEOPLE PLACES

Incorporate health impacts into planning and design. Consider the scale, connectors and destination, and prioritize people over automobiles. Design to create the best place for people.

3. MIX & MINGLE

Include a variety of land uses, building types and mixed-use development, both vertically and horizontally. Co-locate activities and provide an array of public spaces within the community and neighbourhood to support physical and social interaction.

4. EMPOWER ENGAGEMENT

Integrate community engagement through planning tools such as a Health Impact Assessment. Engaging the community through a shared vision of a healthy community increases the likelihood of achieving the goal of an inclusively planned, healthy community that will be more resilient.

5. CHARACTER COMMUNITIES

Access to nature and placemaking connects people to their communities. Use natural features and environmental systems to create unique communities.

6. ALL AGES & ABILITIES

Provide equitable access to amenities, schools and services and integrate a mix of housing options to create opportunities for all people. Land use and planning should support opportunities for aging in place.

7. GROWING GROCERIES

Access to healthy food sources in the form of local groceries stores, community gardens and orchards within walking or cycling distance allows for all socioeconomic groups to be healthy. Consider the placement of land uses and the route from the home to healthy food to be planned for people first over cars.

8. RESILIENT & RESPONSIBLE

Plan and build walkable, mixed-use and transit-rich communities to meet the desires of residents and current market trends. These communities are more adaptive and resilient through economic shifts.

FIGURE 4: PUBLIC TO PRIVATE TRANSECT



3.3. HEALTHY PLANNING POLICIES

3.3.1. INTENT

The intent of these policies is to set a foundation of health for the entire Plan Area.

3.3.2. POLICY

1. Make the Healthy Planning Principles (see **Section 3.2**) the top consideration for planning decisions at the Outline Plan/Land Use Amendment and Development Permit stages.
2. Use the recommendations of the Health Impact Assessment (see **Appendix B**) developed as part of this ASP to inform planning decisions, including ASP amendments.

3. Monitoring and evaluation of the Plan Area should occur throughout the evolution of the area to direct other planning in Calgary.

Public Realm

See **Figure 4: Public to Private Transect**.

4. Predevelopment surface runoff levels should be maintained postdevelopment by using Low-Impact Design (LID) principles. These include, but are not limited to:
 - a. maximizing the use of soft landscape elements such as native trees and shrubs;
 - b. using pervious surfaces in low traffic areas; and
 - c. incorporating bioswales and rain gardens for water management.

5. Public spaces should be designed to support the density, land use and streetscapes for all communities (see **Figure 5: Public Spaces and Streetscape Elements**) and should:

- a. include a variety of quality surface materials for a range of mobility and ability requirements;
- b. be designed for access from the public street;
- c. include street furnishing and encourage public art;
- d. include gathering spaces along the street;
- e. include street-level canopies; and
- f. include decorative and functional street lighting for pedestrians.

FIGURE 5: PUBLIC SPACES AND STREETSCAPE ELEMENTS



6. The streetscape for all communities will include a cross-section that prioritizes mobility and accessibility for active transportation modes by providing
 - a. a place for people to move safely with two-way pedestrian traffic;
 - b. soft and hard landscaping, including deciduous trees along the south and west sides of the street and native shrubs and grasses, to assist with the heat island effect of paving large hard surfaces; and
 - c. intersection crossings that are comfortable for all pedestrians.
7. Public and private amenity spaces should provide a high quality outdoor environment with design considered for year-round use by adopting (See Figure 4: Public to Private Transect):
 - a. overhead structures for protection from the elements;
 - b. site furnishings at entrances and adjacent to bus stops and points of intersection with pathways;
 - c. lighting for safety and architectural effect that does not negatively impact the night sky for adjacent residents;
 - d. flexible small and large gathering spaces for individuals and groups;
 - e. soft and hard landscaping, including deciduous trees along the south and west sides of large spaces and coniferous trees on the north side;
 - f. unique architectural features; and
 - g. space for universally accessible bus zones.
8. At the Outline Plan/Land Use Amendment stage, high pedestrian traffic streets, such as but not limited to, the Activity Centre Street and areas surrounding the Community Activity Centre, should provide a double row of tree planting.
9. Buildings should be street-oriented to offer direct pedestrian access to the primary building entrance from a well-lit public sidewalk.
10. Building entrances, facades, canopies and signage should enhance the public realm through design and by orienting these elements to the street or plaza space. They should be designed at the pedestrian scale.

11. Uses adjacent to Environmental Reserve should be sensitive to environmental habitats.

Circulation





12. The land uses and street network should be planned together to encourage healthy, active living by prioritizing active transportation throughout the community.
13. In each community, provide a minimum of two north-south and two east-west non-motorized pathway connections that include both soft and hard landscaping, with destinations acting as the anchors. This will connect to or be part of the regional pathway system.
14. Pedestrian safety should be maximized in high volume pedestrian spaces such as parks, plazas, commercial areas, gathering spaces and ground-oriented commercial areas.
15. Private driveways should take access from laneways to minimize vehicular and pedestrian conflict.
16. Drive-thrus should not be located in the NAC, CAC or Industrial Hub.
17. Drive-thrus should be integrated into the building and not be visible from the street. When this is not possible, they should be properly screened from the street.
18. Auto-oriented uses are not supported in the Plan Area except in industrial areas, with proper screening of surface parking, recycling and waste facilities, and loading.
19. Parking lots and servicing should be located underground or behind buildings and screened with year-round hard and soft landscaping from all public streets and open space with integration of Crime Prevention through Environmental Design (CPTED) techniques.

4

COMMUNITY FRAMEWORK



FIGURE 6: COMMUNITY STATISTICS

	Community A	Community B
 People	9,000	0
 Jobs	10,300	10,700
 Gross Area	287 ha	391 ha
 Intensity	69 people and jobs/ha	37 people and jobs/ha

4.1. COMMUNITY IDENTITY

Communities are the larger organizing principle of the Plan Area; they group compatible and complementary land uses bound by physical features that act as cues or obstructions. There will be two communities in the Plan Area.

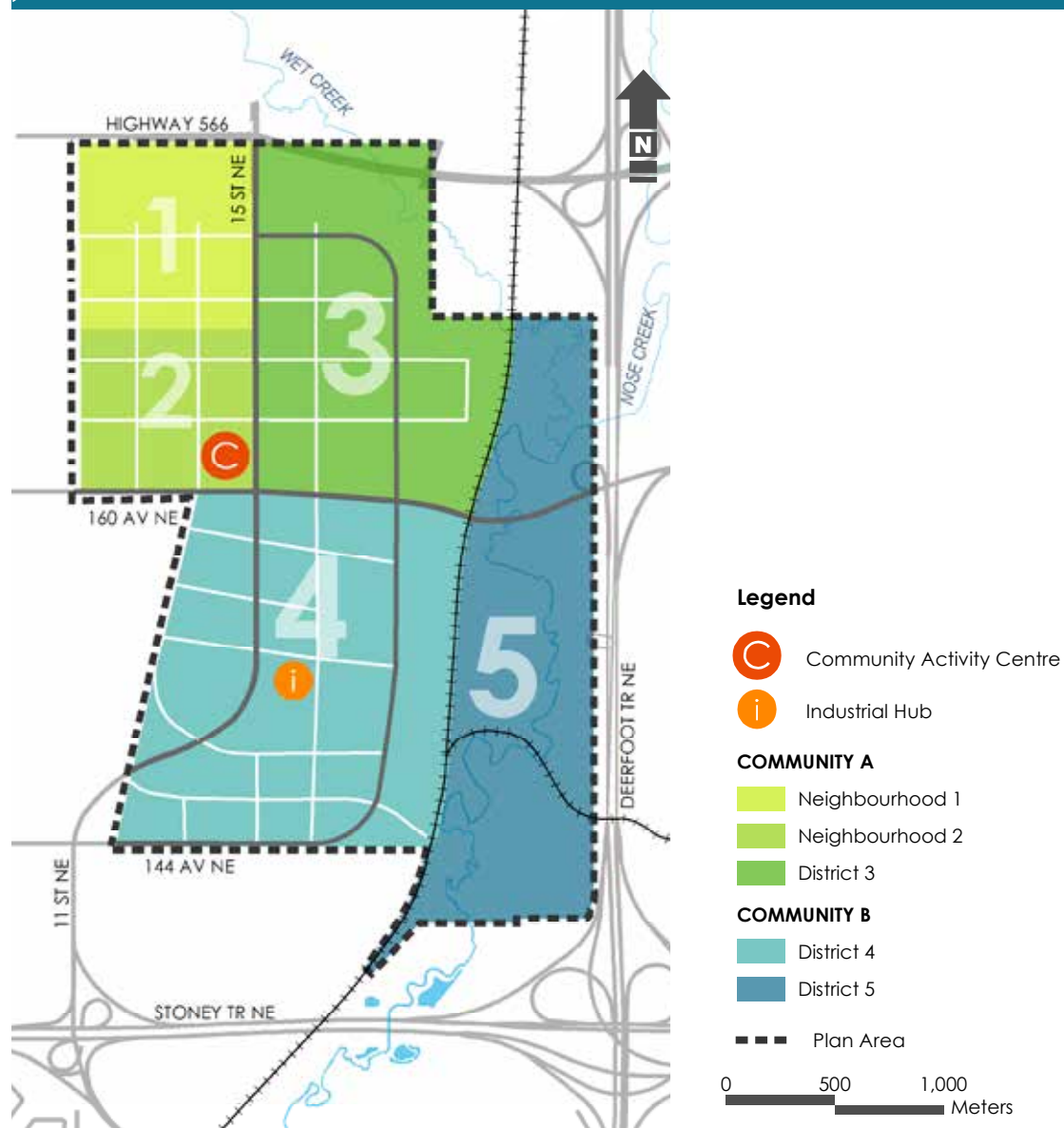
Community A includes two neighbourhoods and one district that should be designed to be inclusive through the provision of a variety of housing options and services to meet the needs of residents of all ages, abilities and incomes, with integration and connections to Community B.

Community B will consist of two districts centred around an Industrial Hub. The community is an employment-focused area due to the NEF 30 contour, limiting residential uses. Elements that encourage a healthy work environment, including

pedestrian access to green spaces for recreation and leisure as well as access to local services, should be incorporated into Community B. Development should meet the targets shown in **Figure 6: Community Statistics**.

Community development and design decisions should prioritize meeting the objectives of the Healthy Planning Principles referenced in **Section 3.2**, specifically **People Places**, **Growing Groceries**, and **Mix and Mingle**.

MAP 4: COMMUNITY FRAMEWORK



4.1.1. INTENT

The intent of these policies is to set the framework for the development of distinct, healthy communities and to detail elements for establishing a unique identity between communities and a cohesive framework within each community. Each community within the Plan Area has a unique geography and physical features that will support different uses and activities.

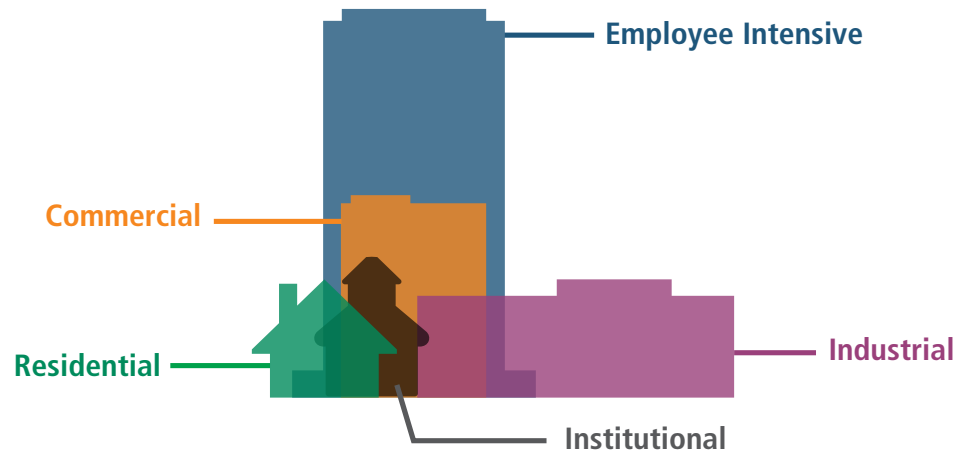
4.1.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area. In addition, policies in **Section 4.1.2** apply to all other sections with Community Framework.

Location and Features

1. The Plan Area has two communities, as shown on **Map 4: Community Framework**.
2. Community A will have a minimum density of 36.8 units per developable hectare (14.9 units per developable acre) and an intensity of 69 people and jobs per developable hectare.
3. Community B will meet an intensity target of 37 people and jobs per developable hectare.
4. Community A will include:
 - a. two neighbourhoods and one district;
 - b. a CAC located along a transit route that will include community-oriented commercial development;
 - c. an Activity Centre Street that connects the residential neighbourhood with the employment district;
 - d. a co-located Recreation and Library Site that is accessible by transit;

FIGURE 7: LAND USE ADJACENCIES GUIDE



- e. two JUS, one in each neighbourhood, that are centrally located to capture the largest possible walking radius of households, giving particular attention to pedestrian-crossing safety;
- f. a Community Association site;
- g. a minimum of two NACs;
- h. mixed-use development along key corridors;
- i. grocery stores that are conveniently located for the community and support walking and cycling trips;
- j. multi-programmable open spaces that could support community gardens and orchards; and
- k. a Regional Pathway and Green Corridor network that is publicly accessible and visible and connects to Nose Creek, wetlands, an overland drainage channel, community features, Community B and areas west of the Plan Area.

- 5. Community B will meet an intensity target of 37 people and jobs per developable hectare.
- 6. Community B will include:
 - a. an Industrial Hub;
 - b. public open space amenities; and
 - c. a Regional Pathway and Green Corridor network that is publicly accessible and visible and connects to Nose Creek, wetlands, an overland drainage channel, community features, Community A and areas west of the Plan Area.
- 7. Community B will include the provision of a transition of compatible uses as per **Figure 7: Land Use Adjacencies Guide**.
- 8. Opportunities for work-live corridors along the western boundary of Community B are encouraged.

4.2. COMMUNITY ACTIVITY CENTRE

Community Activity Centres (CACs) are the focal points of communities. They provide a cluster of higher density mixed uses and amenity spaces in a walkable, cohesive and attractive urban environment.

4.2.1. INTENT

The intent of these policies is to describe elements necessary to achieve the goal of making the CAC a healthy, equitable, walkable, transit-oriented, multi-functional and flexible space to meet the community's needs in a human-scaled environment. Development and design decisions should prioritize meeting the objectives of the Healthy Planning Principles referenced in **Section 3.2**.

4.2.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area.

Location and Features

- 1. The CAC will be located as shown on **Map 3: Land Use Concept**.
- 2. The CAC should provide a focal point and destination for both residents and employees in the area by providing amenities along the Activity Centre Street.
- 3. Buildings should be oriented to the street, screening parking and servicing elements in the rear (see **Figure 8: Example of CAC Streetscape**).

Public Realm

4. The CAC should include retail space in the form of a local or community-sized grocer.
5. Public plazas and open spaces should be incorporated into the programming and layout of the CAC to provide for year-round uses. These include power source, access from the public street, canopy elements, removable seating and other facilities to support future community programming.
6. Quality design, material finishing and design features should be equal for all projects and not diminished for any type of population group.
7. Ground floor residential units with individual entrances should be incorporated into the CAC to support all ranges of mobility.

8. Where possible, provide a double row of street trees, one row within the right-of-way and one row on private property. Trees within private property can be part of the landscape requirement; however, additional trees may be required to complete the double row alignment with those in the right-of-way.
9. Soft landscaping should be incorporated along the streetscape to buffer pedestrians and cyclists from dirt and noise from the vehicular lanes, where possible.

Circulation

10. Consider the use of wider sidewalks and separated bike lanes to encourage transit use, and prioritize pedestrian mobility. Allow for a wider landscape buffer of trees, shrubs and ground covers along the street (see Figure 8: Example of CAC Streetscape).

11. With the exception of interim surface parking lots, parking within the CAC should be on-street (for those street types where parking is allowed) or provided underground.
12. Above-ground parkades and surface parking lots may be allowed, subject to the Approving Authority, if at least 80% of the lot area is screened from pedestrians on the street and low-impact design features divert at least 80% of the surface runoff prior to entering the stormwater system.
13. Applicants should provide only the minimum number of parking spaces required by the Land Use Bylaw. A Parking Supply Rationalization Study must be supplied for any increase beyond the minimum number of parking spaces required by the Land Use Bylaw.

FIGURE 8: EXAMPLE OF A CAC STREETScape



5

NEIGHBOURHOOD FRAMEWORK

Neighbourhoods are a component of the larger urban structure at the community scale. A Neighbourhood Area contains a variety of housing types designed around a focal point such as an activity centre, corridor or retail centre. This section delineates the neighbourhoods by size, boundary and composition and specifically support the Healthy Planning Principals of **All Ages and Abilities, Active Areas, and People Places**.

5.1. NEIGHBOURHOOD IDENTITY

5.1.1. INTENT

Establishing a distinct identity for each neighbourhood provides interest and a sense of place and belonging for residents. The intent of these policies is to ensure that the neighbourhoods in the Plan Area are designed to foster a distinct identity based on both natural features and planning attributes.

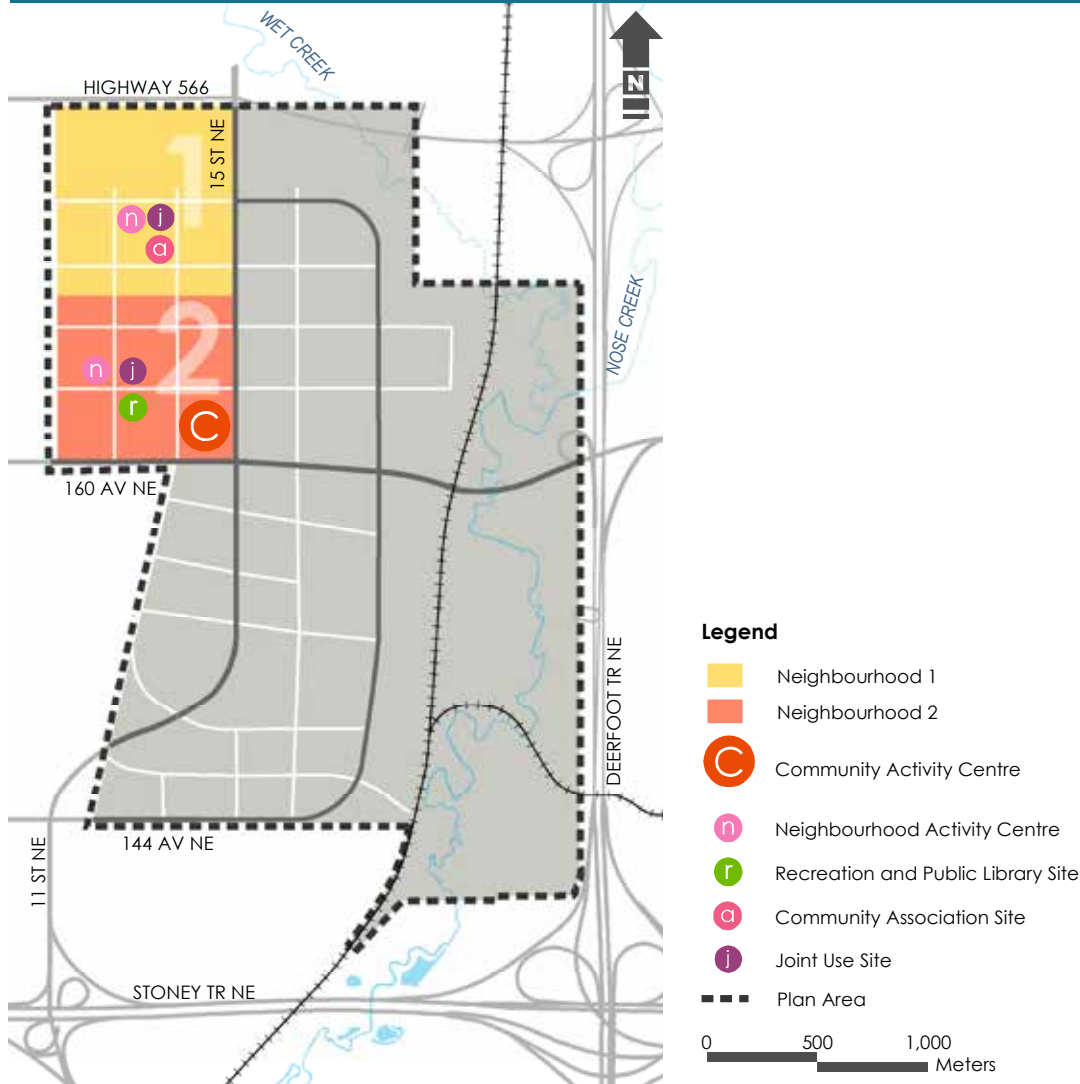
Neighbourhood boundaries were determined by logical divisions created by natural features, walking distances to NACs and convenient access to other amenities and services. The interface and connectivity between neighbourhoods should be seamless, with a consistently high quality of design throughout. Key components of

neighbourhoods in Nose Creek include a fine grain grid network with pedestrian-oriented streets, and a variety of housing options, services and amenities.

5.1.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area. In addition, policies in **Section 5.1.2** apply to all other sections within Neighbourhood Framework.

MAP 5: NEIGHBOURHOOD FRAMEWORK



Location and Features

1. Community A will include two neighbourhoods as shown on Map 5: Neighbourhood Framework.
2. Each neighbourhood must meet the overall minimum required density of 36.8 units per gross developable hectare (14.9 units per gross developable acre).
3. Appropriate adjacent land uses would include employee-intensive, commercial and open spaces (see Figure 7: Land Use Adjacencies Guide), as well as institutional uses and places of worship.

Public Realm

4. Blocks within the Neighbourhood Area should:
 - a. be designed around a grid network where possible; and
 - b. incorporate a variety of housing types within any block.

Circulation

5. At a minimum, each neighbourhood should include one non-motorized pathway running north-south and one running east-west that connects to or is part of the Regional Pathway system.

Neighbourhood Framework

5.1.3. NEIGHBOURHOOD 1 POLICY

Location and Features

1. As the key entrance point to the Plan Area from the north, Neighbourhood 1 acts as a gateway into Nose Creek. The interface along 15 Street NE should
 - a. include human-scaled streetscape and buildings;
 - b. include distinct and articulated architecture;
 - c. respect and celebrate the natural features in the area;
 - d. include integrated mixed use, both vertically and horizontally; and
 - e. incorporate residential into mixed-use development outside of the NEF contour.

Circulation

2. As a gateway to the Plan Area, 15 Street NE should be planned to exemplify the key Healthy Planning Principles (see **Section 3.2**) through building and streetscape design.

5.1.4. NEIGHBOURHOOD 2 POLICY

Location and Features

1. The Recreation and Library Facility should be designed as a destination for the residents in the neighbourhoods and communities of the Plan Area.
2. The Activity Centre Street is a key corridor that connects the NAC, JUS, Recreation and Library Facility, the CA site, the CAC and the employment areas. Open spaces in the form of plazas are encouraged. Key elements along the Activity Centre Street should include:

- a. mixed-use development, both vertical and horizontal; and
- b. enhanced streetscape design that will include public amenity space adjacent to the sidewalk to accommodate higher volumes of pedestrian activity.

Public Realm

3. Uses adjacent to transit stops should provide public amenity spaces that include lighting, structured canopies, site furnishings and entrances to buildings.

FIGURE 9: EXAMPLE OF NAC STREETScape



5.2. NEIGHBOURHOOD ACTIVITY CENTRE

Neighbourhood Activity Centres (NACs) are the focal points of neighbourhoods, and are identified according to the neighbourhood number and will be located as shown on **Map 5: Neighbourhood Framework**.

5.2.1. INTENT

The intent of these policies is to identify the distinctive aspects of each NAC by drawing from unique physical characteristics of the local conditions and ensuring integration into the neighbourhood and larger community. Providing opportunities to access healthy foods and mixed-use development are features of the NAC that realize the vision of a healthy community (see **Figure 9: Example of NAC Streetscape**).

5.2.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area. Policies from **Section 5.1.2** also apply.

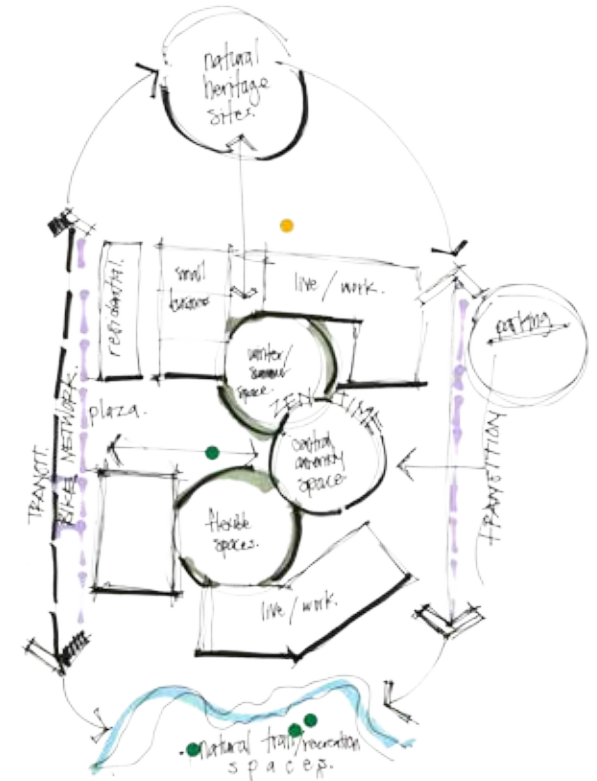
Location and Features

1. The NACs will be located as shown on **Map 5: Neighbourhood Framework** and may be designed as shown in **Figure 10: Functional Diagram of A NAC**.
2. The NACs should provide direct pedestrian connections with the adjacent schools.

Public Realm

3. NACs will provide a variety of seating and gathering places for everyday use and neighbourhood events.
4. Parking and servicing elements should be screened and away from the main entrances and streetscape.
5. Streetscapes should provide year-round pedestrian comfort, canopies for summer shade and protection from rain and snow, access to natural sunlight during winter months, soft landscaping to reduce heat island effect, and LID practices to reduce surface drainage flooding and icing.

FIGURE 10: FUNCTIONAL DIAGRAM OF A NAC



5.3. MULTI-RESIDENTIAL DEVELOPMENT

Multi-residential development will be incorporated throughout the residential portion of the Plan Area. The inclusion of multi-residential development in the Plan Area promotes a range of housing options to meet the needs of a variety of citizens according to housing type and affordability.

5.3.1. INTENT

A healthy community has an integrated social fabric with various housing types intermingled in a neighbourhood with indiscriminating visual differences in the quality and site design of all housing types. Ensuring a high quality of design for all housing types is crucial to promoting social equity and the ability to age in place, both key principles of a healthy community.

5.3.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area.

Location and Features

1. Multi-residential developments should:
 - a. have a minimum of a 5m side yard setback when adjacent to another multifamily site to create a seamless barrier-free plaza-type space between the two building complexes (see **Figure 11: Multi-Residential Sites Interface**);
 - b. receive, at a minimum, the same attention to design and finishing as low-density development;
 - c. have individual entrances for at-grade units;

FIGURE 11: MULTI-RESIDENTIAL SITES INTERFACE



- d. provide creative and visual quality through details such as facade articulation, windows, doors, recesses, canopies, awnings and porches, breaking up massing, varying roof pitches and using quality building materials; and
 - e. have a maximum parcel size of 1.2 ha (3 ac) and should not compose the entire block face.
2. When adjacent to another multi-residential development with the presence of the shared plaza along the side yard, the primary building entrance should be facing the plaza with a clear demarcation of the entrance using signage, architectural articulation, furnishing and landscaping.
 3. A multi-residential site larger than 0.8 ha (2 ac) should:
 - a. include a variety of housing types, with the building footprint of one housing type not exceeding 70% of the mix; and
- b. have no more than two multi-residential sites on any block face, as multi-residential sites should be integrated throughout each neighbourhood.

Public Realm

4. Multi-residential developments should:
 - a. not be located adjacent to skeletal roads or arterial streets if noise walls are required. Mixed-use development with commercial use on the ground floor is allowed along arterial roads with residential above;
 - b. integrate with the surrounding neighbourhood through site design, pedestrian connectivity, compatible architectural elements and landscaping (see **Figure 12: Grade and Street-Oriented Multi-Residential Development**); and
 - c. identify pedestrian connections with distinct surface treatment, lighting and furniture.

FIGURE 12: GRADE AND STREET-ORIENTED
MULTI-RESIDENTIAL DEVELOPMENT



Circulation

5. Multi-residential developments should:
 - a. provide direct pedestrian access from the street;
 - b. fit into the public street grid network and provide connectivity across the site where appropriate; and
 - c. front onto a street with parking access provided from a rear lane, side street or shared entrance into the site.

5.4. OLDER ADULT HOUSING

5.4.1. INTENT

The inclusion of older adult housing and seniors care facilities in the Plan Area would accommodate the needs of an aging population and allow members of the community to age in place.

Older adult housing and facilities should be incorporated in a manner that provides for inclusion and access to services and amenities. The built form and surrounding landscape should have mental and physiological health benefits for seniors. Access and exposure to the natural landscape are crucial elements in older adult housing, especially for those with limited mobility to access such spaces.

5.4.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area.

Location and Features

1. Older adult housing should be oriented towards views of the natural landscapes.
2. Senior Care Facilities should be placed in the centre of a neighbourhood to encourage interaction with all ages in the neighbourhood and to strengthen a neighbourhood's social fabric.
3. Older adult housing should be complemented with active neighbourhood uses such as day cares, local retail and schools.
4. Older adult housing should be integrated into a mixed-use development.

Public Realm

5. Central amenity space should support individual and group settings, where seniors can rest, gather and recreate.
6. Outdoor spaces should:
 - a. be designed to a high standard for all levels of older adult care using high quality materials;
 - b. provide an abundance of soft landscaping, quality hardscape and protection from the elements;
 - c. be safe and accessible for all mobility levels;
 - d. have consideration for programming for older adults to the satisfaction of the Approving Authority; and
 - e. be located near natural landscape features in the area.
7. Parking and servicing areas should be screened from the street, amenity spaces and entrances.

Circulation

8. Older Adult Housing should be located within 400m of a transit stop.



The district is the other building block of the community that complements the neighbourhood. Districts are parallel to neighbourhoods, with the major differences being the types of activities and amount of time spent in each area. Districts are designed to provide a quality work and learning environment, as Calgarians spend the majority of their daytime hours at work or at educational institutions.

6.1. DISTRICT IDENTITY

6.1.1. INTENT

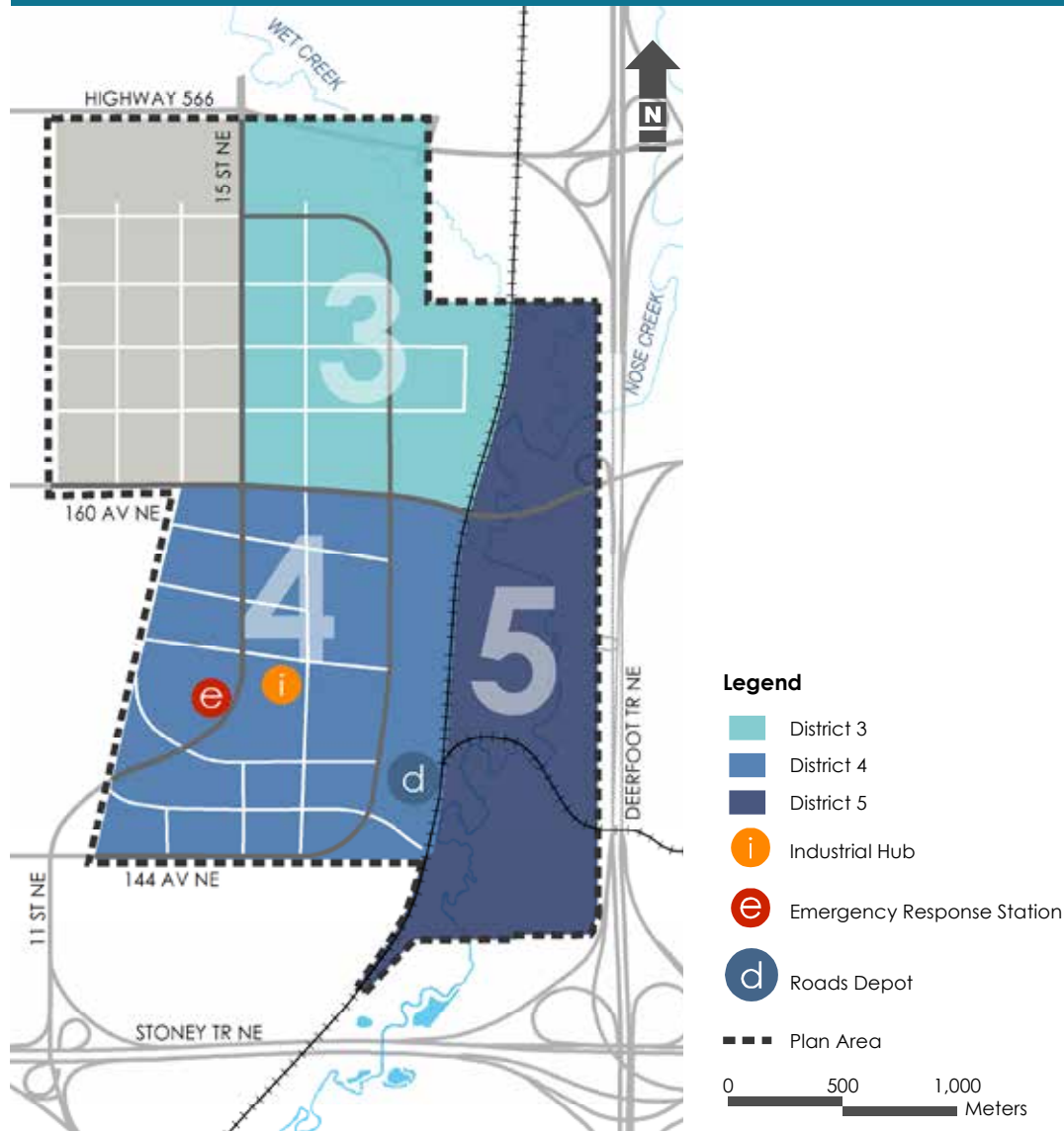
A key component of a healthy community is the ability to work in close proximity to one's home. Lower commute times and distances provide the opportunity for non-vehicular modes of transportation and increase physical activity. Employment districts provide opportunities for a greater range of services into the area that normally are not found in predominantly residential neighbourhoods, including more recreational amenities to encourage active living. Creating a connection between an individual's employment district and residential neighbourhood will enhance the social fabric of the community and strengthen the social ties of residents and employees in the community.

Development and design decisions should prioritize meeting the objectives of Healthy Planning Principles referenced in **Section 3.2**, specifically **All Ages and Abilities**, **People Places**, and **Mix and Mingle**.

6.1.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area. In addition, policies in **Section 6.1.2** apply to all other sections in District Framework.

MAP 6: DISTRICT FRAMEWORK

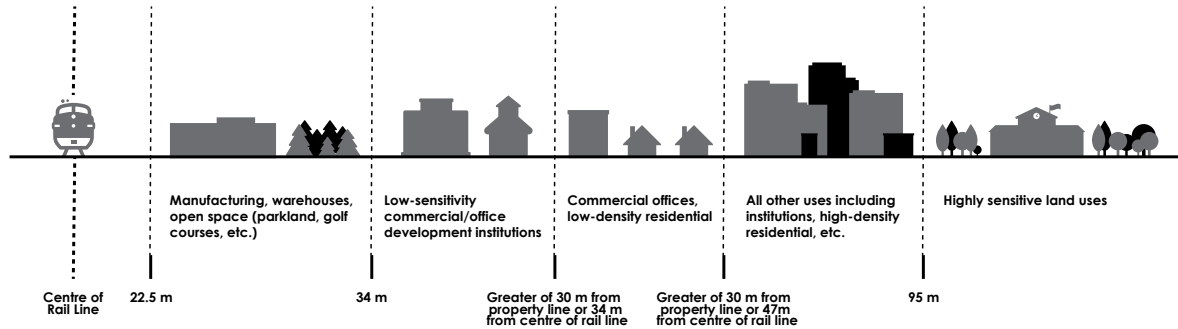


Location and Features

1. Community A will include one district along with two neighbourhoods, as shown on **Map 4: Community Framework**.
2. Community B comprises two districts, as shown on **Map 6: District Framework**.
3. Blocks should be designed around a grid network where possible.
4. The industrial typology shall not be adjacent to residential areas except for neighbourhood compatible uses such as institutional uses and places of worship; refer to **Figure 7: Land Use Adjacencies Guide** for the typologies cross-section.
5. Heavy industrial uses with impacts to the natural environment must not be located in the Plan Area.
6. Development adjacent to the rail right of way that are within 95m:
 - a. should not include sensitive land uses (places where less mobile or vulnerable populations may reside or congregate, including, but not limited to, assisted living, hospitals, child-care services and schools) which may be adversely impacted by railway operations (see **Figure 13: Rail Proximity Development Setback**);
 - b. may require a Development Viability Assessment or a Site Specific Risk Assessment to identify risks and mitigation; and
 - c. residential development must be set back 30m from the railway property line and mitigation measures may be required at the Outline Plan/Land Use Amendment stage.

District Framework

FIGURE 13: RAIL PROXIMITY DEVELOPMENT SETBACK



Public Realm

7. The quality of the public realm should not be diminished in employment areas and should be of the same high quality as the rest of the Plan Area.
8. Entrances to offices or warehouses should be clear from the street and accentuated through both building articulation and soft and hard landscaping.
9. Public amenity spaces for employees should be visible and adjacent to the street to encourage activity on the street. These spaces should provide shelter and seating.

6.1.3. DISTRICT 3 POLICY

Location and Features

1. District 3 includes lands that are adjacent to the rail lines and could support a future commuter rail station.
2. Lands North of Hwy 566 could support office uses.

Public Realm

3. Development adjacent to a future commuter rail station should include a variety of uses and a pedestrian-oriented streetscape.

6.1.4. DISTRICT 4 POLICY

Location and Features

1. District 4 is adjacent to residential development to the west and work-live opportunities should be explored along the boundary of the Plan Area.

6.2. INDUSTRIAL HUB

The Industrial Hub is the focal point of industrial and employee-intensive areas. Services and amenities anchor the Industrial Hub and are complemented by smaller industrial parcels for less intensive industrial uses that may include studio spaces for artists and small-scale industrial fabrication (see Figure 14: Example of Industrial Hub).

FIGURE 14: EXAMPLE OF INDUSTRIAL HUB



6.2.1. INTENT

The intent of these policies is to facilitate the design of quality industrial-supportive services, provide quality amenity space for industrial employees and take advantage of local conditions to ensure integration of the Industrial Hub into the neighbourhood and larger community.

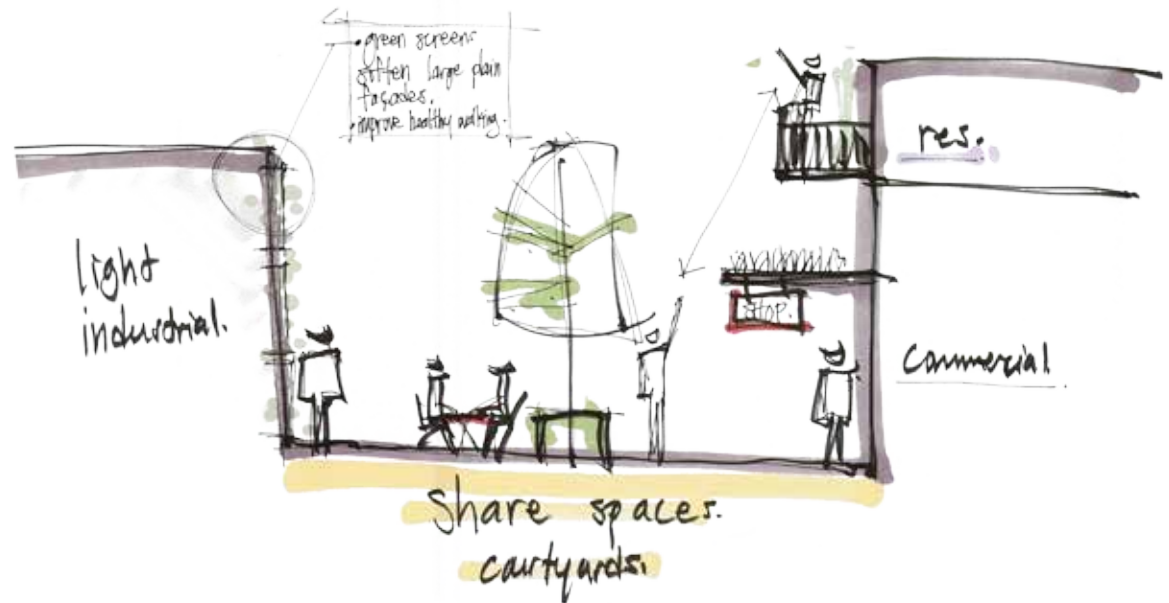
6.2.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area. Policies from **Section 6.1.2** also apply.

Location and Features

1. The Industrial Hub will be located as shown on **Map 3: Land Use Concept**.
2. The Industrial Hub should be a minimum of 4 ha (10 ac).
3. The Industrial Hub should include a large centralized space that can accommodate events, such as an artisan market that allows employees in the area to showcase and sell their goods, as well as, act as a destinations for residents in the Nose Creek Plan Area (see **Figure 15: Cross Section of the Industrial Hub**).
4. The Industrial Hub will be located on a transit route and within 400m of a bus stop.
5. Industrial development should include smaller parcels to encourage small-scale uses and studio spaces.
6. Commercial development in the Industrial Hub should consist of small and medium formal retail uses.
7. Work-live opportunities should be explored.

FIGURE 15: CROSS SECTION OF THE INDUSTRIAL HUB



Public Realm

8. Lands Adjacent to Highway 566 and West Creek land include office type uses. The Industrial Hub will include open spaces and plazas that can accommodate an industrial public market. The industrial hub will provide a destination for employees to gather, shop and recreate.
9. The Industrial Hub will have pedestrian-scaled streetscapes with buildings that provide at-grade entrances.
10. Amenity spaces in the Industrial Hub:
 - a. shall be designed to accommodate active and passive recreation;
 - b. shall comprise no less than 5% of the total land area of the Industrial Hub; and
 - c. should include a transit plaza central to the Industrial Hub with convenient and direct connections to transit service.

Circulation

11. The Industrial Hub should have direct access to the Regional Pathway System. The Industrial Hub shall be tied directly into the Regional Pathway and/or Green Corridor system and should have no negative impact to Environmental Reserve areas.

7

COMMUNITY AMENITIES

This section details the components necessary to ensure residents have access to a complete community, including schools, a recreation facility, a library and green space. Amenities within the community provide opportunities for people to gather, socialize, shop, learn, play and work. They are vital to achieving the Healthy Planning Principles of **Empower Engagement, Mix and Mingle, and All Ages and Abilities.**

7.1. JOINT USE SITES

Joint Use Sites (JUS) provide locations for public and separate schools together with sports fields and recreational areas on sites dedicated as reserve land. JUS are jointly owned by The City of Calgary and the respective school board in accordance with the principles of the Joint Use Agreement.

7.1.1. INTENT

The intent of these policies is to provide direction to ensure JUS are appropriately located and sized, and that the appropriate amount of reserve land is dedicated. Please see **Appendix C: Joint Use Sites and Municipal Facilities Requirements** for JUS sizes and requirements.

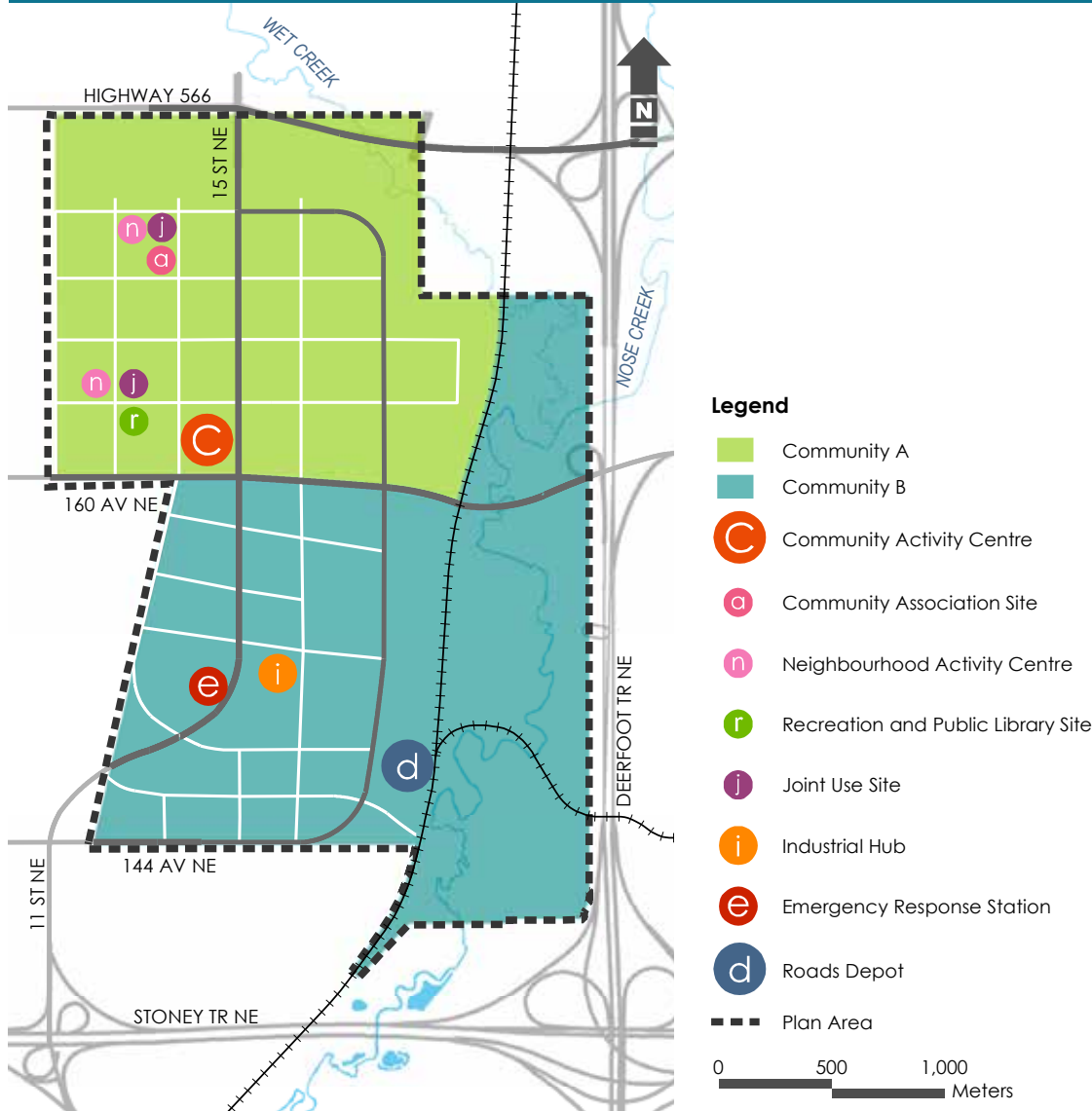
7.1.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area.

Location and Features

1. Two JUS should be located within the Plan Area as shown on **Map 7: Community Amenities.**
2. The location of a JUS may change to the opposite side of a collector street within the same neighbourhood at the Outline Plan/Land Use Amendment stage without an amendment to the ASP.
3. The school building envelope within a JUS should be in accordance with the Site Planning Team Guidelines at the time of development.

MAP 7: COMMUNITY AMENITIES



- Schools should be integrated into the community for extended hour use and should service the neighbourhood.

Public Realm

- The school shall be street-oriented to offer direct pedestrian access to the primary building entrance from the public sidewalk.
- Parking lot location should provide the least amount of pedestrian and cyclist-to-vehicular conflict as possible.

Circulation

- School sites should be designed to prioritize children's ability to walk and cycle to school.
- Bus and parent drop offs should not impact lines of sight at crosswalks, intersections and main pedestrian entrances to the school site.

7.2. RECREATION AND LIBRARY FACILITY SITE

Recreation facilities provide for the recreational needs of community residents. A recreation facility may include, but is not limited to, buildings, ice rinks and playfields. A library provides cultural amenities and a gathering space for the community.

7.2.1. INTENT

The intent of these policies is to describe the location and site conditions of the Recreation and Library Facility site. This site should function as a community gathering place and be responsive to the recreational and cultural needs of the residents and workers within the Plan Area, as well as portions of the Keystone Hills ASP.

The Recreation and Library Facility site will consider providing amenities that support sports, fitness, arts, culture, festivals, community events and leisure activities. These uses aid in creating destinations, programming opportunities and integration of uses that allow a community to be resilient and healthy.

7.2.2. POLICY

Refer to **Section 2.3.2** for policies that apply to the entire Plan Area.

Location and Features

1. The Recreation and Library Facility site will be located as shown on **Map 7: Community Amenities**.
2. The site shall facilitate the development of a Small Regional Recreation Centre and a public library and be a minimum of 5.2 ha (13 ac).

FIGURE 16: COMMUNITY AMENITIES PROGRAMMING



Public Realm

3. Building entrances, facades, canopies and signage should enhance the public realm by orienting these elements to the street or plaza space.
4. Recycling, waste facilities and their servicing should be integrated into the building and not be visible from the street.

7.3. COMMUNITY ASSOCIATION SITE

The Community Association (CA) site provides for the recreational, cultural, physical and social needs of community residents. Facilities developed on the CA site may include a variety of recreational and open space amenities, including but not limited to community gardens, ice rinks, open air stages and gathering spaces (see **Figure 16: Community Amenities Programming**).

7.3.1. INTENT

The intent of these policies is to describe the location and site conditions of the CA site. The CA site should be a programmable, multi-functional space that creates a sense of identity and belonging in the community.

7.3.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area.

Location and Features

1. There shall be one CA site located as shown on **Map 7: Community Amenities**.
2. The CA site should consider co-location with other flexible uses that include schools, libraries and recreation facilities.

3. If the CA site is co-located, it would require:
 - a. office space and a shared meeting facility; and
 - b. a separate distinct entrance incorporated into the building design that should be oriented towards the public street.
4. The CA site should be located in close proximity to the Regional Pathway and/or Green Corridor network, where possible.

Public Realm

5. CA sites should be safe and accessible for all ages and abilities, integrating with natural features.

Circulation

6. CA sites should be located within 400m of a transit stop.

7.4. ROADS FACILITY SITE

A Snow Storage Site and a Construction and Materials Depot have been identified for the Plan Area, as shown on **Map 7: Community Amenities**.

7.4.1. INTENT

The intent of these policies is to describe the location and site conditions of the Snow Storage Site and the Construction and Materials Depot Site.

7.4.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area.

Location and Features

1. The Snow Storage Site should be a minimum of 6.47 ha (16 ac) of developable land.
2. The Construction and Materials Depot should be a minimum of 6.47 ha (16 ac) of developable land.
3. The Roads Facility Site should:
 - a. be located along an industrial arterial street to accommodate large truck movement;
 - b. be placed adjacent to industrial uses to minimize impact on residential development; and
 - c. be located where there is a buffer southeast of the facility from other developments that may be impacted by seasonal operational practices.

Public Realm

4. The site should provide a high quality of screening and fencing so as to integrate into the district.
5. Streetscapes in the Plan Area with sidewalks shall continue in front of the roads facility.
6. When buildings are on site and are not required to be placed internal to the site for safety, security or operational reasons, they shall be oriented towards the street. The building should be enhanced with both soft and hard landscaping features.
7. Operational areas shall include year-round screening consisting of both decorative fencing and soft landscaping, and should not diminish the streetscape in the area.

7.5. EMERGENCY RESPONSE STATION

An Emergency Response Station has been identified for the Plan Area.

7.5.1. INTENT

The intent of these policies is to describe the location and site conditions of the Emergency Response Station and ensure appropriate emergency response coverage for the Plan Area. The Emergency Response Station should be integrated with the character and architectural style of the district.

7.5.2. POLICY

Refer to **Section 3.3.2** for policies that apply to the entire Plan Area.

Location and Features

1. An Emergency Response Station shall be located as shown on **Map 7: Community Amenities**.
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).
4. Developers are encouraged to engage administration regarding the location and size of the land parcel at the initiation of any outline plans.

Public Realm

5. Operational areas shall include year-round screening consisting of both decorative fencing and soft landscaping, and should not diminish the streetscape in the area.

8

OPEN SPACE NETWORK

Policies in this section support the importance of an open space network in building a healthy community and should highlight the Healthy Planning Principles of **Active Areas, People Places, and Character Communities** for healthy communities. The open space network incorporates opportunities to preserve, connect and enjoy natural features in the landscape to the programmed spaces that allow for recreation, social interaction and community building.

8.1. OPEN SPACE

8.1.1. INTENT

The intent of these policies is to provide direction to comprehensively plan an open space network that will provide opportunities for all in Nose Creek to enjoy a healthy lifestyle and environment.

8.1.2. POLICY

Location and Features

1. Open spaces should provide opportunities for passive and active recreation and act as community destinations (see **Figure 17: Public Access to Open Space**).
2. Open spaces should be:

- a. equitable for all in the community; and
- b. located with public access by ensuring the perimeter is abutting public land, which includes streets and ER, unless the open space is in the form of an urban plaza where adjacent boundaries are amenity spaces from commercial uses. Urban plazas should have a minimum of 25% of the total perimeter facing a public street.

Public Realm

3. Open spaces should balance public access and integration with adjacent uses. Where possible, open spaces should not be fronted by roads on all sides unless the open space is greater than 0.8 ha (2 ac) so that a variety of park programming can occur in the space.

MAP 8: OPEN SPACE



FIGURE 17: PUBLIC ACCESS TO OPEN SPACE



8.2. REGIONAL PATHWAY AND GREEN CORRIDORS

8.2.1. INTENT

The intent of these policies is to provide direction to comprehensively plan an open space network that will provide opportunities for all in the Plan Area to enjoy a healthy lifestyle and environment.

8.2.2. POLICY

Location and Features

1. The Green Corridor and Regional Pathway network should be located as shown on **Map 8: Open Space**.
2. Regional Pathway alignment may be refined but not removed at the Outline Plan/Land Use Amendment stage.
3. The Regional Pathway and/or the Green Corridor must connect to Nose Creek.
4. The Green Corridor should include native plantings and natural landscaping.
5. The Regional Pathway and/or the Green Corridor must have direct access to the NAC, CAC, Industrial Hub, Recreation and Public Library site, and CA site.

8.3. ENVIRONMENTAL OPEN SPACE STUDY AREA

Environmental Open Space (EOS) Study Area identifies land that is environmentally significant and will require further study at the Outline Plan/Land Use Amendment stage to determine if it qualifies as Environmental Reserve or if it can be incorporated into development.

As the Plan Area falls within the Nose Creek watershed, area water quality should be considered in the approval of all development, particularly that adjacent to the creek itself, as well as the wetlands and drainages associated with it.

8.3.1. INTENT

The intent of these policies is to provide direction to the Approving Authority for the preservation of open space and the sensitive development of natural features to protect the Plan Area watershed and integrate critical ecological areas, enhancing air, soil and water quality; ensuring ecological integrity of public open spaces; and strengthening connections between natural areas and the broader community.

FIGURE 18: INTEGRATING NATURE INTO PARK SPACE



8.3.2. POLICY

Location and Features

1. Any development within the Nose Creek Corridor (defined as the area between the CP Rail tracks and Deerfoot Trail NE) shall adhere to the Nose Creek Watershed Water Management Plan.
2. Contiguous corridors should be retained for connectivity of wetlands, creeks, streams and drainages to allow for wildlife movement and possible stormwater integration.
4. LID practices should be implemented to achieve runoff volume targets in the Nose Creek Watershed Water Management Plan.
5. Stripping, grading or filling in escarpment areas should be avoided.
6. Slope Adaptive Guidelines should be followed where development occurs on slopes deemed to be stable.

Public Realm

3. Commercial and industrial uses adjacent to natural areas should:
 - a. allow for public gathering space to be integrated with the natural areas;
 - b. avoid locating surface parking along the adjacent edge of the natural area;
 - c. allow direct pedestrian connection from the commercial uses to the pedestrian pathways within the natural area; and
 - d. coordinate landscape components, where appropriate, to reflect the nature of the adjacent open space (see **Figure 18: Integrating Nature into Park Space**).
7. Crossings of wetlands and drainages should be avoided where possible.
8. Where a crossing is required:
 - a. studies should be done at the Outline Plan/Land Use Amendment stage to ensure that any potential changes to existing wetland/drainage boundaries are minimized;
 - b. mitigation measures shall be demonstrated by the applicant, both during construction and in the final design; and
 - c. wildlife crossings should be considered in the design, where deemed feasible and appropriate by the Approving Authority.

9

MOBILITY

The intent of these policies is to outline the pedestrian, cycling, transit and vehicular networks in the Plan Area to ensure the street network functions efficiently and safely for a variety of transportation modes.

Mobility policies are vital to achieving the Healthy Planning Principles of **Resilient and Responsible, Active Areas, and All Ages and Abilities**. Consideration of pavement and streetscape design will develop the framework necessary to support a healthy community as it evolves over time.

9.1. PEDESTRIAN CIRCULATION

Pedestrian circulation is a priority element of creating a vibrant and healthy community. Safe and accessible pedestrian circulation provides residents, employees and visitors to the Plan Area with increased mobility options. Pedestrian circulation should be designed to provide direct connections to community destinations, promote walking and integrate with the pathway network. This is developed closely with the overall road network as the majority of pedestrian activities will be on the streets.

9.1.1. INTENT

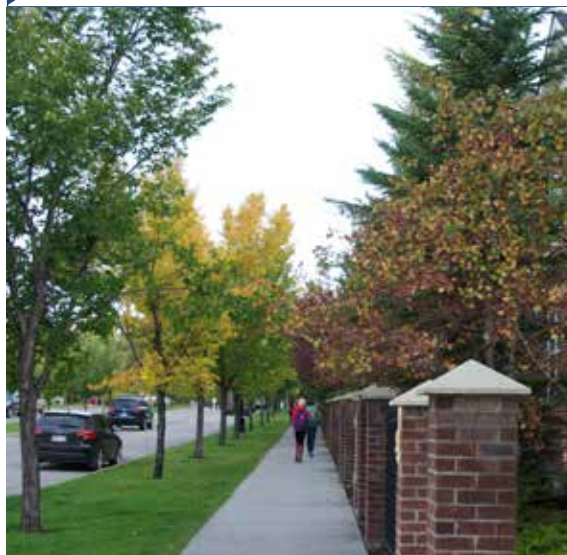
The intent of these policies is to outline the pedestrian networks in the Plan Area. See **Section 8.2: Regional Pathway and Green Corridors** for information on regional pathways and the green corridor network.

9.1.2. POLICY

Location and Features

1. A wayfinding system should be implemented throughout the Plan Area to provide pedestrians and cyclists opportunities to plan their routes to various destinations. Elements of the wayfinding system should include key destinations such as NACs and the CAC, parks, transit stations, shopping areas, trails, and community recreation and cultural facilities.
2. Pedestrian connectivity must be established between the Plan Area and areas within The City of Calgary to the south and west. Continuity should be maintained to the north and east to Rocky View County.

FIGURE 19: PEDESTRIAN-ORIENTED STREETS



3. Pedestrian circulation should be a seamless network that is accessible for all on public and private properties (see **Figure 19: Pedestrian-oriented Streets**).

Public Realm

4. Adjacent uses that would offer activity on the street should provide additional sidewalk space or hard surface to provide ample room for pedestrians who are both passing and gathering.
5. High-density residential neighbourhoods, mixed-use areas and commercial areas should provide wider sidewalks and/or a building setback from the property line that will allow for additional pedestrian movement and activity.
6. Public streets should be designed as safe places for pedestrians and facilitate non-motorized modes of transportation.

FIGURE 20: CYCLING CONNECTIONS



Circulation

7. Site circulation should be designed for optimal pedestrian movement.
8. Crossings over natural features, at road intersections and at rail lines should be designed with the safety and connectivity of pedestrians in mind.

9.2. CYCLIST CIRCULATION

Cycling is an affordable and sustainable active transportation option (see **Figure 20: Cycling Connections**). The Nose Creek ASP allows for on-street, separated and pathway cycling connections throughout the Plan Area. Connections will also be provided to link the Plan Area to Nose Creek and adjacent communities to the south and west in the Keystone Hills ASP.

9.2.1. INTENT

The intent of these policies is to outline cyclist networks in the Plan Area. See **Section 8.2: Regional Pathway and Green Corridors** for information on regional pathways and the green corridor network.

9.2.2. POLICY

Location and Features

1. Cycling facilities should be provided at destinations including NACs and the CAC, the Industrial Hub, parks, transit stations, community, recreation and cultural facilities and shopping areas.

Public Realm

2. Design of bicycle parking should encourage year round use and be integrated into the overall architecture of the building design.
3. Bicycle share program parking stations are encouraged in the public realm and public amenity spaces at destinations throughout the Nose Creek ASP. These could include the NACs, CAC, Recreation and Library site, Industrial Hub, and key open space and park entrances to adjoining natural features such as the creek.

Circulation

4. Where a Regional Pathway is shown on the land use concept adjacent to a liveable street:
 - a. enhanced modal separation for cycling infrastructure should be provided where high motor vehicle volumes and/or modal conflicts are anticipated; and
 - b. modal separation may be provided through an off-street pathway or an on-street cycle track.
5. A bicycle station should be integrated into the primary transit stop located in the CAC.

9.3. TRANSIT SERVICE

Transit is a high priority mode of transportation as it provides affordable and sustainable mobility options for the community. The Plan Area allows for transit service to connect with adjacent communities in Keystone Hills ASP and throughout the city. Transit is a vital component of supporting all land uses (see **Map 9: Transit Network**).

9.3.1. INTENT

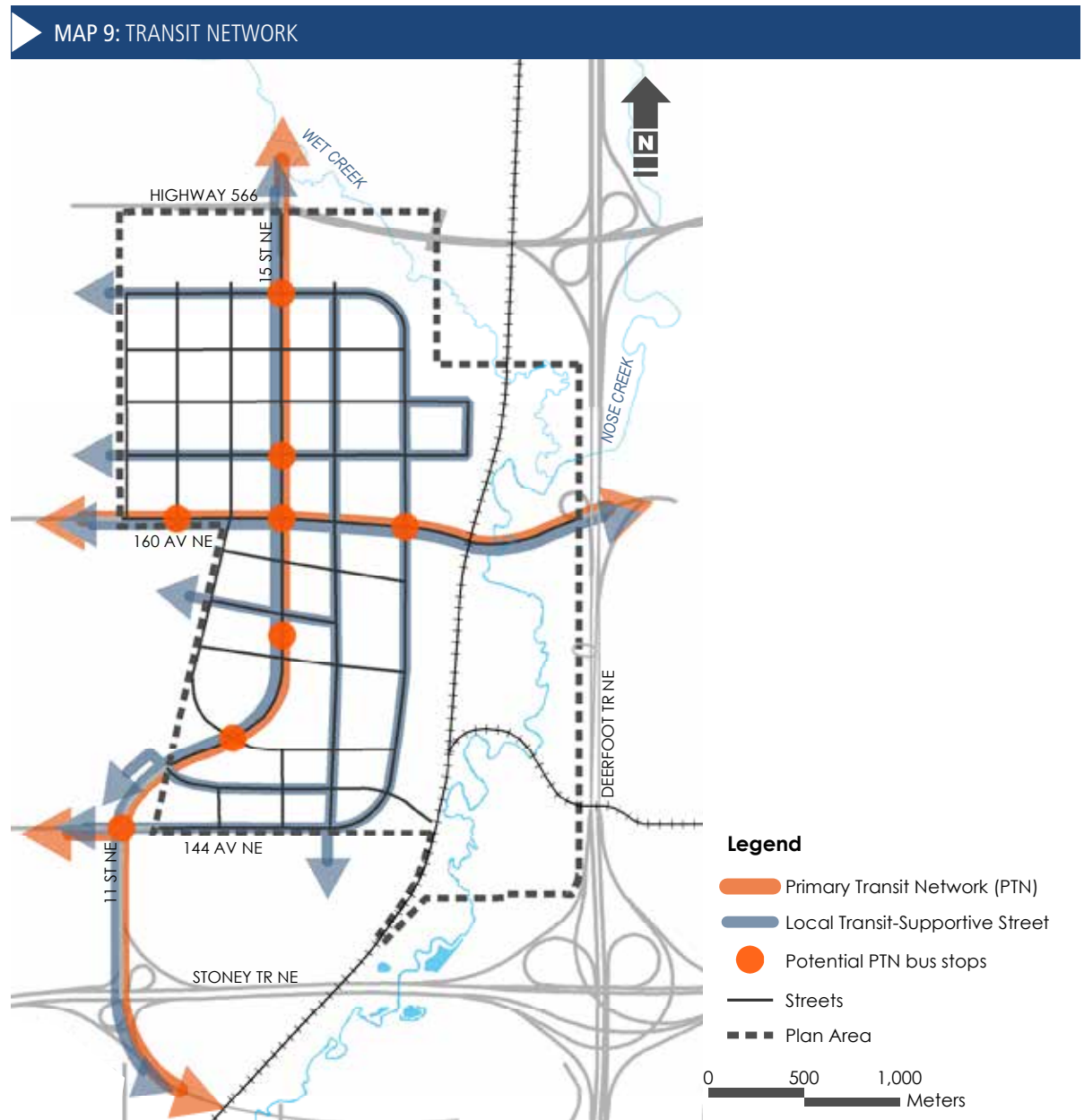
Provide direct, convenient and efficient transit service both within the Plan Area and to the rest of the city to support public transit as the preferred mobility choice for more residents.

Transit service is provided at two levels: the Primary Transit Network (PTN), which provides a high level of service in terms of frequency, speed, directness, and connectivity. Local transit service provides communities in the Plan Area with service to the PTN and/or LRT.

9.3.2. POLICY

Location and Features

1. Each community shall be designed to provide direct and convenient transit route connections within the Plan Area, to the Keystone Hills ASP area to the west, and to the PTN.
2. Bus stops along the PTN shall accommodate articulated buses and enhanced pedestrian waiting amenities. Exact locations will be determined at the time of Outline Plan/Land Use Amendment.
3. Enhanced transit amenities should be integrated with adjacent land uses at PTN stops (see **Figure 21: Enhanced Transit Amenities**).



Public Realm

4. Driveways, loading zones and other vehicle access points are not allowed across from bus stop zones in commercial and industrial areas.
5. All streets accommodating phased temporary or permanent transit service shall be a collector or higher classification.

Circulation

6. An east-west road located north of 144 Avenue NE shall be provided as a transit connection between Nose Creek ASP and Keystone ASP. The roadway may be local street standard; however, it must be designed to support transit operations.
7. Transit priority measures may be required along PTN routes to reduce travel time, increase operational efficiency and increase convenience for the transit customer.
8. Transit service to development identified in the Plan Area between CP Rail and Deerfoot Trail NE will be considered as a low service priority. Transit service will be considered and reprioritized if the following conditions are met:
 - a. street classification is a collector or higher;
 - b. two vehicle access points are provided;
 - c. streets are a maximum grade of 4%;
 - d. the land use and intensities promote transit use;
 - e. high quality pedestrian connections are provided; and
 - f. funding and resources are provided for service.

FIGURE 21: ENHANCED TRANSIT AMENITIES



9.4. STREET NETWORK

The transportation network for the Plan Area builds on existing connections, placing an emphasis on the needs of pedestrians, cyclists and transit. The land use and street network should be planned together so it is easy and attractive for people to walk, cycle or take the bus. Street network and site design should consider the pedestrian and cyclist experience and environment.

9.4.1. INTENT

The intent of these policies is to provide an integrated, multi-modal internal network of streets connected to residential, commercial and industrial uses within and beyond the Nose Creek Plan Area. Safety should be optimized for all users, especially for pedestrians and cyclists.

9.4.2. REGIONAL TRANSPORTATION NETWORK

The Nose Creek Plan Area will connect to the regional transportation network via Stoney Trail NE to the south, Deerfoot Trail NE to the east and Highway 566 to the north. These highways are under the jurisdiction of Alberta Transportation. Connections within the city will be via 144 Avenue NE, 160 Avenue NE and 11 Street NE. The following major infrastructure improvements may be included in future City budgets and are subject to Growth Management Overlay conditions:

- a. Stoney Trail NE and 11 Street NE interchange;
- b. Deerfoot Trail NE and CrossIron Drive/160 Avenue NE interchange; and
- c. 160 Avenue NE bridges over CP Rail Line and Nose Creek.

Mobility

In addition to City-funded infrastructure improvements, funding and construction of the following Alberta Transportation infrastructure improvements must be addressed to support build-out of the Plan Area:

- Deerfoot Trail NE and the Highway 566 interchange; and
- Highway 566 widening (from two to six lanes).

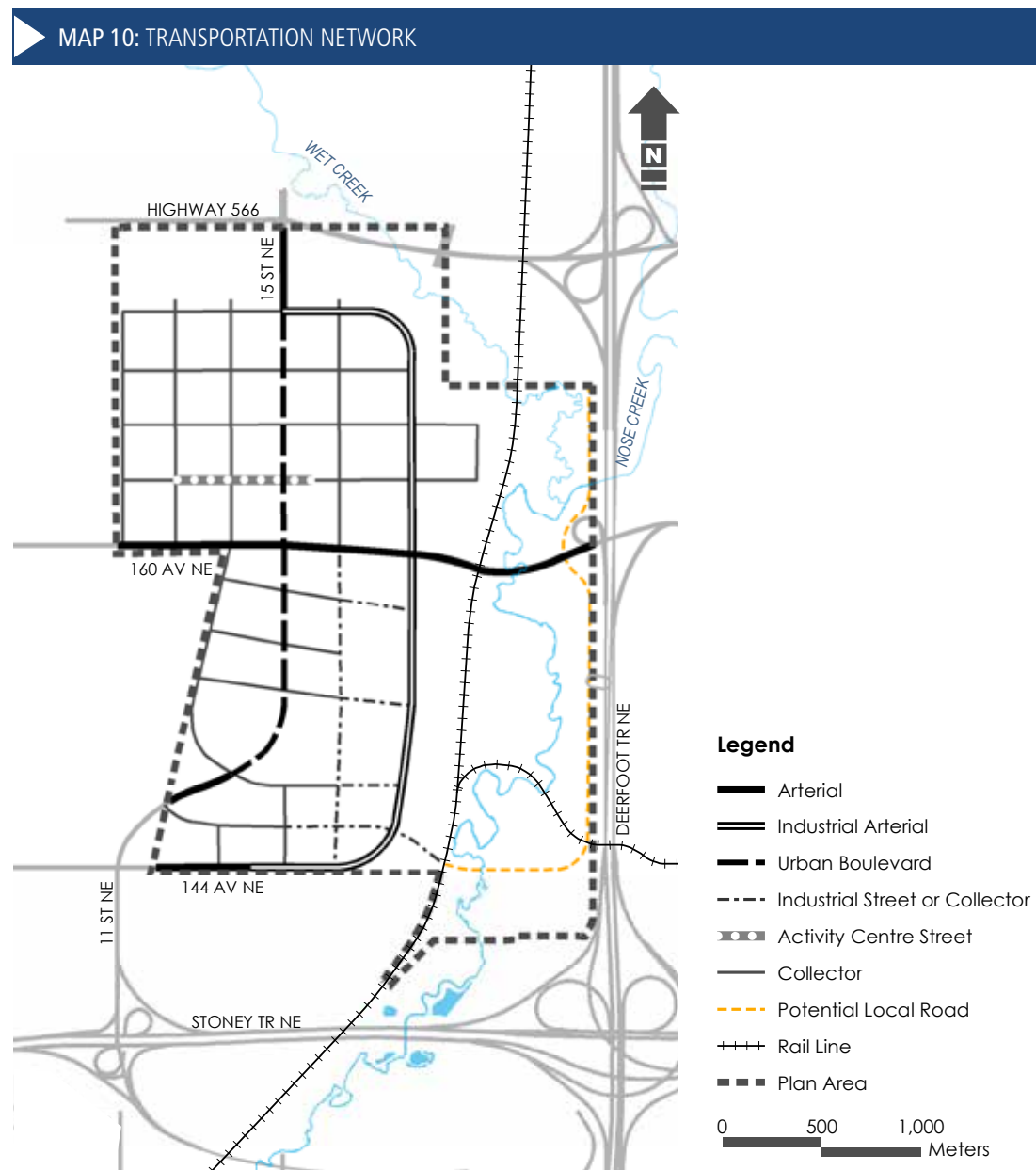
9.4.3. POLICY

Location and Features

- The internal street network should be located as shown on **Map 10: Transportation Network**.
- At the Outline Plan/Land Use Amendment stage, a Transportation Impact Analysis will be required that confirms the street classifications and intersection treatment are adequate. Alternate classifications may be approved without requiring an amendment to this ASP.

Public Realm

- Noise walls are discouraged. Integration of sound attenuation walls into the architecture of the building along with enhanced streetscape through materials and soft landscaping should be the desired approach.
- Utility structures and poles should be arranged to minimize their visual impact and should not impede pedestrian or cyclist movements.



Circulation

5. The street network shall not include cul-de-sacs unless determined by the Approving Authority for technical reasons.
6. Crescent streets and loop roads are discouraged.
7. The road network should be planned to provide the maximum choice for how people will make their trips, emphasizing active modes of transportation.
8. No new public at-grade crossing of the rail lines are allowed. All new public crossings shall be grade separated.
9. Access to all sites should be simple and clearly marked so that pedestrians in the area are safe and not discouraged from walking on the sidewalk.

FIGURE 22: POROUS SURFACE FOR PARKING LOTS



9.5. OFF-STREET PARKING

9.5.1. INTENT

The intent of these policies is to provide adequate parking to support residential, commercial and industrial uses while reducing negative impacts on the natural environment and the health of residents, employees and visitors.

9.5.2. POLICY

Location and Features

1. A reduced parking supply should be encouraged when within 400 m of a transit stop.
2. Structured parking is preferred over surface parking.
3. Where surface parking is required, design measures should be included to minimize the negative aesthetic and environmental impacts through the integration of:
 - a. porous surfaces in low traffic areas such as parking stalls located further away from the entrance of the destination (see **Figure 22: Porous Surface for Parking Lots**);
 - b. stormwater management; and
 - c. soft landscaping and screening (see **Figure 23: Parking Lot Screening**).

Public Realm

4. Off-street parking should be oriented away from the street and provided at the rear of buildings.

FIGURE 23: PARKING LOT SCREENING



10

UTILITY INFRASTRUCTURE

The intent of these policies is to support the Healthy Planning Principles of **Resilient and Responsible**, and **Character Communities**.

10.1. WATER SERVICING

10.1.1. INTENT

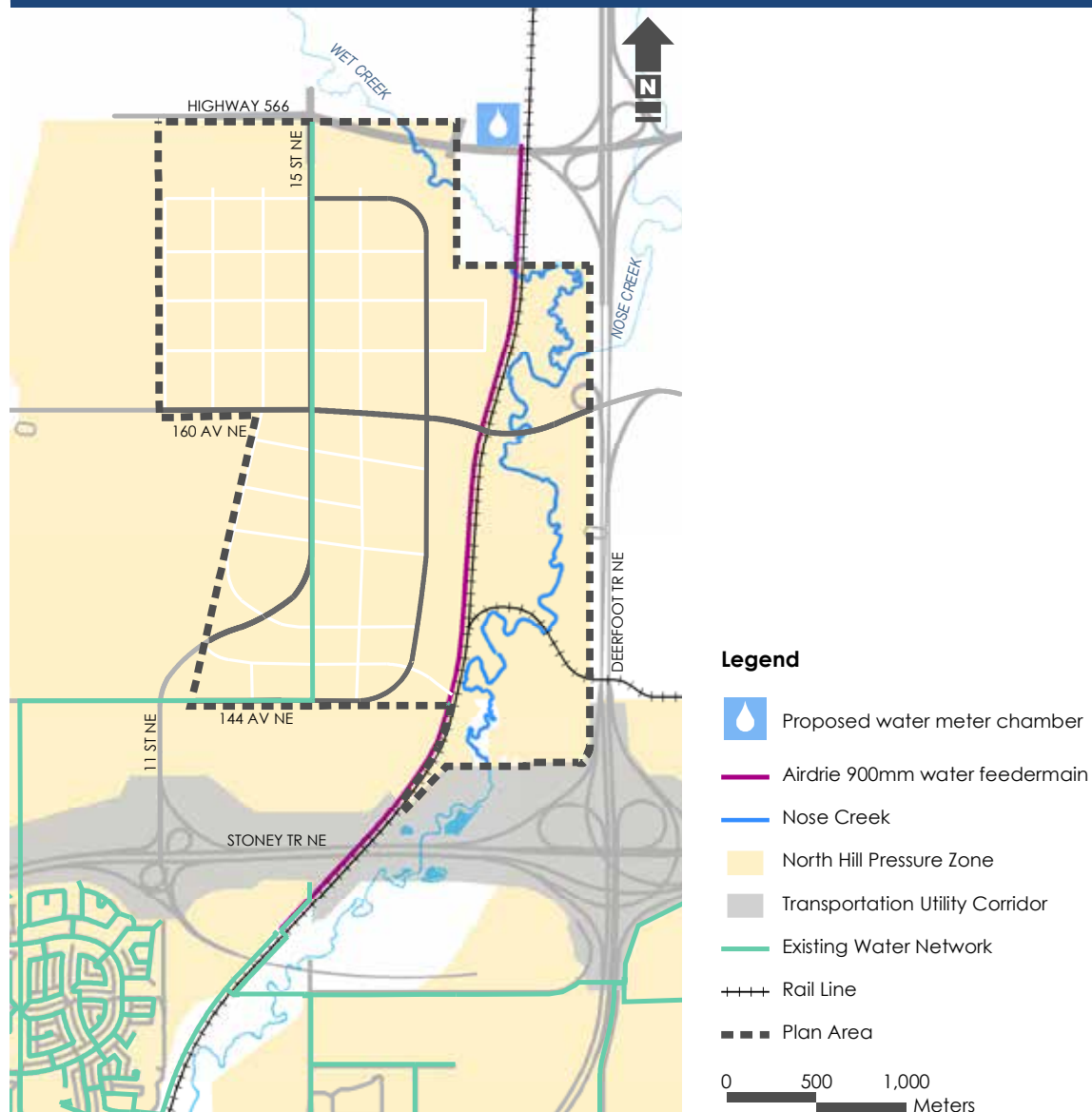
The intent of these policies is to ensure that a suitable and efficient water system is provided to serve the full build-out of the Plan Area.

10.1.2. POLICY

Location and Features

1. The entire Plan Area is located within the North Hill Pressure Zone. Servicing of the lands within the Plan Area will be achieved through extensions of the existing distribution network south of the Transportation Utility Corridor (TUC), with reinforcing connections to portions of the existing 900 mm Airdrie feedermain located within Calgary city limits (see **Map 11: Water Servicing**).
2. Reinforcing connections to the existing 900 mm Airdrie feedermain may not occur prior to the relocation of the existing Airdrie 900 mm chamber.
3. Any proposed land use or transportation network changes to the approved ASP may require re-evaluation of water infrastructure by Water Resources.
4. Any proposed distribution systems for an Outline Plan/Land Use Amendment area will be reviewed and, if required, modelled by Water Resources as part of an Outline Plan Land Use Amendment application.
5. Utility alignment shall minimize impact to Environmental Open Space.

MAP 11: WATER SERVICING



10.2. STORMWATER MANAGEMENT

The Plan Area is located in the Nose Creek watershed basin. Nose Creek flows through the eastern portion of the Plan Area, west of Deerfoot Trail NE. The Nose Creek watershed faces challenges due to the cumulative effects of increasing residential and commercial development, industrial growth, stormwater discharge, agricultural activity and channelization. Water quality, erosion and flooding are concerns in the Nose Creek watershed basin and in the connected downstream systems. There are opportunities to incorporate sustainable stormwater management techniques in the Plan Area to promote resilient, healthy communities.

10.2.1. INTENT

The intent of these policies is to guide the design and development of a suitable and efficient stormwater management system, while preserving, to the greatest extent possible, important watershed features including existing topography, natural hydrology, slopes, floodplains and riparian areas, wetlands and groundwater flow patterns.

10.2.2. POLICY

1. Through the Nose Creek Watershed Water Management Plan and The City of Calgary Stormwater Management and Design Manual, integrated stormwater management practices should be implemented to improve stormwater quality and mitigate the impacts of urban development.
2. The Master Drainage Plan for the Plan Area must be approved prior to Outline Plan/Land Use Amendment approval.

FIGURE 24: LID SOLUTIONS



3. Recommendations for stormwater outfall discharge locations, maximum allowable release rates, runoff volume control targets, water body setbacks (e.g., ephemeral and intermittent streams, Nose Creek and wetlands), minimizing encroachment (on flood fringe, floodway and meander belt) and stormwater treatment, as established in the approved Master Drainage Plan, must be adhered to throughout the Plan Area.
4. Conveyance of existing overland drainages shall be maintained, as per the approved Master Drainage Plan. Recommendations for mitigation of potential impacts to drainage courses shall be included in the approved Master Drainage Plan.
5. Stormwater management and watershed health should be comprehensively considered within the broader regional context of adjacent biophysical systems and development plans.
6. The stormwater management system shall be designed to (see **Figure 21: LID Solutions**):
 - a. include LID solutions in accordance with The City of Calgary's Stormwater Source Control Practices Handbook and the approved Master Drainage Plan; and
 - b. introduce mitigation measures to address impacts on water quality for Nose Creek and any other bodies of water.
7. Outputs of the approved Master Drainage Plan significant enough to alter land use may require amendments to the ASP.
8. The approved Master Drainage Plan may identify requirements for monitoring of natural systems prior to or at the Outline Plan/Land Use Amendment stage.

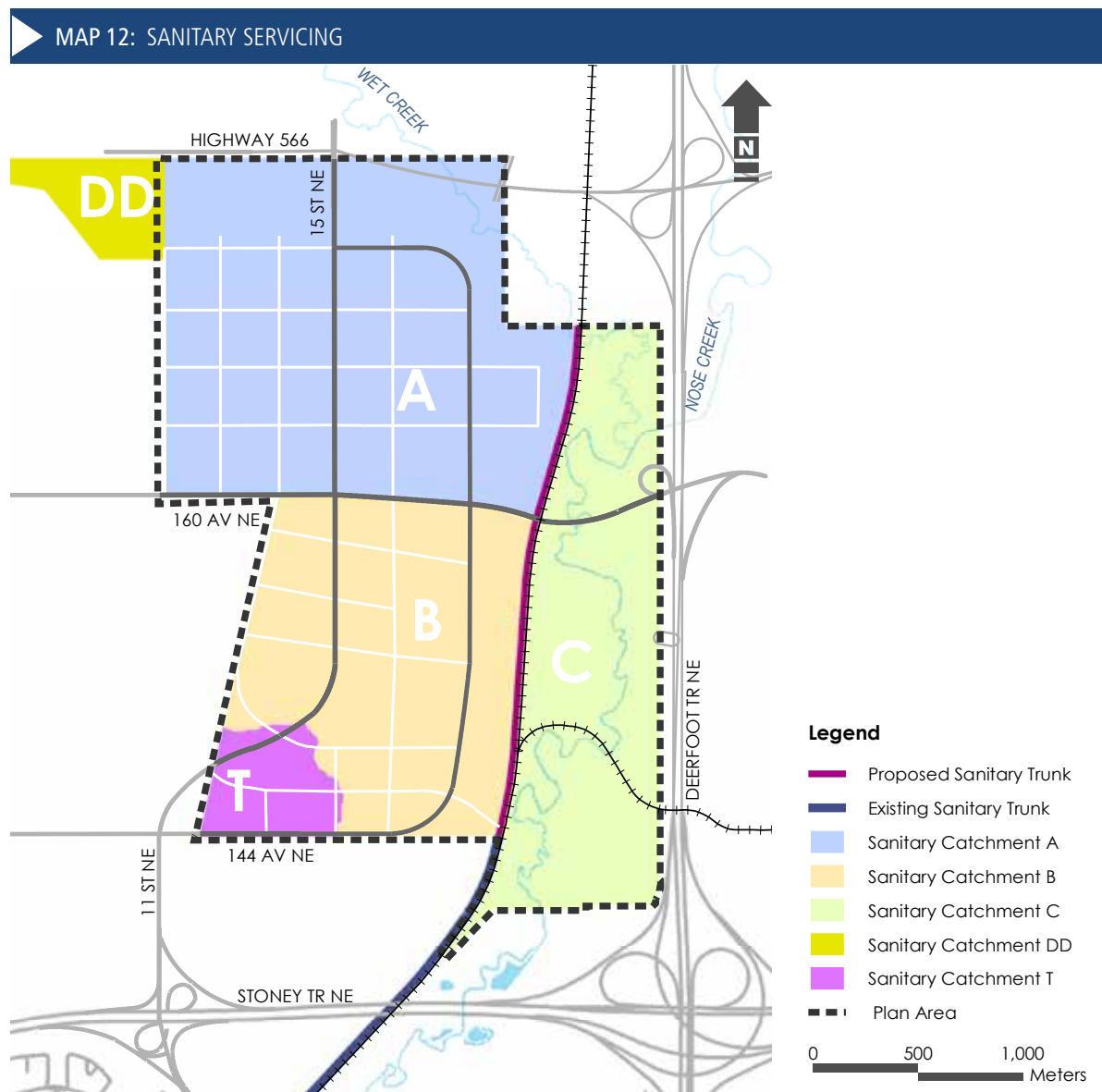
10.3. SANITARY SERVICING

10.3.1. INTENT

Ensure that a suitable and efficient sanitary sewer system is provided to serve the full build-out of the Plan Area.

10.3.2. POLICY

1. Sanitary servicing of the Plan Area will be achieved through an extension of the existing Nose Creek Sanitary Trunk, extending north of 144th Ave NE. The conceptual alignment of the Sanitary Trunk extension is shown on **Map 12: Sanitary Servicing**.
2. The alignment of the Sanitary Trunk extension required to service the Plan Area is conceptual and may vary, subject to the availability of utility easements and pipe coverage requirements.
3. There are three major sanitary catchments within the Plan Area, shown on **Map 12: Sanitary Servicing**:
 - a. The majority of Catchment A can be serviced by gravity. In order to service all developable lands within Catchment A, a developer-funded lift station(s) may be required for lower elevation lands;
 - b. The majority of Catchment B can be serviced by gravity; and
 - c. To service Catchment C, creek and CPR rail crossing(s) will be required. In order to service developable lands within Catchment C, a developer-funded lift station(s) may be required.



4. There are two additional, smaller sanitary catchments to consider; one within the Plan Area and one external to the Plan Area, shown on **Map 12: Sanitary Servicing**:
 - a. Catchment T, within the Plan Area, may be serviced by the future East Keystone Sanitary System;
 - b. Catchment DD, external to the Plan Area, is included in servicing of the Plan Area due to topography and should be considered in further servicing design of Catchment A.
5. As part of an Outline Plan/Land Use Amendment application, a Sanitary Servicing Study/Analysis may be required to demonstrate that the subject site can be serviced in accordance with the overall design of the sanitary sewer system for the area.
6. Any proposed land use or transportation network changes to the approved ASP deemed significant by The City of Calgary Water Resources Department may require re-evaluation and modification of sanitary infrastructure.
7. To serve the full build-out of the Plan Area, downstream sanitary trunk upgrades may be required.
8. Utility alignment shall minimize impact to Environmental Open Space.

10.4. OIL AND GAS

10.4.1. INTENT

The intent of these policies is to minimize potential hazards associated with urban development in close proximity to oil and gas infrastructure. Appropriate public notification and preparedness is required.

10.4.2. POLICY

1. Development in the vicinity of oil and gas infrastructure must comply with all applicable laws, regulations and/or directives.

Oil and Gas Wells

2. At the discretion of the Approving Authority, the access to an abandoned well and the abandoned well setback will be established in consultation with the operator. The space requirements will be based on the minimum amount of space required by the operator to safely re-enter the abandoned well.
3. The City of Calgary shall not provide credit for Municipal Reserve or Municipal School Reserve for land located within Alberta Energy Regulator abandoned well setbacks.
4. Pending the results of a Risk Assessment, abandoned wells may or may not be incorporated into the Municipal Reserve or Municipal School Reserve areas at the discretion of the Approving Authority.
5. Roads shall not be located over abandoned oil or gas wells.

Pipelines

6. Prior to any tentative plan or Development Permit approval all active pipelines must comply with all applicable laws, regulations and/or directives as per the Risk Assessment accepted by The City of Calgary.
7. Intersections of water, sanitary or stormwater utility lines, roads and parcels where new building construction will take place should not be co-located with abandoned pipelines. At the discretion of the Approving Authority, an environmental assessment of a pipeline right-of-way where the pipeline has been removed may be required to demonstrate that the land is suitable for the intended use.
8. The City shall not grant credit for Municipal Reserve for land containing pipeline rights-of-way. This land may be designated as non-credit Municipal Reserve.
9. Crossing and access agreements must be in place prior to tentative plan approval over land encumbered by a pipeline right-of-way.
10. Pathways and other recreational uses may be allowed on pipeline rights-of-way at the discretion of the Approving Authority and in discussion with the pipeline operator.

Risk Assessment

11. A Risk Assessment acceptable to The City of Calgary shall be required prior to, or in conjunction with, an Outline Plan/Land Use Amendment on land where oil and gas facilities, associated setbacks and/or EPZs are

present. Terms of reference for this study shall be developed in consultation with The City of Calgary. The City will use this assessment to determine whether any additional mitigation measures should be integrated at the time of development.

12. The applicant shall update the Risk Assessment with any changes to oil and gas infrastructure with each tentative plan or subdivision application to ensure the assessment is current.

Consultation

13. For lands within 200 m of oil and gas infrastructure, the applicant shall consult with the operator of the facility and the applicable regulator prior to the earlier of:
 - a. a pre-application meeting for an Outline Plan/Land Use Amendment application, or
 - b. the Outline Plan/Land use Amendment application.
14. Based upon the rules of the Alberta Energy Regulator, as amended from time to time, The City of Calgary shall circulate all Outline Plan/ Land Use Amendment applications within 1.5 km of an oil and gas facility.
15. Based upon the rules of the Alberta Energy Regulator, as amended from time to time, The City of Calgary shall circulate all Outline Plan/ Land Use Amendment applications within the EPZ to the Alberta Energy Regulator.

Risk Mitigation

16. The City of Calgary may limit, delay or not allow development to start in areas determined to have unacceptable levels of risk for the proposed uses based on a Risk Assessment accepted by The City of Calgary (i.e., where consequences of failure of oil and gas infrastructure or probability of failure is deemed to be greater than can reasonably be removed or reduced to a level acceptable to The City of Calgary).
 - iii. upgrade the oil and gas pipeline to a standard and depth that is compatible with the proposed surrounding land uses based on the rules of the Alberta Energy Regulator and a Risk Assessment accepted by The City of Calgary
17. Prior to any tentative plan or development permit approval for lands:
 - a. within 200 m of oil and gas infrastructure, or
 - b. for areas where the proposed uses are determined to be at unacceptable levels of risk from oil and gas infrastructure based on a Risk Assessment accepted by The City of Calgary, agreements between the applicant and the applicable oil and gas infrastructure operator shall be in place to:
 - i. abandon (and remove where possible) the oil and gas infrastructure in accordance the Alberta Energy Regulator standards of the day;
 - ii. relocate the oil and gas infrastructure to reduce the risk to an acceptable level for the proposed uses; or
18. The City of Calgary may limit, delay or not allow development of sensitive uses (e.g., schools, daycares, older adult housing and supported care facilities) in areas determined to have unacceptable levels of risk for the proposed uses based on a Risk Assessment accepted by The City of Calgary.

Sensitive Uses

Notification

19. Applicants (or whoever is marketing development) shall be required to provide prospective buyers with information outlining the existence of sour gas and other gas and oil facilities in areas determined to be at potential risk based on a Risk Assessment accepted by The City of Calgary.

Removal

20. If any oil and gas facility that impacts the Plan Area is removed, the policies related to those facilities no longer apply. An amendment to the ASP may be required, at the discretion of the Approving Authority.

11

IMPLEMENTATION

This section contains policies necessary for plan implementation such as interpretation, growth management, application requirements, innovation and intermunicipal coordination.

11.1. AREA STRUCTURE PLAN INTERPRETATION

11.1.1. INTENT

This section clarifies the interpretation of the Nose Creek ASP. Accurate interpretation is paramount to achieving the goals of this ASP.

11.1.2. POLICY

Map Interpretation

1. 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.

2. No measurements of distances or areas should be taken from the maps in this ASP.
3. All proposed land use areas, neighbourhood boundaries, road/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 refinements may require an amendment to this ASP.

4. In the case of the Environmental Open Space (EOS) Study Area, where adjustments to the extent of 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**.

Policy Interpretation

5. 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.
6. 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 MDP and Calgary Transportation Plan policies and guidelines to the satisfaction of The City with regard to design and performance standards.
7. 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.

Appendix Interpretation

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

Illustration and Photo Interpretation

9. 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 ASP’s policies and guidelines.

Rail Policy

10. All Outline Plan/Land Use Amendment and Development Permit applications adjacent to rail right of way lands shall be circulated to the rail operator for review.
11. A Risk Assessment shall be required for all developments within 30 m of the property line of a rail line.
12. A Noise Study shall be required for all developments within 300 m of the property line of a rail main line or within 75 m of the property line of a spur line.
13. A Vibration Study shall be required for all developments within 75 m of the property line of a rail main line or spur line.

Monitoring, Review and Amendments

14. 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 prioritizing and sequencing growth areas as part of the Corporate Framework for Growth and Change.
15. The policies within the ASP will be monitored over time in relation to development, the MDP and the NCPG to ensure they remain current and relevant. Where determined necessary, these policies will be updated through the plan amendment process either generally or in response to a specific issue.

16. 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 adopted until such time as the Approving Authority determines the Plan Area is fully built out.
17. This ASP may be amended from time to time either in relation to a City initiative or a Land Use Amendment application.
18. It is recommended that a Health Impact Assessment be used throughout the planning process to help realize the vision of the plan area. The Health Impact Assessment can be updated with each application should there be changes to the overall design to ensure the most recent research and findings are assisting the decision-making process.
19. Outline Plan/Land Use Amendment applications will be monitored to ensure each neighbourhood meets the overall minimum density in this ASP.

Plan Limitations

20. 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. 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.

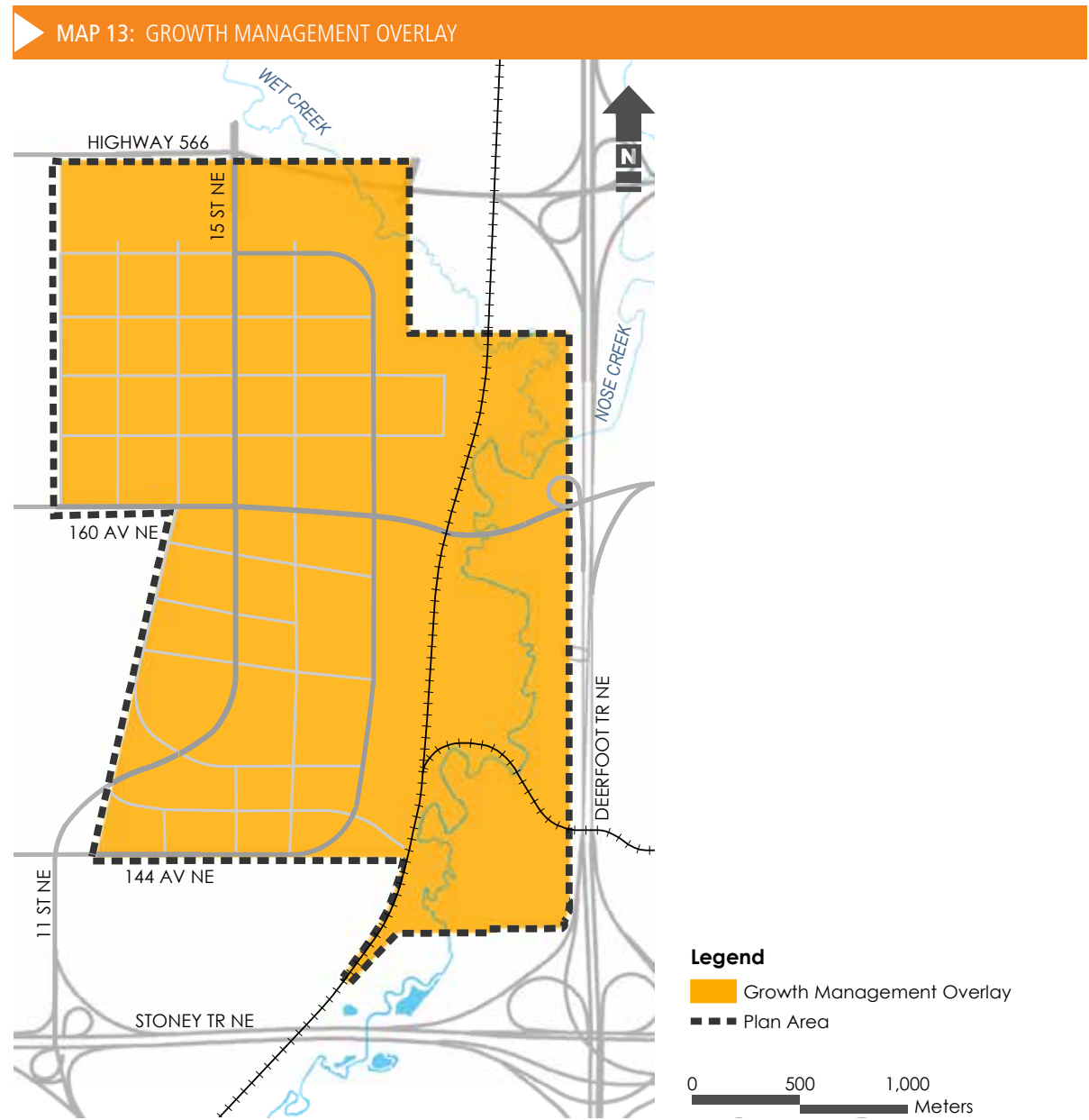
11.2. GROWTH MANAGEMENT

11.2.1. INTENT

The intent of this section is to ensure that development within the Plan Area is aligned to the growth management process. This process involves the application of a Growth Management Overlay to the Plan Area as shown on **Map 13: Growth Management Overlay**. The overlay strategically directs development in the Plan Area to lands where growth management issues have been resolved. The NCPG contains the policy pertaining to the Growth Management Overlay.

In order for major development to occur, the following infrastructure components need resolution:

- a. at least two of the three major connections:
 - i. Stoney Trail NE and 11 Street NE interchange;
 - ii. Deerfoot Trail NE and CrossIron Drive/160 Avenue NE interchange; or
 - iii. Highway 566 interchange and 15 Street NE.
- b. other infrastructure projects identified in **Section 9.4.2: Regional Transportation Network** may also be required;
- c. transit service requirements will be determined at the time of proposal;
- d. adequate water, sanitary and stormwater servicing; and
- e. emergency response coverage within the appropriate standard of service.



11.3. APPLICATION REQUIREMENTS

11.3.1. INTENT

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

11.3.2. POLICY

1. The density of specific developments can vary, but Outline Plan/Land Use Amendment applications shall be monitored to ensure that each Neighbourhood Area 36.8 units per gross developable residential hectare (14.9 units per gross developable residential acre) as per the NCPG.
2. Historical Resources Act clearance is granted for the Plan Area. However, subject to Section 31 of the Act, “a person who discovers an historic resource in the course of making an excavation for a purpose other than for the purpose of seeking historic resources shall forthwith notify the minister of the discovery.” The discovery of historic resources is to be reported in accordance with the Act.
3. Any changes to the text or maps within the ASP will require an amendment in accordance with the Municipal Government Act. Where an amendment to the 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.

11.4. INTERMUNICIPAL COORDINATION

11.4.1. INTENT

The Plan Area is bordered by Rocky View County (RVC) to the north and east. Historically, the land in the Plan Area was part of RVC and used as farmland. Annexation of RVC land by The City of Calgary in 2007 resulted in the present municipal boundaries. The 2006 annexation agreement between RVC and The City led to the identification of planning principles which were refined in the 2011 Rocky View/Calgary Intermunicipal Development Plan (IDP). The Nose Creek ASP falls entirely within the IDP Policy Area. The intent of these policies is to ensure that The City of Calgary and RVC work collaboratively to coordinate planning for areas of mutual interest.

11.4.2. POLICY

Intermunicipal Communication and Cooperation

1. The City will consult with RVC 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.

Pathway Connections

2. Regional Pathway connections to RVC from the Nose Creek Plan Area are encouraged where appropriate.

Interface Planning

3. The presence of Highway 566 and Deerfoot Trail provides a clear interface at the edge of the plan area to the north and east. The quality of development that faces these skeletal roads should be architecturally aesthetic through building design and soft and hard landscaping.
4. A seamless connection to pathways, roadways and open space planning should be provided to communities adjacent to Nose Creek. There should be no clear delineation between communities in the City of Calgary and communities in RVC while achieving the vision of a healthy community.
5. The City of Calgary will circulate all development and planning proposals within the IDP Policy Area of the Plan Area in accordance with current RVC and City of Calgary Intermunicipal Development Plan policies.

12

ABBREVIATIONS & DEFINITIONS

This section clarifies the meaning of terms use in the document.

ABBREVIATIONS

ASP	Area Structure Plan	HIA	Health Impact Assessment
AVPA	Airport Vicinity Protection Area	IDP	Intermunicipal Development Plan
CA	Community Association	JUS	Joint Use Site
CAC	Community Activity Centre	LID	Low Impact Development
CPR	Canadian Pacific Railway	MDP	Municipal Development Plan
CPTED	Crime Prevention through Environmental Design	NAC	Neighbourhood Activity Centre
CTP	Calgary Transportation Plan	NCPG	New Community Planning Guidebook
EOS	Environmental Open Space	NEF	Noise Exposure Forecast
EPZ	Emergency Planning Zone	PTN	Primary Transit Network
ER	Environmental Reserve		
ERS	Emergency Response Station		

DEFINITIONS

The following definitions shall apply. Where a term is defined in the glossary of the MDP or CTP, that definition applies in the interpretation of this ASP. The street classifications mentioned in this ASP refer to the street classifications of the Design Guidelines for Subdivision Servicing. Where a definition differs from The City of Calgary Land Use Bylaw (1P2007), the Land Use Bylaw definition shall prevail.

A

Active Transportation: Any form of human-powered transportation including, but not limited to, walking, running, cycling or using a wheelchair.

Approving Authority: The Subdivision Authority, Development Authority or Subdivision and Development Appeal Board of The City of Calgary, as the context implies.

Auto-Oriented: A use where the primary function is automobile-related; e.g., car dealership or RV storage.

B

Bicycle Station: A facility for bicycle parking that includes secured and covered parking stalls that are located near key entrances or destinations.

Biophysical Impact Assessment (BIA): A commonly required report used to define the environmental impact of a project on the biological features of a community. In preparing a BIA, baseline data are usually collected on soil, vegetation, wetlands, wildlife and hydrology.

C

The City: The Corporation of The City of Calgary.

Council: The elected council of The City of Calgary.

Crime Prevention through Environmental Design (CPTED): Promotes design principles in planned environments that encourage safe behaviour and reduce the opportunities for crime to occur.

D

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

District: A portion of a community planned for the primary purpose of employment that shares a particular or common characteristic.

E

Emergency Planning Zone (EPZ): An area around a source of risk for which planning is needed to ensure prompt and effective actions are taken to protect the health and safety of the public if an accident occurs (note that applicable EPZs for risk sources that are outside of the Outline Plan/Land Use Amendment area must also be included in the risk assessment).

Employee-Intensive Uses: Uses that are employment intensive and deemed to be compatible and appropriate in the context of an employment area. Employee-intensive uses may include, but are not limited to, offices, laboratories and institutions.

Environmental Reserve (ER): As set out in the Municipal Government Act.

Escarpment: A steep slope formed by the erosive action of water, normally adjacent to a watercourse.

H

Health Impact Assessment (HIA): An approach or process that helps evaluate the potential health effects of a plan, project or policy before it is built or implemented. It provides recommendations to increase positive health outcomes and minimize adverse health outcomes by bringing potential public health impacts and considerations to the decision-making process.

I

Industrial Hub: The focal point of industrial and employee-intensive areas; a geographic concentration of services and amenities with a centralized space for employees in a district.

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, medical clinics and daycare centres.

Intensity: A measure of the concentration of people and jobs within a given area (gross developable area) calculated by totalling the number of people either living or working in an area.

L

Low-Impact Development (LID): An approach to land development that uses various planning and engineering practices and technologies that create and/or use natural resource systems to replace traditional engineering systems, reducing infrastructure costs.

Abbreviations & Definitions

M

Modal Separation: Physical delineation between motorized and non-motorized transportation modes; this could include separated bike lanes.

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

Municipal Development Plan (MDP): Bylaw 24P2009 of The City of Calgary, as amended or succeeded.

N

Neighbourhood: A portion of a community that has a particular or common characteristic and is planned primarily for residential and supporting uses.

Neighbourhood Area: The residential area outside of a Neighbourhood Activity Centre. The Neighbourhood Area contains a variety of housing types in a fine grain grid network.

P

Pedestrian-Oriented: An environment facilitating safe, convenient, attractive and comfortable travel for pedestrians of all ages and abilities.

Private Amenity Space: Space that is provided for the use of the occupants of only one unit.

Public Amenity Space: A space designed for active or passive recreational use that is provided for all the occupants of a development.

Public Realm: Includes all exterior places, linkages and built form elements that are physically and/or visibly accessible by the public regardless of ownership

Public Space: Land that is publicly owned and may include, but is not limited to, accessible streets, pathways, parks or open spaces.

R

Risk Assessment: The process of identifying and documenting risks to human health or the environment to allow further evaluation and appropriate responses. Risk assessments should include potential risks, their likelihood, their consequences and the proposed mitigation measures.

T

Transition Areas: Areas that allow for a transition of one land use to another with an equal mix of the two land uses.

Typology: A classification based on physical characteristics and forms that are associated with a land use category.

U

Unacceptable Levels of Risk: Where consequences of failure of oil and gas infrastructure or probability of failure is deemed to be greater than can reasonably be removed or reduced to a level acceptable to The City of Calgary.

W

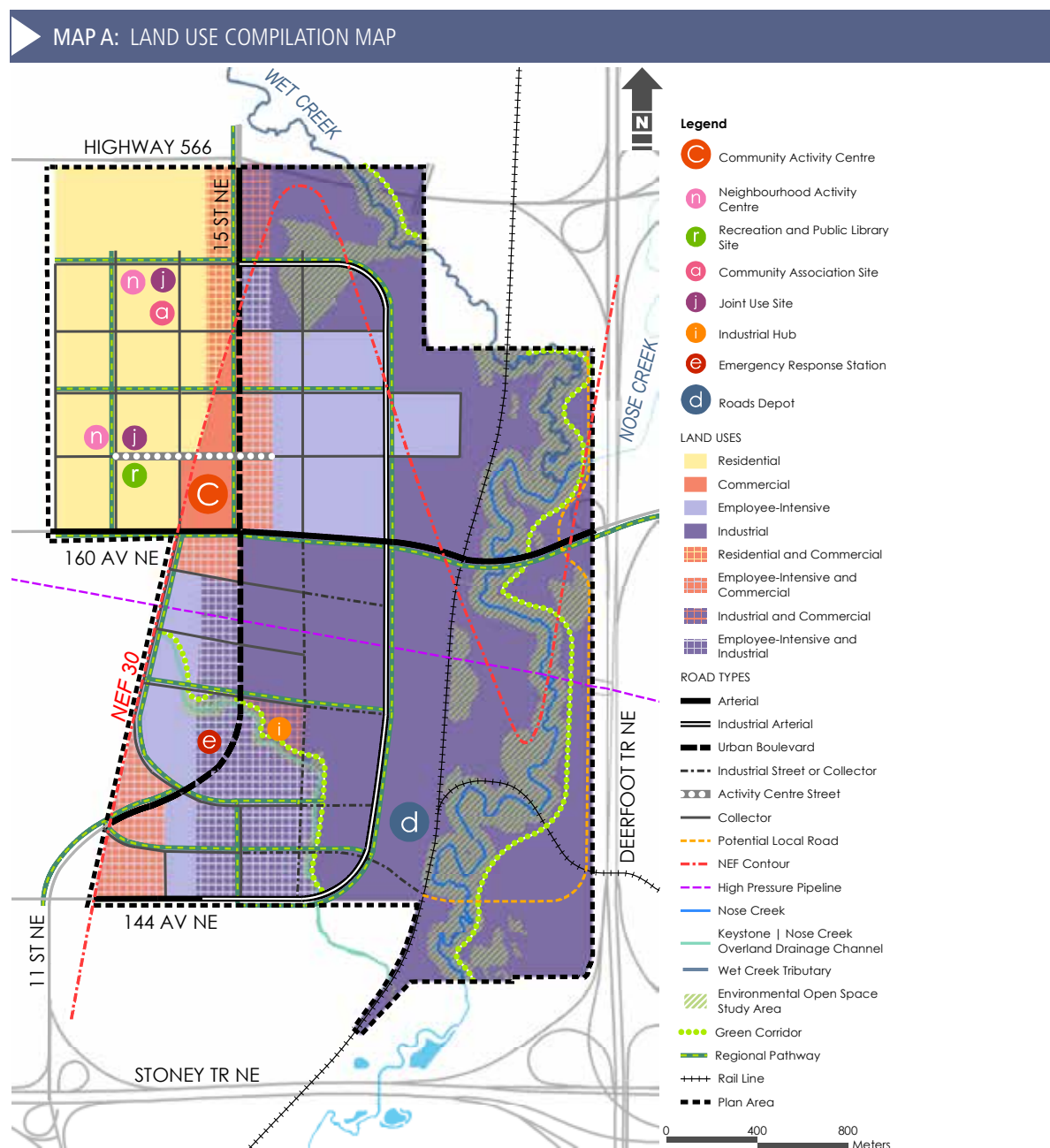
Work-Live: A land use typology where a business is the primary function and the business owner occupies an attached dwelling unit.

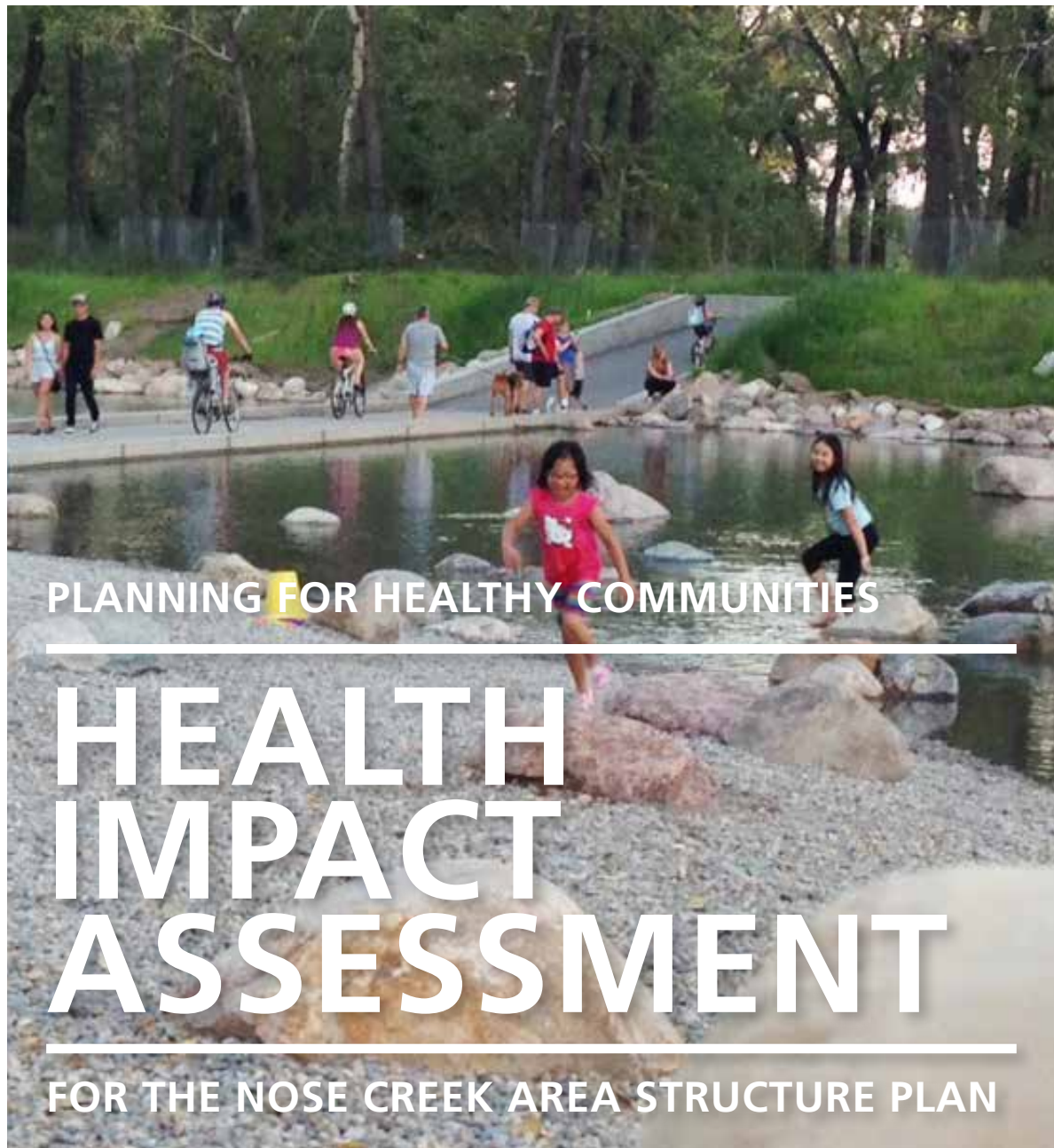
13

APPENDICES

- Appendix A: Land Use Compilation Map
- Appendix B: Health Impact Assessment
- Appendix C: Joint Use Site Requirements
- Appendix D: Biophysical Background Information
- Appendix E: Development Staging
- Appendix F: Engagement Summary

APPENDIX A: LAND USE COMPILATION MAP





APPENDIX B: HEALTH IMPACT ASSESSMENT

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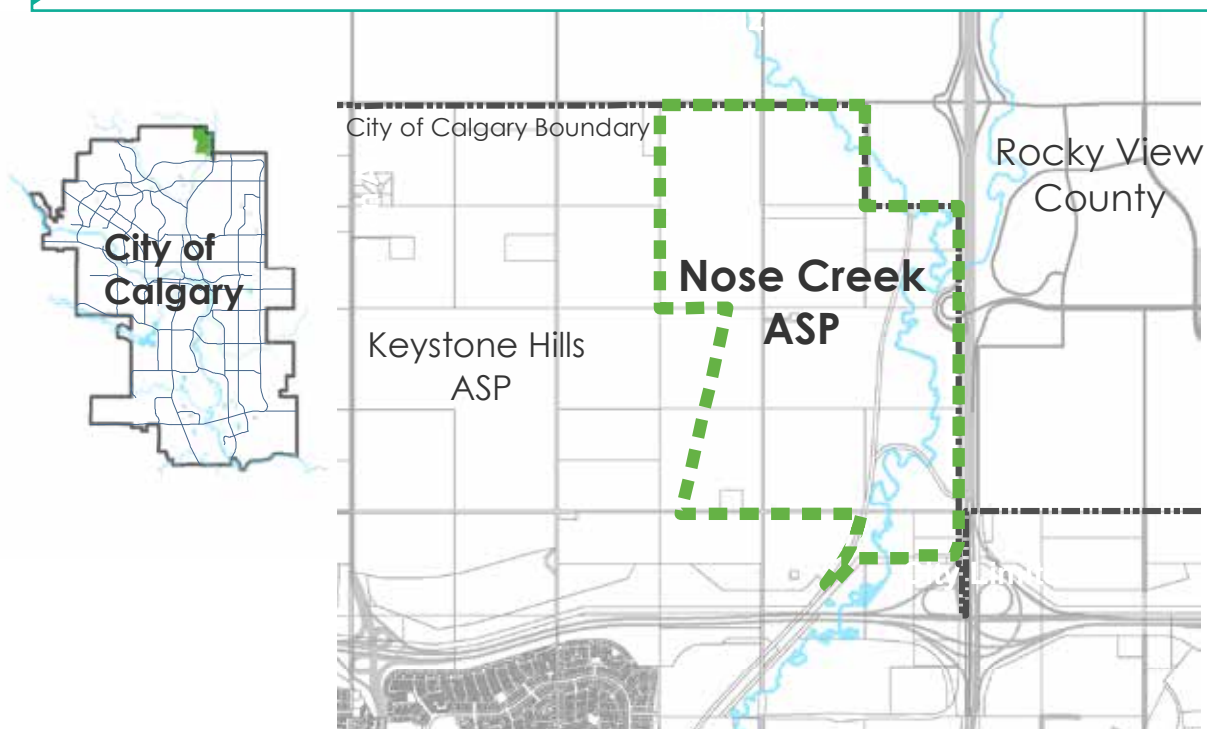


1. INTRODUCTION

The purpose of this document is to present the results of a Health Impact Assessment (HIA) that was conducted for the Nose Creek Area Structure Plan (NCASP), a policy plan for an area in northeast Calgary (see **Figure 1: Context Map**). The HIA is intended to inform developers, City Administration, and the general public about key health considerations that have gone into developing the Nose Creek plan, and how health can be maximized in the future as the neighbourhood is built and continues to evolve.

This is the first City-initiated HIA tied to a policy plan. The HIA was developed by the Nose Creek ASP project planning team at The City of Calgary with technical assistance and mentoring provided by **Habitat Health Impact Consulting**.

FIGURE 1: CONTEXT MAP



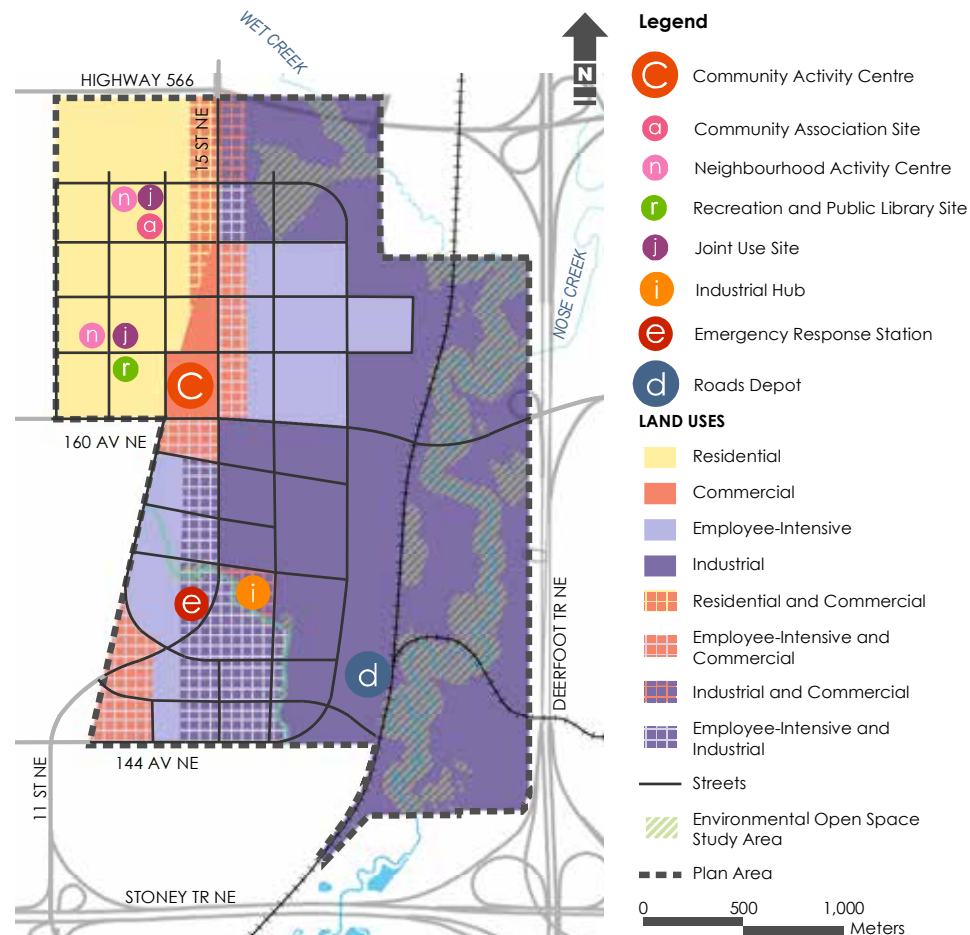


2. ABOUT THE NOSE CREEK AREA STRUCTURE PLAN

The NCASP plan area consists of approximately 679 ha (1,678 ac) of undeveloped land in northeast Calgary, west of Deerfoot Trail NE and north of Stoney Trail NE. Nose Creek and a Canadian Pacific Rail line run along the eastern edge of the Plan Area.

Historically, the land has been used primarily for agriculture. At build-out, the Nose Creek plan area will be home to 9,000 people and will provide approximately 20,000 jobs (see Figure 2: Land Use Map).

FIGURE 2: LAND USE MAP



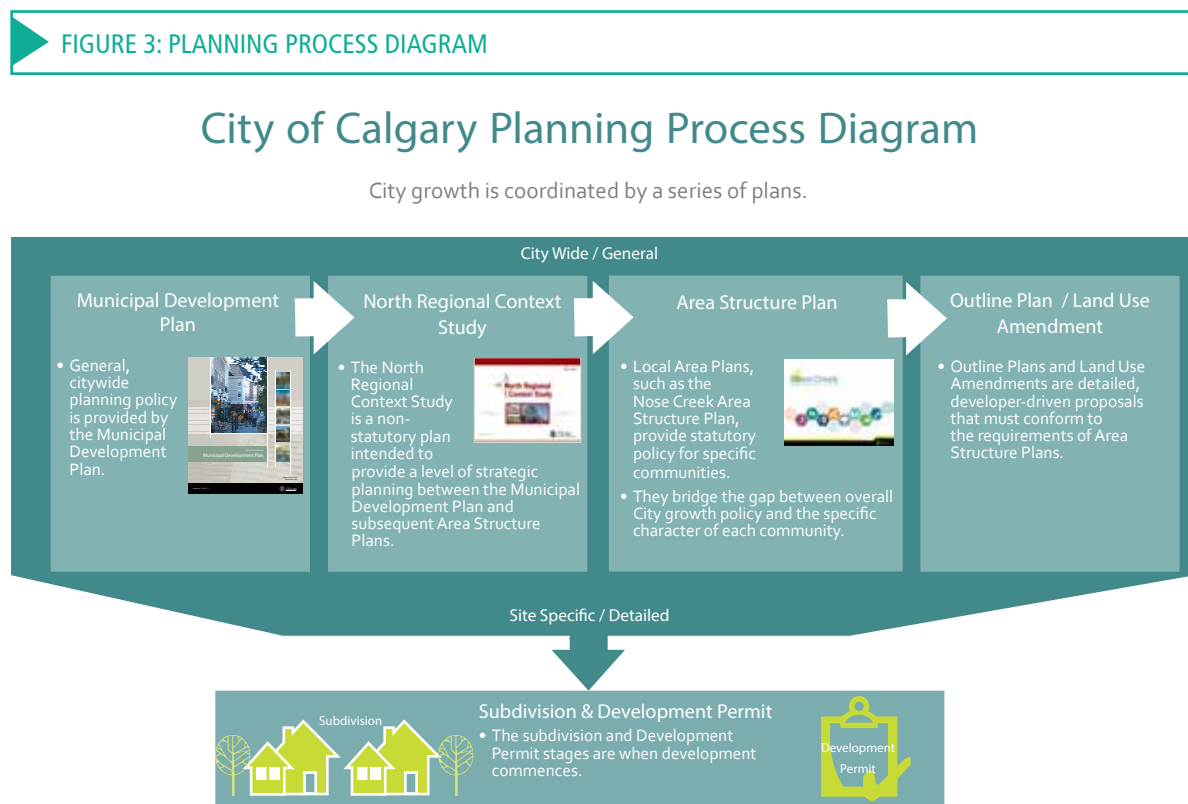
An Area Structure Plan (ASP) is a long-range statutory planning document that refines and implements The City's broad planning policies and objectives contained in the Municipal Development Plan that guides

land, subdivision and development decisions in the plan area. ASPs are typically prepared for large areas of undeveloped land where new communities are going to be planned. Development of an ASP is the first step

in obtaining planning approval for a new community and includes making decisions on land uses, transportation systems, population and jobs, the sequence of development and the provision of essential services and facilities, taking into account the opinions expressed by stakeholder groups (see **Figure 3: City of Calgary Planning Process Diagram**).

Preparation of the Nose Creek ASP was initiated in 2013 as one of six council-initiated ASPs that were developer-funded but City-led. This unique approach required a variety of new approaches to project time line delivery for City administration which created the opportunity to look at utilizing an approach for decision making focused on measured health impacts.

As part of this work program, the project manager identified that it would be useful to include an approach alongside the ASP that considered metrics around health in planning. An HIA was identified as an appropriate tool for this purpose. The NCASP will be the first City of Calgary land use planning policy document to explicitly address health considerations in the development of a new neighbourhood. An additional outcome is that the HIA will help The City understand what future planning issues, including infrastructure projects and planning policy documents, could benefit from a similar health focus (see **Appendix 1: Summary of the Nose Creek ASP Process**).





3. ABOUT THE HIA

Health Impact Assessment (HIA) is an approach or process that helps evaluate the potential health effects of a plan, project or policy before it is built or implemented (Ross et al, 2014). It provides recommendations to increase positive health outcomes and minimize adverse health outcomes by bringing potential public health impacts and considerations to the decision-making process.

HIA generally follows the steps outlined below:

1. **Screening:** Decide if an HIA will be useful
2. **Scoping:** Plan the HIA approach
3. **Assessment:** Identify and describe health impacts; develop strategies to enhance health benefits and minimize adverse effects
4. **Reporting:** Communicate results
5. **Evaluation and Monitoring:** Understand the effectiveness of the HIA and track health changes over time.

A description of how these steps were approached for the Nose Creek HIA is provided in **Appendix 2: HIA Methods**.

A key element of HIA is to incorporate the views of affected stakeholders: individuals and organizations that may be affected by the plan being considered. The Nose Creek planning process incorporated an engagement strategy that included identifying and connecting with a wide range of internal and external stakeholders through processes such as open houses, technical meetings, external stakeholder meetings, landowner meetings and workshops over a 16 month period. **Appendix 1: Summary of the Nose Creek ASP** describes the stakeholder groups engaged, and some of the processes that were used to obtain opinions and refinements to the ASP.

The NCASP has undergone an extensive process of scrutiny and refinement with input from a wide variety of stakeholder groups. The focus of the HIA assessment, therefore, was to identify the key provisions in the ASP that support the overall goal of building a healthy community. By identifying these provisions and linking them to specific health outcomes, the HIA:

- Demonstrates the way in which the current NCASP supports a healthy future community;
- Identifies those provisions that will be important to implement as the ASP is applied to development; and
- Provides decision-makers and other stakeholders with an understanding of how their actions will influence health outcomes among people who reside, work, learn, and visit in the plan area.

Where else has HIA been used for municipal planning?

While HIA is new to the City of Calgary, it has been used extensively to strengthen municipal planning across North America and globally. Cities that have successfully used HIA for urban planning initiatives include London, England¹; Bilbao, Spain²; Christchurch, New Zealand³; Los Angeles⁴; San Francisco⁵; and Sydney, Australia⁶, among others. HIA has proven useful in helping decision-makers, local residents and other stakeholders to develop healthier cities.

In an evaluation of 17 case studies of HIA implemented in Europe, almost every HIA was found to be effective in some way, ranging from directly affecting the provisions of the decision being made, to more indirect beneficial effects on community relationships and awareness of vulnerable populations.

“HIA provided decision-makers with a structured way of thinking about unintended consequences and gave them confidence to make clear recommendations” (Haigh et al., 2013).

“[HIA] raised the awareness of the social model of health amongst those whose roles were not primarily health-related. This resulted in the strategy development teams taking greater account of public health issues when drafting the strategies” (World Health Organization, 2015).

“The process of conducting the HIA and the data collected brought attention to health, safety and to impacts on vulnerable populations that would not have been part of the process otherwise.” (The Health Impact Project, 2015).

These outcomes are all key steps towards healthier public policy and healthier communities.









1. <http://www.apho.org.uk/resource/item.aspx?RID=108634>
2. <http://www.apho.org.uk/resource/item.aspx?RID=85397>
3. http://www.hiasociety.org/documents/GreaterChristChurch_HIA_Report.pdf
4. <http://www.humanimpact.org/news/usc-specific-plan-hia-released/>
5. <http://www.apho.org.uk/resource/item.aspx?RID=61493>
6. http://hiaconnect.edu.au/wp-content/uploads/2013/04/Greater_Western_Sydney_HIA.pdf



4. ABOUT THE HEALTHY PLANNING PRINCIPLES

This HIA has been organized around eight Healthy Planning Principles that were developed based on the research that connects health and planning. The principles were adapted by NCASP project planning team from the Urban Land Institute's 10 Principles for Building Healthy Places (<http://uli.org/report/ten-principles-for-building-healthy-places/>). The adaptations were made in order for the principles to align with the context of the project and the planning approvals process at The City.

The Healthy Planning Principles are shown below. Evidence linking each principle to physical and mental health outcomes is described in the Findings section of this document:

							
ACTIVE AREAS Plan to encourage physical activity by integrating supporting land uses so people are able and drawn to travel without being auto-dependant. Consider active living strategies at building design stage.	PEOPLE PLACES Incorporate health impacts into planning and design. Consider the scale, connectors and destination, and prioritize people over automobiles. Design to create the best place for people.	MIX & MINGLE Include a variety of land uses, building types and mixed-use development both vertically and horizontally. Co-locate activities and an array of public spaces within a community and neighbourhood to support physical and social interaction.	EMPOWER ENGAGEMENT Integrate community engagement through planning tools such as a Health Impact Assessment. Engaging the community through a shared vision of a healthy community increases the likelihood of achieving the goal of an inclusively planned, healthy community that will be more resilient.	CHARACTER COMMUNITIES Access to nature and placemaking connects people to their communities. Use natural features and environmental systems to create unique communities.	ALL AGES & ABILITIES Provide equitable access to amenities, schools and services and integrate a mix of housing options to create opportunities for all people. Land use and planning should support opportunities for aging in place.	GROWING GROCERIES Access to healthy food sources in the form of local groceries stores, community gardens and orchards that are within walking or cycling distance allows for all socioeconomic groups to be healthy. Consider the placement of land uses and the route from the home to the healthy food to be planned for people first over cars.	RESILIENT & RESPONSIBLE Plan and build walkable, mixed-use and transit-rich communities to meet the desires of residents and current market trends. These communities are more adaptive and resilient through economic shifts.



5. FINDINGS

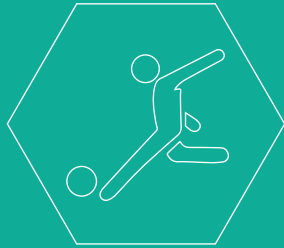
In total, the NCASP includes over 220 policies, with the majority directly or indirectly supporting the eight Healthy Planning Principles. This assessment focuses on describing two things:

- How the Healthy Planning Principles informed various decisions in the land use concept.
- How policies in the ASP will direct the different planning stages to support creating a healthy community.

For each of the eight Healthy Planning Principles, examples of supportive policies from the NCASP are listed. These are organized into three sections:

- **Support at Development Permit Stage** describes policies within the ASP that will guide the final stage of planning, the Development Permit stage. At this stage, site planning for individual parcels and the interface of buildings to the street and adjacent parcels is decided.

- **Support from NCASP Policy** describes how the ASP utilized the Healthy Planning Principles to make decisions during policy development and development of the land use concept.
- **Support at Outline Plan / Land Use Amendment Stage** describes how the ASP policies will guide the next stage of the planning process: Outline Plan /Land Use Amendment. At the stage of Outline Plan (unique to The City of Calgary) the location of roads, infrastructure, and land uses are determined and the quality of the network within the plan area is shaped. It also directs the size of the parcels, their adjacent uses and location of natural features and pathway connections.



5.1 ACTIVE AREAS

Plan to encourage physical activity by integrating supporting land uses so people are able and drawn to travel without being auto-dependant. Consider active living strategies at the building design stage.

Examples of policies in NCASP

3.3.2.7.
3.3.2.12.
5.1.2.5.
5.4.2.3.
6.1.2.9.
8.1.2.1.
9.2.2.4.

5.1 ACTIVE AREAS

Links to Health

Regular physical activity has a multitude of health benefits: it improves muscular and cardiorespiratory fitness; improves bone and functional health; reduces the risk of hypertension, coronary heart disease, stroke, and other chronic diseases; decreases the risk of falls and fractures; and is essential for maintaining a healthy weight.⁶ Many urban design and land use policies can promote physical activity and active modes of transport, such as walking and cycling. Interventions related to land use and destination mix, street and pedestrian connectivity, and overall neighbourhood design have been shown to support increased physical activity among residents.^{7, 8}

Support from NCASP Policy

The Neighbourhood Framework, Open Space Network and Mobility sections of the NCASP focus on Active Areas which is mentioned in the introduction or intent statements of each section.

Health considerations as part of the NCASP development included:

- Locating a mix of uses within a walking and cycling distance of both neighbourhoods to encourage increased physical activity
- The placement of community amenities that are accessible by the majority of residents within each neighbourhood to encourage group sports and physical activity.
- Providing off-street connections for pedestrians and cyclists through the inclusion of non-motorized pathways throughout the plan area in both north-south and east-west direction.

- A grid network to provide multiple direct, connected, and accessible routes for people who live, work, learn and play in both communities to all areas within the plan. To encourage walking and cycling as part of everyday mobility choices and create enhanced opportunities for physical activity.

Support at Outline Plan / Land Use Amendment Stage

- Land use within a neighbourhood and street block should be mixed so that people have the ability to walk or cycle to non-residential uses.
- Include open space for active and passive recreational uses in Employment and Industrial areas.
- Open spaces should be located to be publically accessible to encourage active and passive recreational uses for all in the community.

Support at Development Permit Stage

- Encourage applying active living strategies at the development permit stage.
- Provide public amenities spaces in locations that are accessible by the users and visible to the street.
- Placement of driveways and servicing should have minimal impact to the streetscape and pathways to reduce pedestrian and vehicular conflict. Provide cycling facilities at entrances and at destination spots such as plazas and parks to support cycling.
- Provide site furnishings, landscape features, and welcoming entrances to enhance the streetscape to provide pedestrian comfort and encourage interaction.



5.2 PEOPLE PLACES

Incorporate health impacts into planning and design. Consider the scale, connectors and destination, and prioritize people over automobiles. Design to create the best place for people.

Examples of policies in NCASP

3.3.2.17.

4.2.2.5.

4.2.2.7.

5.2.2.5.

8.1.2.3.

8.3.2.3.

5.2 PEOPLE PLACES

Links to Health

Land use decisions related to zoning, transportation systems and neighbourhood design can have a tremendous impact on health.¹ A healthy neighbourhood environment makes the healthy choice the easy choice. Walkable, mixed use and well-connected neighbourhoods encourage active transport and increased levels of physical activity.¹ Residents in close proximity to vital services and health-enhancing amenities may experience better health outcomes.²⁻⁴ Elements of the built environment can also improve mental health and well-being by supporting activities that encourage social integration, social engagement and participation, social support and perceptions of safety.⁵

Support from NCASP Policy

The Neighbourhood Framework, District Framework and Open Space Network sections of the NCASP focus on People Places which is mentioned in the introduction or intent statements of each section.

Health considerations as part of policy plan development included:

- Providing regional pathway connections in the plan area in all directions and throughout the plan to encourage active modes of transportation.
- The larger grid network that will support a fine scaled grid network for streets designed for pedestrian comfort. This will provide people scaled connections to destinations that supports creating people places on the streets, a key location for social interaction.

Support at Outline Plan / Land Use Amendment Stage

- Provide non-motorized connections in the plan area and where possible utilize natural features as a destination.
- Open spaces should be sized and designed to support surrounding needs of the community which could include urban plazas, sports fields, playgrounds, orchards and community gardens.
- Design a grid road network in residential areas that is people-oriented and encourages people to walk and cycle.

Support at Development Permit Stage

- Public amenity space should be designed for year-round use and integrate with the streetscape at key entrances.
- Multi-residential buildings should provide ground and street oriented entrances.
- Multi-residential buildings should be integrated into the neighborhood block with single detached development and should not create a long continuous building facade beyond a standard neighborhood block.
- Year round streetscape design should provide protected areas for seating.
- Create a safe public realm for circulation and gathering purposes.
- Provide support elements such as seating, lighting and soft landscaping and entrances around bus stops.



5.3 MIX & MINGLE

Include a variety of land uses, building types and mixed-use development both vertically and horizontally. Co-locate activities and an array of public spaces within a community and neighbourhood to support physical and social interaction.

Examples of policies in NCASP

3.3.2.9.
4.1.2.4.e.
5.3.2.2.
6.1.4.1.
7.2.2.3.

5.3 MIX & MINGLE

Links to Health

A sense of belonging describes a person's attachment to and social comfort with their community, friends, family, workplace or personal interests.¹⁷ Communities that promote a sense of belonging are good for health: people with a strong sense of community belonging are more likely to report higher rates of self-perceived physical and mental health than those whose sense of belonging is weak.^{17, 18} Certain elements of the built environment, such as access to green spaces and safe and welcoming common areas, may facilitate opportunities for social interaction, which is associated with health and wellbeing.¹⁹

Support from NCASP Policy

The Community Framework, District Framework and Community Amenities sections of the NCASP focuses on People Places which is mentioned in the introduction or intent statements of each section.

Health considerations as part of policy plan development included:

- Providing a mix of land uses consisting of employment, industrial, commercial and residential land uses to allow people to live, work, learn and play in the same community which will encourage alternative transportation modes for residents and employees in the plan area.
- Locating community amenities such as school sites with playing fields adjacent to Neighbourhood Activity Centres and Community Association sites supported co-location of activities and flexible programming options.

- Placement of the recreation facility and library within a neighbourhood and along a key transit corridor to provide opportunities for local residents and regional users.

Support at Outline Plan / Land Use Amendment Stage

- Land use parcel sizes and adjacent uses should be compatible to support co-location of activities and uses.
- Community amenities and their associated parcel sizes should be designed to support co-location of activities and complimentary land uses.
- Mix land uses to avoid blocks of single type uses.
- Encourage land uses that support both vertical and horizontal mixed use.
- Street network should be designed such that the streetscape will support mixed uses and provide safe and inviting places for people to interact.

Support at Development Permit Stage

- Orient building entrances to the street to encourage activity to and from the street.
- Provide year round public realm and public amenity space design to support social interaction.
- Design gathering spaces that support a variety of activities by considering adjacent uses, pathway and walkway connections, placement of furnishings and soft landscaping.
- Consider shared walkways and courtyards between larger buildings.



5.4 EMPOWER ENGAGEMENT

Integrate community engagement through planning tools such as a Health Impact Assessment. Engaging the community through a shared vision of a healthy community increases the likelihood of achieving the goal of an inclusively-planned healthy community that will also be more resilient.

Examples of policies in NCASP
3.3.3.2.
7.3.2.2.

5.4 EMPOWER ENGAGEMENT

Links to Health

From a health perspective, community engagement refers to community involvement in decision-making and in the design, governance and delivery of initiatives that aim to promote health.¹¹ Providing opportunities to promote health from the “bottom up” can not only empower communities and lead to more effective interventions,^{12, 13} it may also result in tangible benefits to health outcomes. Some research evidence has found associations between community engagement and self-perceived improvements in physical and emotional health, self-confidence, self-esteem, social relationships and feelings of individual empowerment.¹¹ The benefits of community engagement may be particularly beneficial to disadvantaged populations by encouraging social inclusion and “giving a voice to the voiceless”.¹⁴

Support from NCASP Policy

The Community Amenities section of the NCASP focuses on Empower Engagement and is mentioned in the introduction of the section.

Health considerations as part of policy plan development included an extensive engagement plan with:

- 12 workshops with the landowner group;
- 3 group external stakeholder meetings;
- 14 individual meetings with special interest groups;
- 39 landowner meetings;

- 2 open houses;
- 128 newsletters emailed out; and
- ongoing updates on The City of Calgary project website.
- Over 80 City of Calgary internal technical meetings
- Information from this HIA should be included in future decision-making for amendments to the ASP.

Support at Outline Plan / Land Use Amendment Stage

- The information from this HIA should be included in future decision-making for Outline Plan and Land Use Amendments.
- Provide opportunities for the community to determine their needs and programming at the Community Association site.

Support at Development Permit Stage

- The eight Healthy Planning Principles should be supported in the Development Permit decision making process.



5.5 CHARACTER COMMUNITIES

Access to nature and placemaking connects people to their communities. Use natural features and environmental systems to create unique communities.

Examples of policies in NCASP

- 1.2.
- 3.3.2.8.
- 3.3.2.6.b.
- 8.3.2.6.
- 8.3.2.3.
- 10.2.2.6.a.

5.5 CHARACTER COMMUNITIES

Links to Health

Access to and engagement with natural features and environmental systems offer numerous health benefits. Exposure to nature is associated with lower levels of stress, anxiety, depression, and chronic disease; and increased levels of concentration and cognitive functioning.¹ Proximity to green spaces can encourage higher levels of physical activity and promote social interaction.^{20, 21} Natural features and environmental systems may also clean the air, resulting in lower levels of air pollution and preventing the onset of respiratory and other diseases, while the cooling effects of vegetation may help mitigate the urban heat island effect.^{1, 20}

Support from NCASP Policy

The Open Space Network and Utility Infrastructure sections of the NCASP focus on Character Communities which is mentioned in the introduction statements of both sections.

Health considerations as part of policy plan development included:

- Locating of the community amenities to catch the largest amount of people within a walking distance or to utilize a natural feature in the plan area.
- Locating the Industrial Hub near the drainage channel which could be a feature to the area as well as a key connection point from the residential areas to the employment and industrial areas.
- One core value of the NCASP focused on celebrating and integrating the natural and cultural landscape.
- The location of the Environmental Open Space Study area in the NCASP which will be further refined at Outline Plan / Land Use Amendment stage.

- Location of infrastructure to minimize impact on key environmental features such as Nose Creek.
- Location of streets to minimize negative impacts on existing natural features and the overland drainage channel within the plan area.

Support at Outline Plan / Land Use Amendment Stage

- Locate high density residential areas near natural features to ensure maximize the benefits of the natural landscape on the health of the people in the community.
- Environmental Reserve land should be visible and accessible to the public.
- Infrastructure including roadways and underground pipes should be located to minimize impact on natural features.
- Include Low Impact Design (LID) measures to plan for soft landscaping and trees along streets.
- Adjacent land uses to environmental reserves should not have a negative impact.
- Grading of the plan area should be designed to minimize impact on environment features and should include slope adaptive design at the outline plan stage.

Support at Development Permit Stage

- Introduce additional trees and soft landscaping into the streets and public spaces to enhance the plan area as well as assist with surface runoff.
- Public amenity spaces should include soft landscaping areas.
- Include LID measures in the site plans for development.
- Ensure adjacent operations do not have a negative impact to environmental reserves.
- Buildings should be slope-adaptive to the site.



5.6 ALL AGES & ABILITIES

Provide equitable access to amenities, schools and services and integrate a mix of housing options to create opportunities for all people. Land use and planning should support opportunities for aging in place.

Examples of policies in NCASP

5.1.2.4.
5.3.2.3.
5.3.2.1.e.
5.4.2.2.
6.1.2.7.
7.3.2.5.
9.1.2.3.
10.4.2.18.

5.6 ALL AGES & ABILITIES

Links to Health

Easy access to schools, amenities and other services supports healthy communities for all ages and abilities. Children who walk or bicycle to school often have substantially higher levels of physical activity than those who travel by motorized transport.¹⁵ Proximity to community amenities, such as parks, recreation centres, and sports facilities may also support increased levels of physical activity.^{4, 16} Access to vital services, such as health care, can influence rates of health care utilization and improve health outcomes.²

Support from NCASP Policy

The Neighbourhood Framework, District Framework, Community Amenities and Mobility sections of the NCASP focuses on All Ages and Abilities which is mentioned in the introduction or intent statements of each section.

Health considerations as part of policy plan development included:

- A higher minimum residential density requirement throughout the plan area to encourage a greater variety of housing types, preventing exclusively single detached dwelling development.
- Policies around multi-residential housing and older adult housing to ensure these housing types are well integrated into the community and have access to key amenities and services.
- Location of school sites and Neighbourhood Activity Centres to capture the largest catchment area of residents in each neighbourhood.

- A strong grid network in the both neighbourhoods to would support a street block for all housing types encouraging a diverse population.

Support at Outline Plan / Land Use Amendment Stage

- Limit the size of large multi-residential sites and type to avoid large blocks of continuous building.
- Recognize older adult housing needs and locate older adult housing near amenities and open space.
- Quality streetscapes that support alternative transportation to community amenities and open space and natural areas.
- Design street cross sections to prioritize all active modes of transportation.
- Create and provide landscape features, site furnishing and design elements at gathering or waiting points.

Support at Development Permit Stage

- Universal streetscape design in public spaces and buildings.
- Prioritize pedestrian safety through site design within internal circulation.
- Provide amenity spaces that support various demographic groups.



5.7 GROWING GROCERIES

Access to healthy food sources in the form of local groceries stores, community gardens and orchards within walking or cycling distance allows for all socioeconomic groups to be healthy. Consider the placement of land uses and the route from the home to healthy food to be planned for people first over cars.

Examples of policies in NCASP

2.3.2.7.
3.3.2.6.
4.1.2.4.i.
4.1.2.4.j.
4.2.2.4.
6.2.2.3.

5.7 GROWING GROCERIES

Links to Health

A healthy, balanced diet is critical to our health and well-being. Research suggests that diets rich in fruits and vegetables may reduce the risk of a number of chronic conditions including diabetes, cancer, heart disease and obesity.²² The accessibility, quality and variety of food available to us are influenced by land use decisions,¹ which determine the availability of local grocery stores, community gardens and orchards. Better access to supermarkets (compared to convenience stores) has been linked with healthier diets and lower levels of obesity³ while participation in community and school gardens may help increase fruit and vegetable consumption.^{23, 24} Research suggests that walkable neighbourhoods and access to public transit may be associated with higher levels of food security.^{25, 26}

Support from NCASP Policy

The Community Framework section of the NCASP focuses on Growing Groceries and is mentioned in the introduction of the section. The Healthy Communities Section also focuses on Growing Groceries.

Health considerations as part of policy plan development included:

- When determining the location of the key features such as the various activity centres, and the creation of the Industrial Hub, the core idea was to provide opportunities for people in the area to have access to retail spaces that would support grocers and a mix of food establishments.

- Policy development for open spaces that would support accessible spaces for orchards, or gardens which includes ensuring they are facing public streets and connect to the community.
- Walking and cycling to retail areas that would provide support for a local grocer required the creation of a grid network to provide more direct access for pedestrians and cyclists with fewer wide roads for pedestrians and cyclists to cross.

Support at Outline Plan / Land Use Amendment Stage

- Include smaller commercial parcels that would support a local grocery store that typically has better street frontage with smaller surface parking lot requirements.
- Locate Community Association sites adjacent to park spaces to encourage co-location of these healthy food initiatives.
- Size and location of public park should consider the space to support community orchards and gardens in neighbourhoods.
- Quality streetscape that support multi-modes of transportation to potential food source locations, to support and encourage people to access food options in a healthy way.

Support at Development Permit Stage

- Site planning of commercial areas with grocery retailers designed for the safety of pedestrian circulation first and to be street-oriented to encourage and support people traveling on foot from the adjacent community.



5.8 RESILIENT & RESPONSIBLE

Plan and build walkable, mixed-use and transit-rich communities to meet the desires of residents and current market trends. These communities are more adaptive and resilient through economic shifts.

Examples of policies in NCASP

4.2.2.7.
7.1.2.6.
9.3.2.1.
9.3.2.2.
9.4.3.7.
10.4.2.18.
10.4.2.18.

5.8 RESILIENT & RESPONSIBLE

Links to Health

Studies on residential preference and public health in Metro Vancouver and the Greater Toronto Area have shown that residents strongly prefer walkable, mixed use and transit-supportive neighbourhoods.^{9, 10}

Residents of both locations who lived in more walkable neighbourhoods took public transit more frequently, drove less often, and had lower body weights compared to people living in less walkable neighbourhoods. In addition to promoting physical activity, walkable, mixed-use and transit-rich communities may be associated with benefits related to social interaction, air quality, climate change, traffic reduction, and reduced travel costs.^{9, 10}

Support from NCASP Policy

The Mobility and Utility Infrastructure sections of the NCASP focus on Resilient and Responsible which is mentioned in the introduction of both sections.

Health considerations as part of policy plan development included:

- When determining the land uses, a mix of residential, commercial, employment and industrial balance was developed in the ASP to support the ability for people to be able to work, live and play within one area.
- Recognizing sensitivity to development adjacent to rail lines, the industrial land use was selected as the responsible and logical choice.
- The road network was designed to provide transit connections both within and outside of the plan area.

- Regional Pathway and Green Corridor locations were designed to provide multiple pedestrian and cyclist prioritized routes in all directions while considering the natural features in the plan area.

Support at Outline Plan / Land Use Amendment Stage

- Land uses should support mixed use developments at centrally located areas of a neighbourhood or community and along key corridors.
- Placement of Regional pathways should be designed to capture the largest amount of users and should be easily accessible and safe.
- Land uses around bus stops and the Primary Transit Network (PTN) should be of a higher intensity.

Support at Development Permit Stage

- Utilize risk assessment to inform setback requirements to build resiliency into the area.
- Mixed-use development should be designed for more intense uses on the ground floor to support a lively streetscape.
- Public amenity spaces should address the streets to encourage social interaction.
- Site furnishings, lighting, canopies, soft landscaping and artistic elements should be placed at key entrances of buildings, public amenity spaces and streetscapes to build a pedestrian-rich environment.
- Vehicular circulation should minimize impact to the pedestrians on the street and within the site; clear pedestrian walkways with landscape features should be provided from the street and bus stops to the entrances of the buildings.



6. CONCLUSION

The Nose Creek ASP supports the development of a healthy community.

This HIA was able to demonstrate the links between key provisions in the NCASP and the eight Healthy Planning Principles. It showed that the collaborative work that has been undertaken by The City, the landowner group and stakeholder groups has resulted in a set of policies and guidelines that are likely to result in a robust, sustainable and healthy new community.

The HIA also shows the importance of continuing to consider health within the NCASP planning process in the future. The HIA identified a number of critical policies within the NCASP that must be adhered to in order to maximize community health benefits as specific plans for the plan area continue to evolve. Both The City and developers are responsible for ensuring the implementation of these policies.

Incorporating an HIA into the planning process has been beneficial.

This HIA has shown that including health considerations in the planning process as a decision making tool can be easily integrated within the practice of municipal planning at The City of Calgary. The HIA was integrated into the policy development timeline and did not interfere with process, but rather provided a centralized focus on health outcomes for efficient decision-making when conflicting interests surfaced.

The eight Healthy Planning Principles were useful in guiding the policy development and providing a framework for ensuring that the next stages of planning further support the development of a healthy community. Furthermore, these eight Healthy Planning Principles could be considered for a wide range of City planning projects, scaled and refined accordingly to reflect the project scope and current research.

In summary, the HIA has provided value to the NCASP process through clear direction by focusing on health, which impacts everyone. This unifying element created a common ground from which a collaborative and team environment was able to make timely decisions for a complex project.

The HIA was a useful tool to channel support for developing a healthy community that was expressed by Administration, the landowner group and stakeholders.

APPENDIX 1: SUMMARY OF THE NOSE CREEK ASP ENGAGEMENT

1. NOSE CREEK ASP STAKEHOLDER LIST

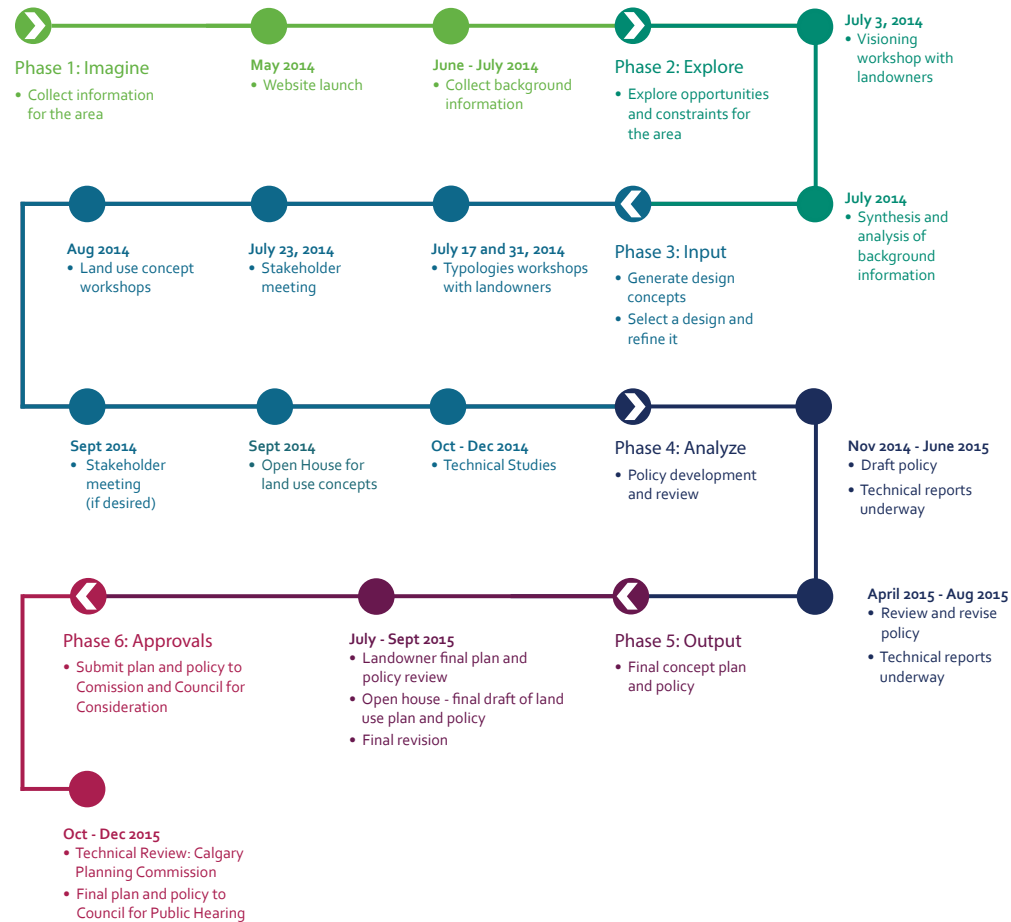
Stakeholders that were contacted as part of the engagement process included:

- Adjacent landowners
- Alberta Culture
- Alberta Energy Regulator
- Alberta Environment
- Alberta Health Services
- Alberta Motor Transport Association
- Alberta transportation
- ATCO Gas and Pipelines Ltd
- Beddington Heights Community Association
- Bike Calgary
- Bow River Basin Council
- Calgary Airport Authority
- Calgary Area Outdoor Council
- Calgary Board of Education
- Calgary Catholic School Board
- Calgary Chamber of Commerce
- Calgary Economic Development
- Calgary Home Builders Association
- Calgary Pathway & Bike Advisory Council
- Calgary River Communities Action Group
- Calgary River Valleys
- Calgary Sport Council
- Canada Pacific Railway Ltd.
- Department of Fisheries and Oceans
- Elbow Valley Cycle Club
- Evanston Creekside Community Association
- Falconridge/Castleridge Community Association
- Federation of Calgary Communities
- Hidden Valley Community Association
- Kallisto Energy Corporation
- Nature Calgary
- Nexen Inc.
- Northern Hills Community Association
- Nose Creek Watershed Partnership
- Open Streets Calgary
- Parks Foundation Calgary
- Rocky View County
- Saddleridge Community Association
- Sandstone MacEwan Community Association
- Skyview Ranch Community Association
- Sustainable Alberta Association
- Sustainable Calgary Society
- Synergy
- Taradale Community Association
- Trans Canada Pipelines
- Trans Canada Trail
- Transport Canada
- Trout Unlimited Canada
- University of Calgary – Faculty of Environmental Design
- University of Calgary Faculty of Arts – Geography

Appendices

2. ENGAGEMENT CHECKLIST & SUMMARY

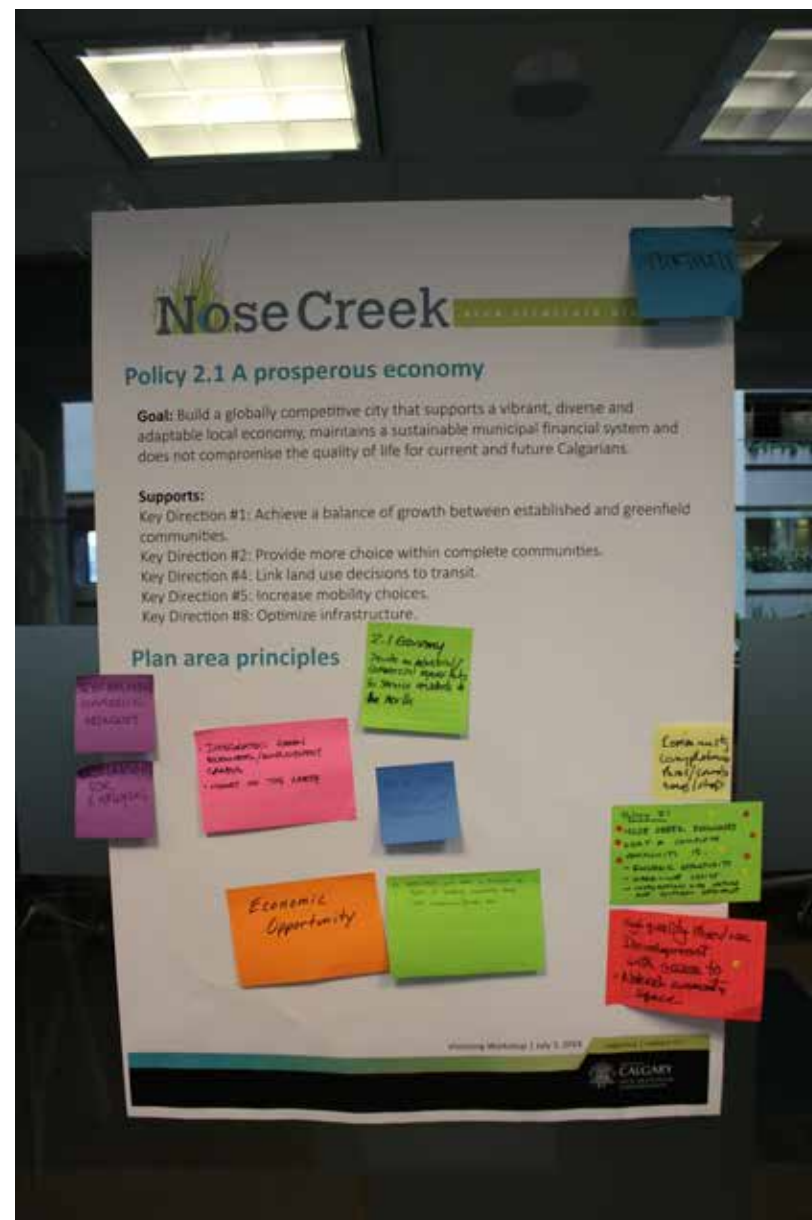
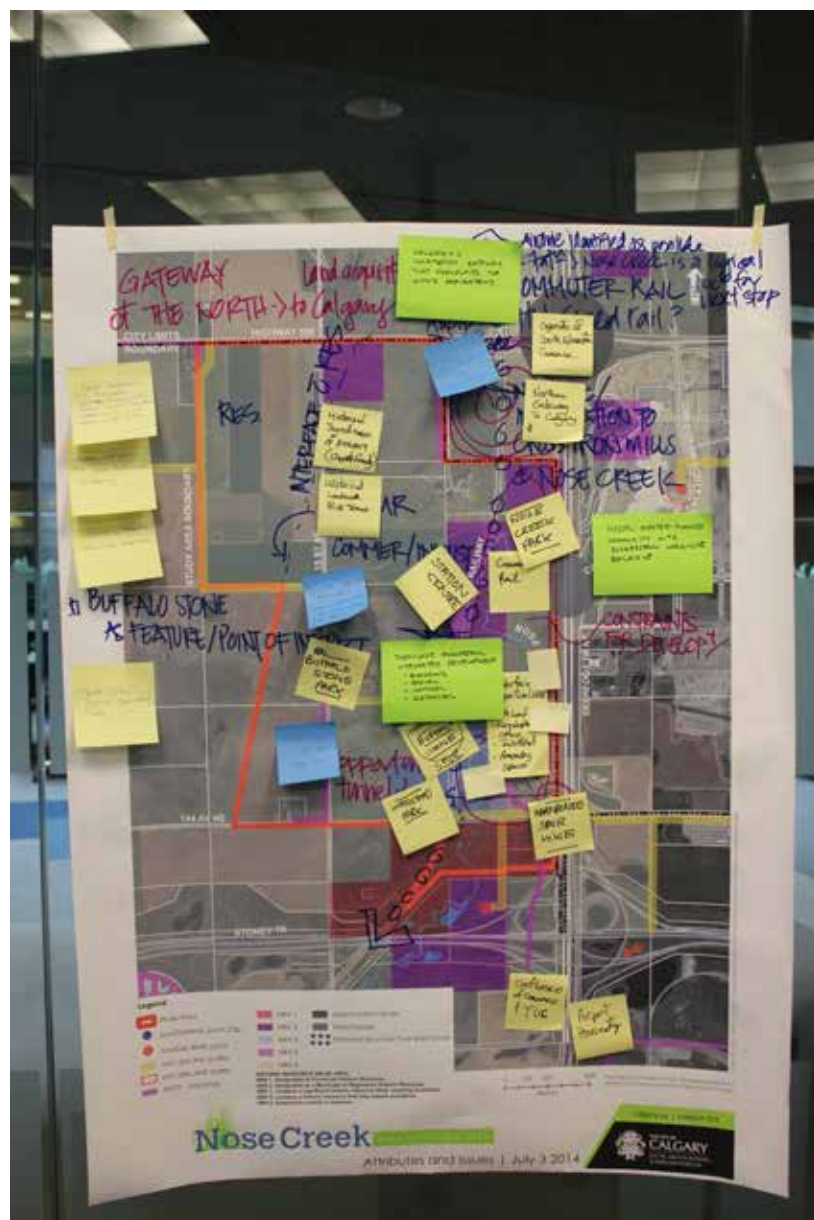
Engagement Checklist

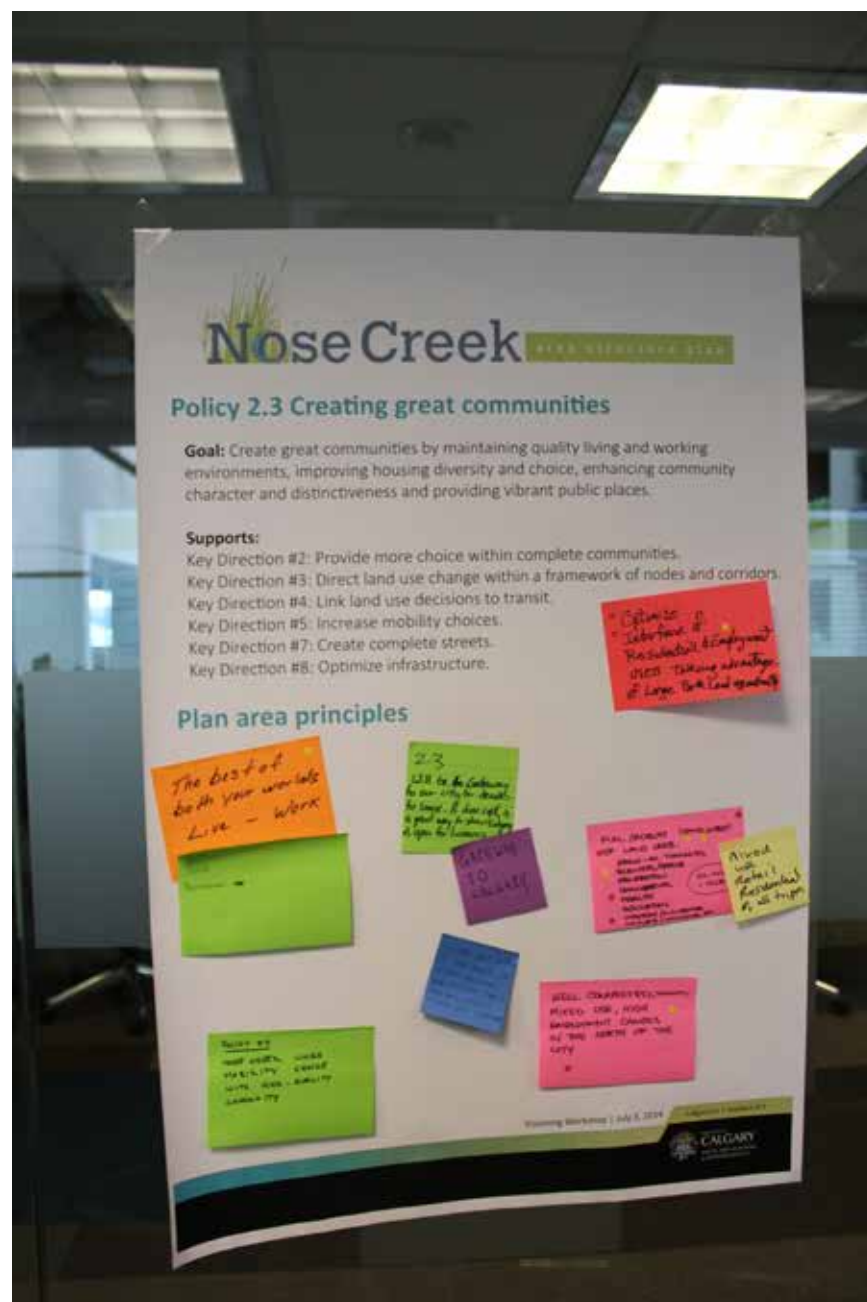


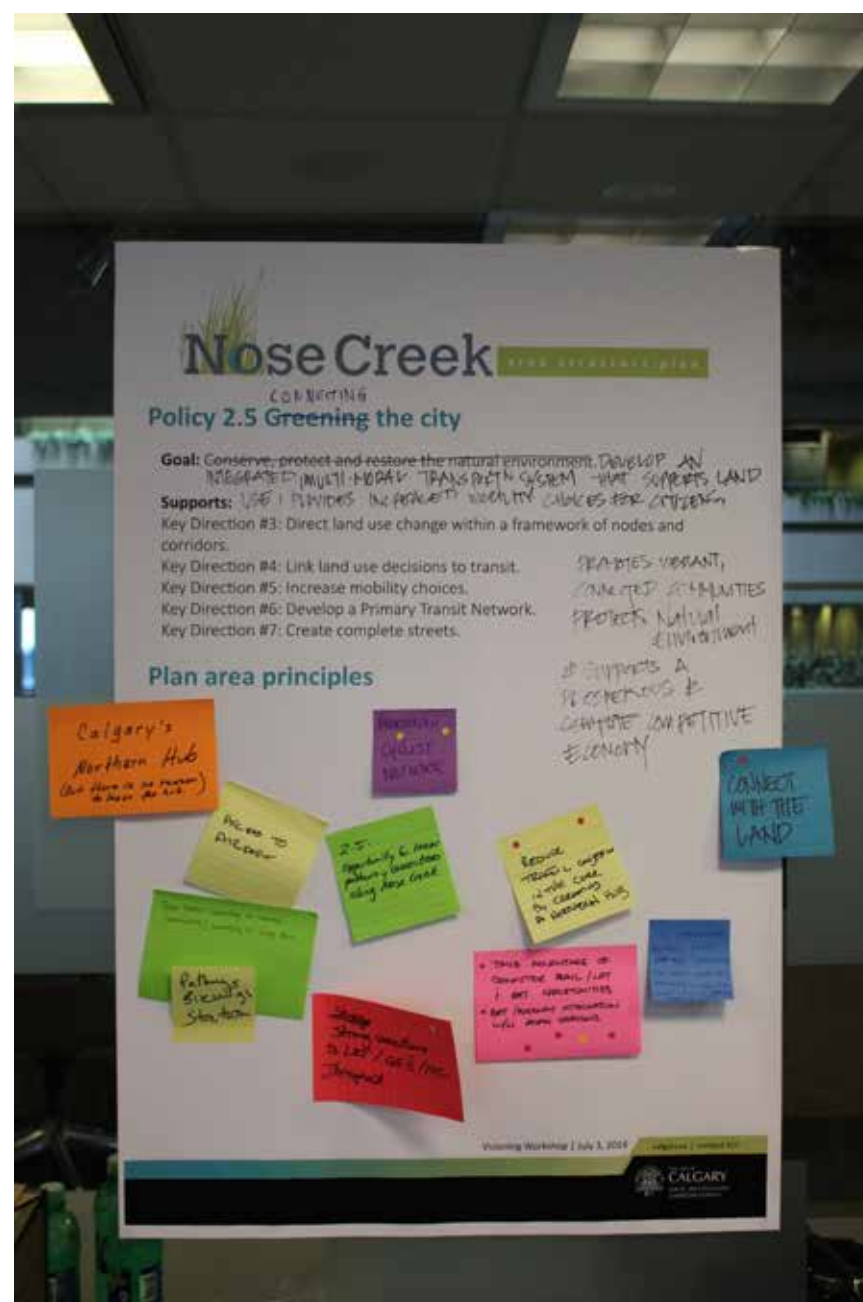
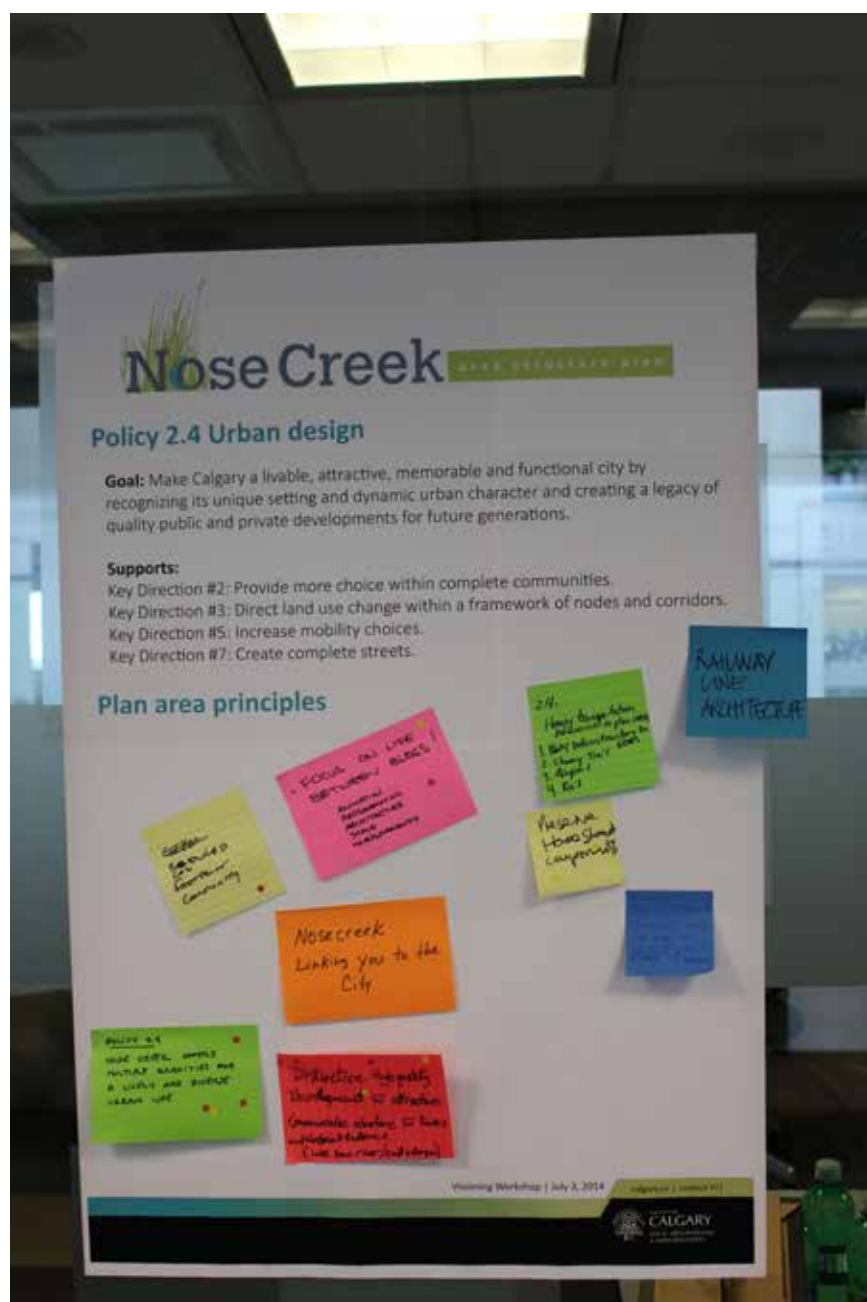
Engagement Summary

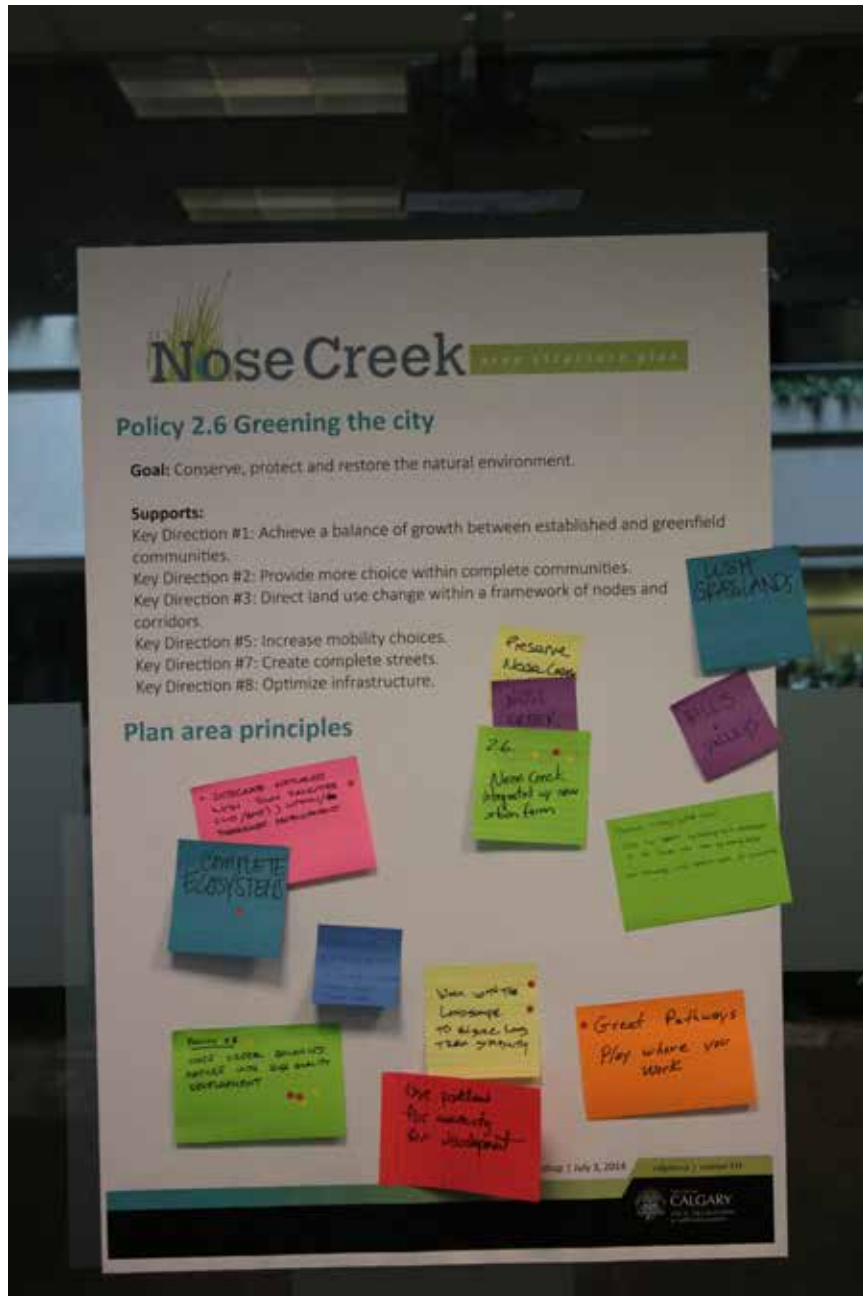


3. VISIONING





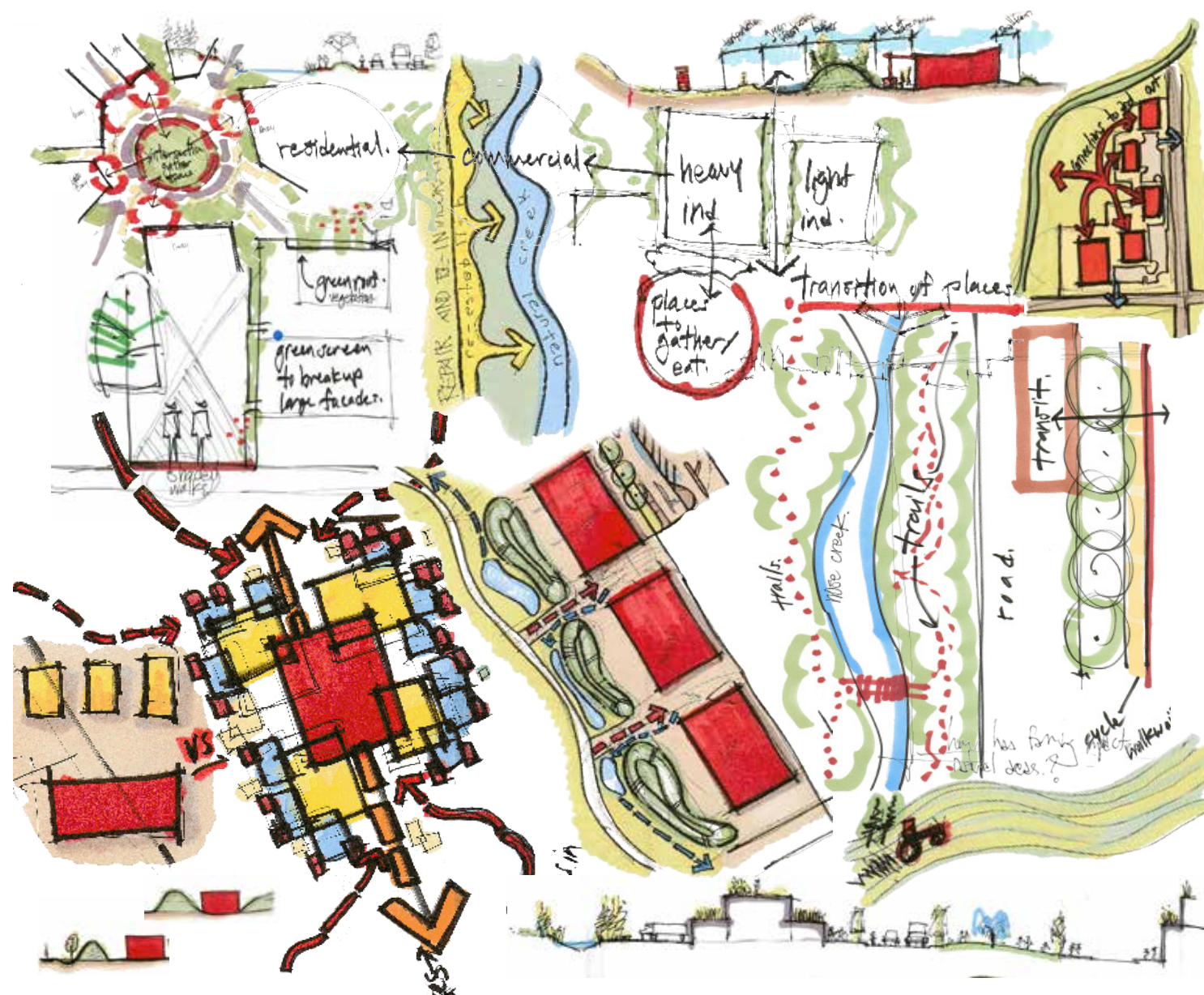




Word Cloud from Visioning Session



4. TYPOLOGIES WORKSHOPS: DRAWING & DIALOGUE WITH STAKEHOLDERS



typology no.1
industrial - heavy

2014.07.24 | typology workshop summary

2014.07.17 workshop participants

group A	group B
steve shawcross	joey gill
dave dalen	joseph silot
vicky chruich	sam alatorre
cheri long	joyce tang
breaune harder	erin russell
carly roberge	mike light
katelyn junkin	
jonathan sagi	

Nose Creek
area structure plan

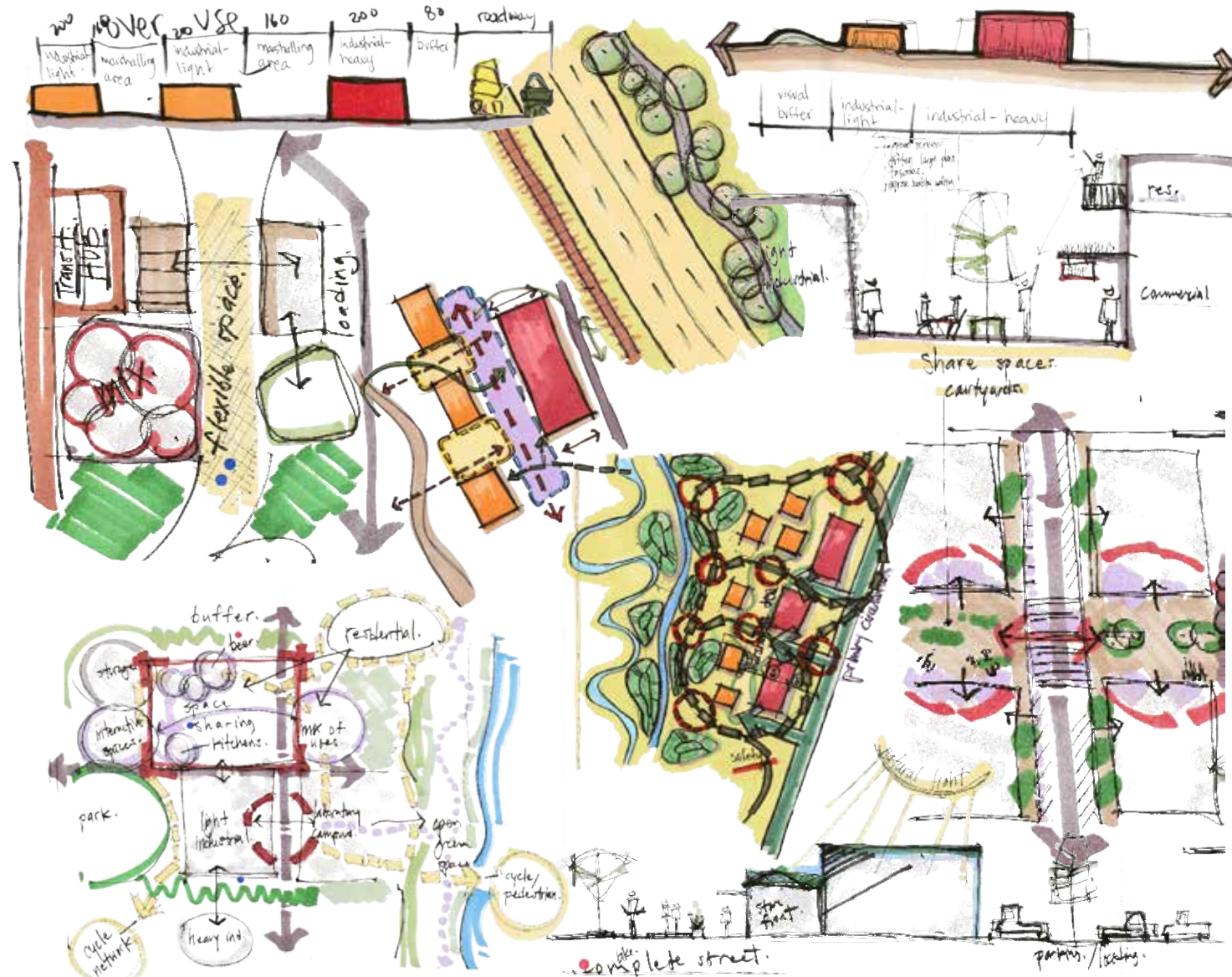
integrate and celebrate
mobilize and connect
grow and exemplify

key metrics

- A Livable Industrial Plan
 - (5) Provide walkable connections to active and passive open space networks
 - (4) Acknowledge employee convenience; provide safe connections to close by retail, residential and open space networks and natural environments for transportation and recreation
 - (2) LID principles shall be implemented where appropriate
 - (2) Plan public transit routes between residential and industrial areas
 - (1) Enclosed bicycle parking
- Architecture and Site
 - (3) Buildings shall respond to the pedestrian scale, provide sufficient natural light inside and provide indoor recreation amenities where appropriate
 - (2) Yards shall be located behind industrial buildings in a truck court, keeping unsightly activities and equipment away from street-view
 - (2) Integrate green roofs and green screens to breakup large plain facades
 - (1) Provide employee amenity space for gathering and eating
 - (1) Screening shall be provided between yards and adjacent land uses to provide visual relief from the facility, berms, naturalized plantings and green infrastructure shall be implemented where appropriate
 - (0) Site parking for light vehicles may be located between buildings
- Interface with Adjacent Land Uses
 - (5) Integrate typologies in a gradual fashion from industrial outwards, followed by industrial-light, industrial-commercial, industrial-business, avoid isolating land uses
- Streetscape
 - (2) The streetscape shall include boulevard planting, green infrastructure, separated bike lanes, separated pedestrian pathways and on-street parking
- Environment
 - (2) Re-establish strong connections to and design in response to the natural environment (including Nose Creek)
 - (0) Repair and re-invigorate land where degradation has occurred from past activities, re-store natural landscapes

DRAFT





typology no.2 industrial - light

2014.07.24 | typology workshop summary

2014.07.17 workshop participants

group A

steve shawcross
dave dalen
vicky churuch
cheri long
breanne harder
carly roberge
katelyn junkin
jonathan sagi

group B

joey gill
joseph silot
sam alatorre
joyce tang
erin russell
mike light

Nose Creek
area structure plan

integrate and celebrate
mobilize and connect
grow and exemplify

key metrics

Interface with Adjacent Land Uses

- (8) Locate light industrial facilities to serve as a buffers to heavy industrial facilities and in close proximity to commercial and residential

General Considerations

- (2) Plan for employment-intensive uses
- (2) Organize land use in a linear fashion with blue/green infrastructure where appropriate
- (1) Develop and monitor performance standards
- (1) Provide interstitial space between heavy and light industrial for marshalling areas and employee amenity spaces
- (6) Water management, circulation and recreation shall be integrated and organized as one entity

Architecture and Site

- (5) Loading access shall be located in the back of the building
- (3) Street-front access and storefront integration is encouraged
- (3) Collect and re-use stormwater for irrigation purposes
- Buildings shall provide sufficient natural light inside
- (6) Locate buildings closer to streets to provide shared spaces
- (6) Design pedestrian oriented building facades

Streetscape and Circulation

- (5) Develop cycling and pedestrian circulation routes to adjacent land uses, retail and residential
- (3) Identify and provide connections to cultural and natural local attractions
- (2) Primary circulation routes shall occur between heavy and light industrial land uses

Business Related Considerations

- (5) Provide flexibility in uses to allow for healthy growth of businesses
- (2) Provide shared spaces between adjacent facilities such as courtyards, kitchens, etc. to encourage intermingling between neighbouring employees
- (2) Provide flexibility for start-up and established light industrial businesses

DRAFT



2014.07.17 workshop participants

group B

joey gill

joseph silot

sam alatorre

joyce tang

erin russell

mike light

mike light

integrate and celebrate
mobilize and connect
grow and exemplify

General Considerations

- (5) Green space connectivity shall be maintained throughout the development
- (2) Organize in a grid layout or by proximity to related land use as opposed to buffering
- (1) Passive and active uses shall be considered in all areas, not exclusive to anywhere
- (1) Higher percentage of commercial industrial use mixed with lighter percentages of heavy and light industrial
- (0) Opportunities which lie in history and the uniqueness of an area shall be embraced
- (0) Incorporate landmark gateways and branding themes for the development (consent ranching heritage)
- (0) Natural landscapes shall be integrated throughout for social gathering and recreational activities

Streetscape and Circulation

- Streetscape and Circulation
 - (12) Streetscapes shall be walkable and pedestrian-oriented
 - (13) Opportunities for particular streets to be designed for transit and car sharing with separate cycling and pedestrian pathways shall be considered
 - (7) Complete Transit services shall be encouraged and convenient
 - (3) Streetscapes shall serve as features and function to separate spaces
 - (1) Facilities shall be aligned with streets
 - (8) Streets shall be hierarchical and accessible by residential neighbourhoods
 - (6) Ensure passive and active recreation opportunities are available outside of typical business hours

Interface with Adjacent Land Use

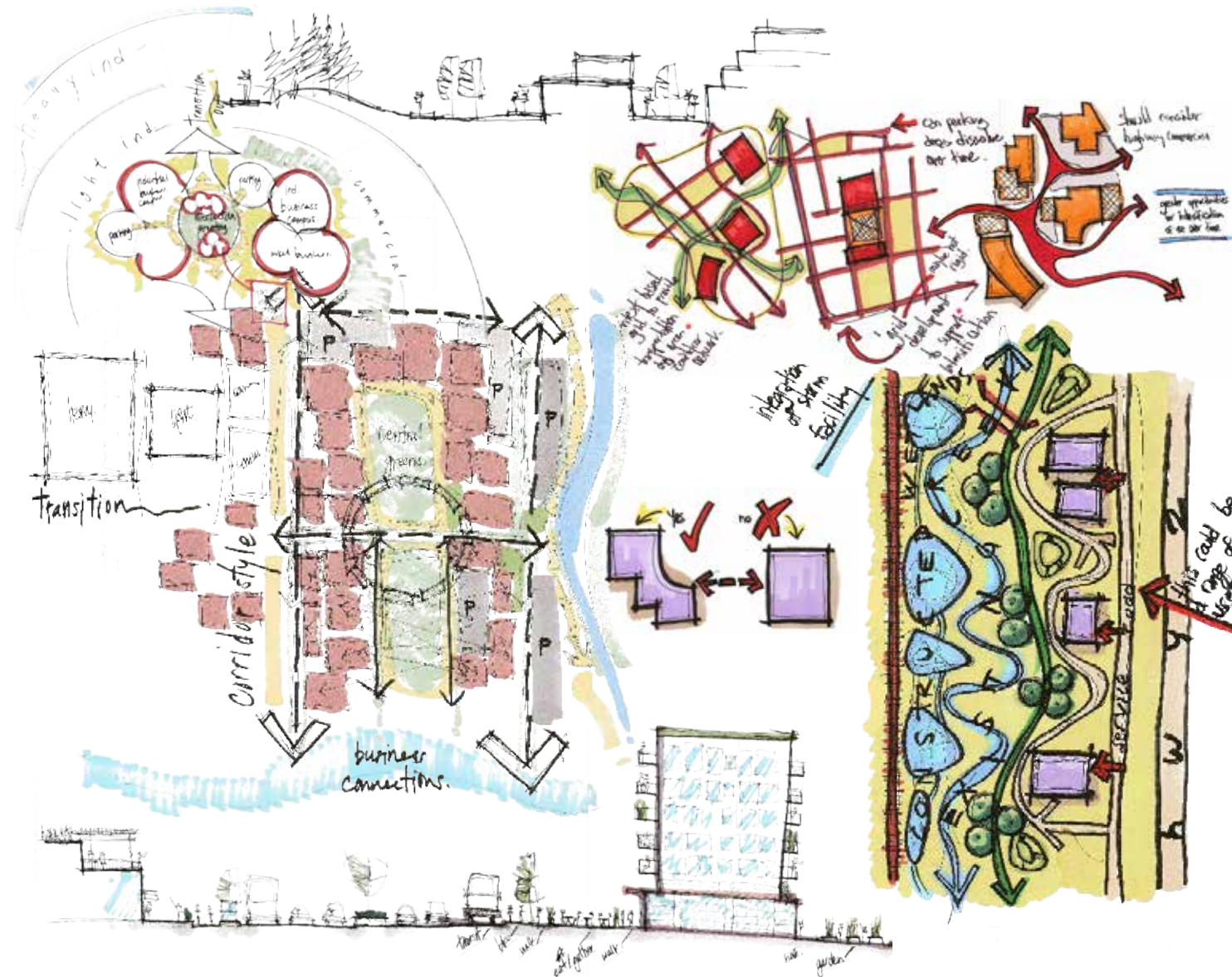
- (1) Integrate typologies in a gradual fashion from industrial outwards, followed by industrial-light, industrial-commercial, industrial-business
- (0) Commercial industrial is a preferred transitional land use to residential, industrial business and light industrial

Architecture and Site

- (2) Relaxations to typical parking requirements shall be implemented
- (1) Live/work building stacking shall be implemented with commercial on the ground level floor
- (0) Underground parking shall be considered
- (0) Buildings and parking space shall anticipate future intensification
- (0) Higher importance shall be placed on architectural vernacular

DRAFT





typology no.4 industrial - business

2014.07.24 | typology workshop summary

2014.07.17 workshop participants

group A	group B
steve shawcross	joey gill
dave dalen	joseph silot
vicky chruich	sam alatorre
cheri long	joyce tang
breaanne harder	erin russell
carly roberge	mike light
katelyn junkin	
jonathan sagi	



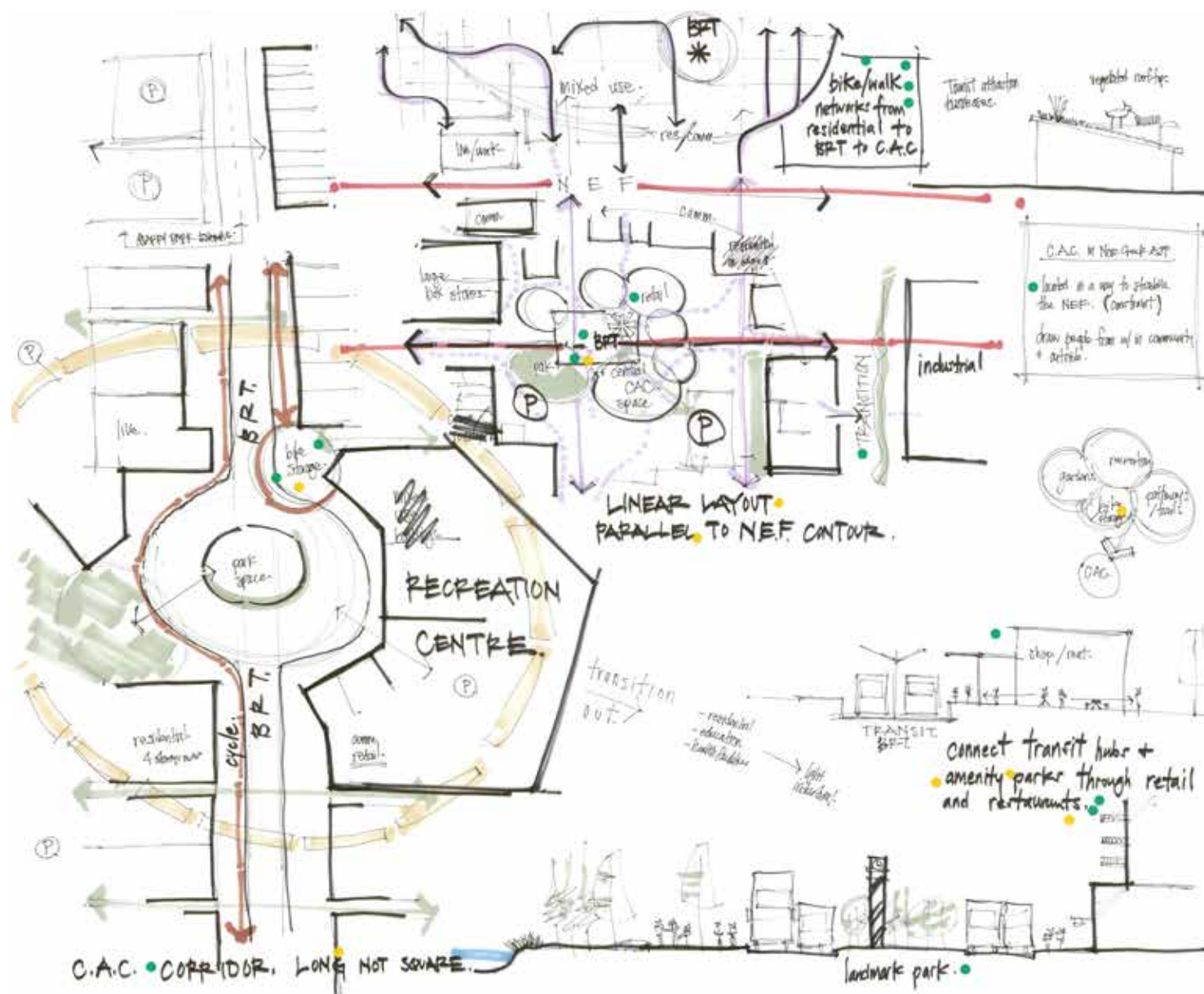
integrate and celebrate
mobilize and connect
grow and exemplify

key metrics

- Interface with Adjacent Land Uses
 - (4) A business campus is the preferred model as there is minimal risk in terms of visual interface
 - (2) Opportunities in relation to highway commercial frontage shall be considered
 - (6) Business Industrial is the best transition to move out of industrial commercial land use
- Architecture and Site
 - (4) Parking shall be laid out in a manner that accommodates future expansion where it is initially important but can respond to future intensification as public transit use increases
 - (2) Buildings shall be articulated in greater detail and aesthetically pleasing
 - (2) Taller buildings with higher density are preferred
 - (6) Underground parking shall be considered
 - (6) High importance shall be placed on architectural vernacular
 - (6) Building forms can be much more sympathetic and connected to adjacent forms
 - (7) Stormwater management shall be integrated throughout
 - (6) The benefit of a large reservoir shall be investigated
- General Considerations
 - (2) Retail, live-work business serves as a transition space to adjacent land uses
 - (2) The development shall be designed to intensify over time
 - (2) A context-based grid development with a green transportation network that supports intensification is preferred
 - (6) Central green spaces where people can gather are integral
- Streetscape
 - (2) Streetscapes shall be walkable and pedestrian-oriented
 - (6) Opportunities for particular streets to designated for transit and car sharing with separate cycling and pedestrian pathways shall be considered

DRAFT









typology no.5
neighbourhood
activity centre (nac)

2014.07.17 | typology workshop

participant name + signature

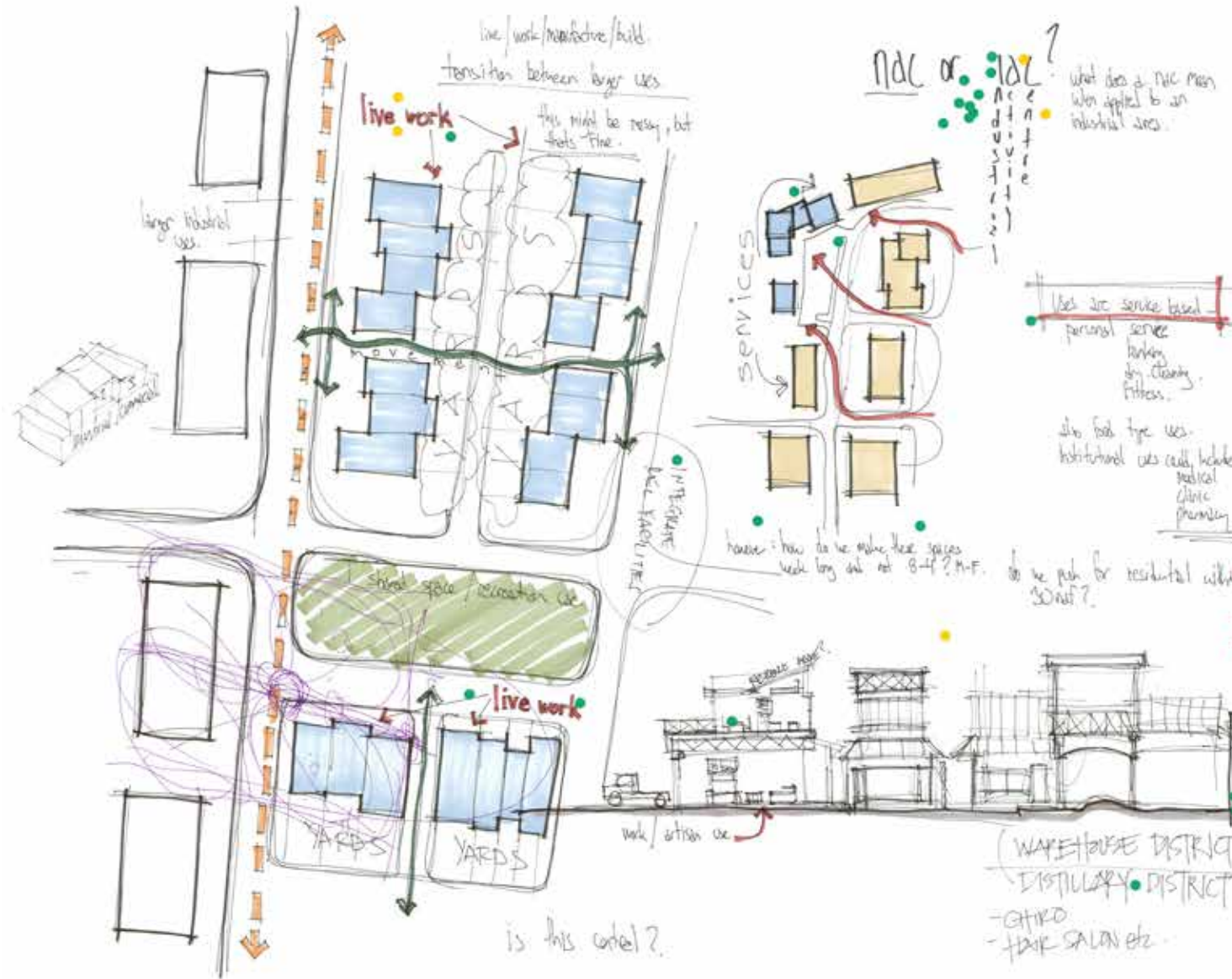
SEAN	
JEN	
JOY	
VIN	
JANICE	
JOHN	

Nose Creek
area structure plan

integrate and celebrate
existing and emerging
growth and opportunity

- Any thinking
- land use is best
 - urban day culture?
 - connectivity through is important.
 - edges shall be better not open space
 - all uses should be encouraged to be 24/7 - i.e. open school up for community use
 - short of open space network is the connecting feature for paths and parks
 - active density shall be elastic.
 - house barriers to use
 - social fabric / more opportunities for social interaction
 - mix of housing types and variety in the lot size





typology no.5
neighbourhood
activity centre (nac)

2014.07.17 | typology workshop

participant name + signature

TERESA	
BEIN	
JOSEPH	
JIM	
JONAE	
JON	

Nose Creek
area structure plan

integrate and coordinate
existing and proposed
uses and connect
uses and community

key findings

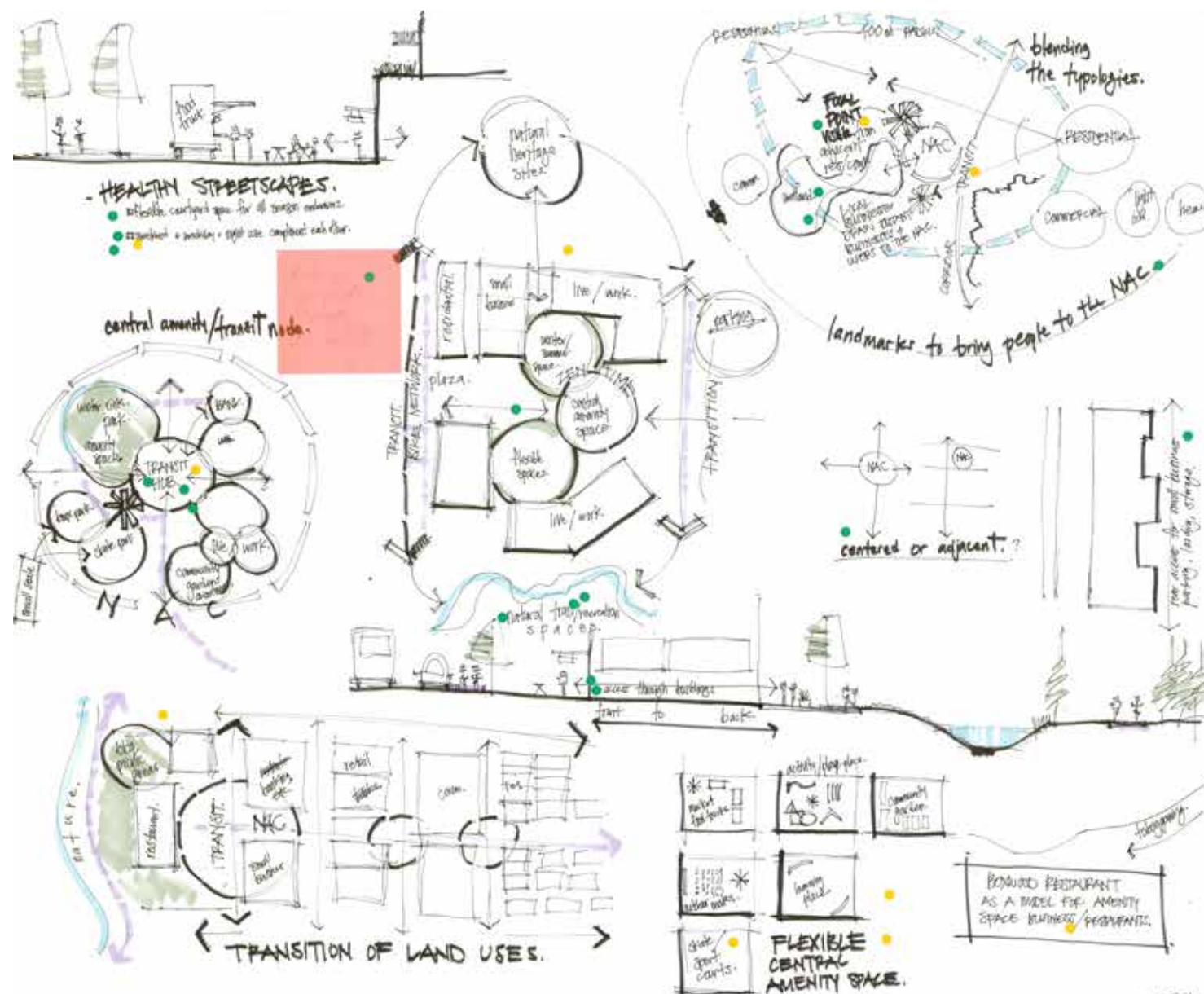
- mainly using from M-F, 9-5 use
- can we combine residential for work
- necessary vitality / good urban clutter
- how do we make it 24 hour space
- active gathering space that captures the new audience and draws in people from other places
- how do we make a 'warehouse' district
- identify appropriate elements in the area this has worked previously and look to include
- transit is important to making this work
- this should be consolidable
- residential component only as live/work
- not stand alone
- services for industrial workers

WAREHOUSE DISTRICT
DISTILLERY DISTRICT

CHRO
HAIR SALON etc.

is this correct?

CALGARY
RIR
ground



2014.07.17 | typography workshop

participant name + signature

vicks
 dave
 samu
 new
 mlt
 new
 tre



Nose Creek
area structure plan

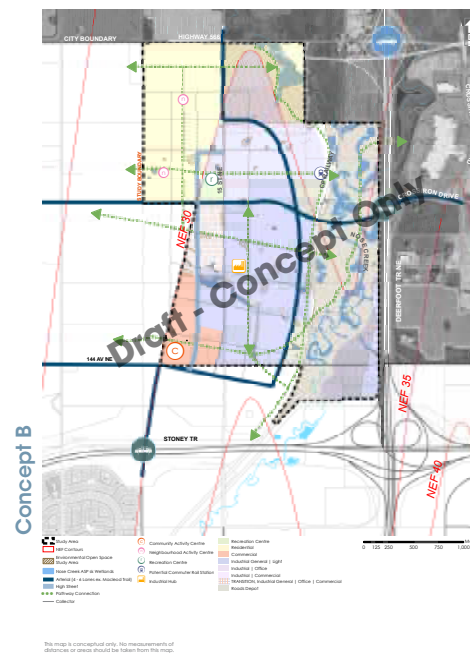
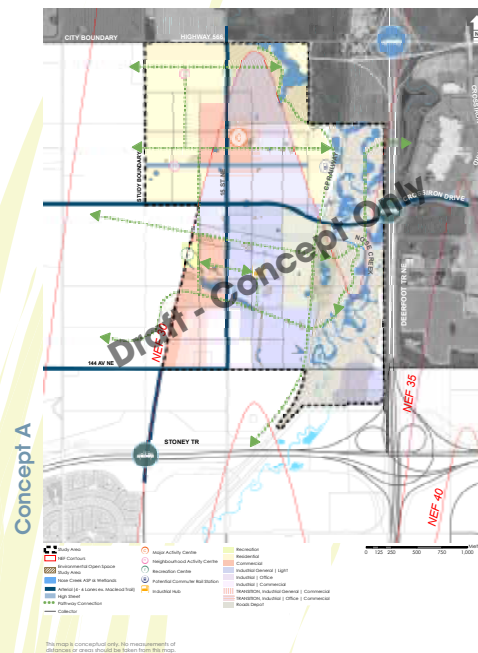


5. OPEN HOUSE LAND USE CONCEPT SELECTION

Nose Creek area structure plan

network & connectivity

Which connectivity concept best exemplifies the goals of a healthy community?



Related healthy community planning principles:

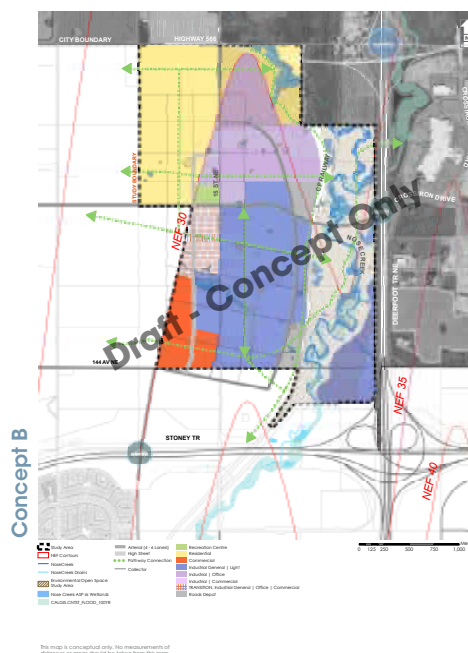
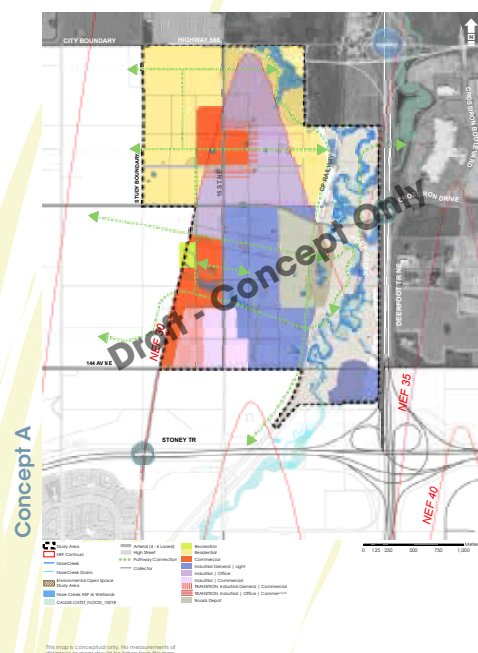
- 1 Put People First:** integrate health into planning and design
consider health impacts
- 2 Encourage Physical Activity:** co-locate activities and design for flexibility
- 3 Recognize the Economic Value:** existing desire for more walkable, mixed-use, transit-rich communities
- 6 Make Healthy Choices Easy:** sidewalk design, bikeways, refuge, accessibility
- 9 Embrace Unique Character:** integrate natural systems into the community

Onward/ We will continue to foster distinctive, complete communities with a strong sense of place.

Nose Creek area structure plan

land use

Which land use concept best exemplifies the goals of a healthy community?



Related healthy community planning principles:

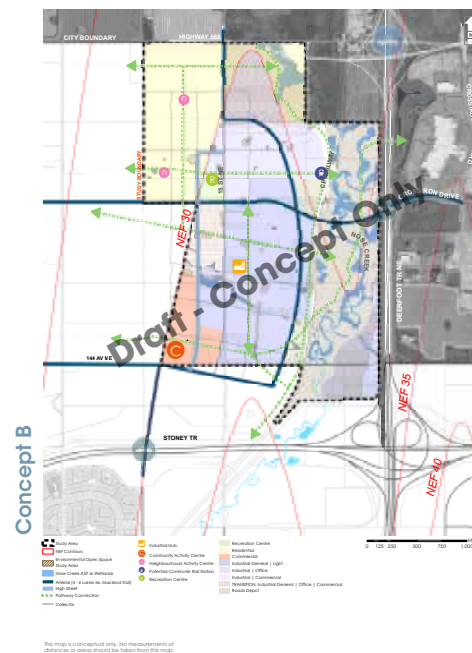
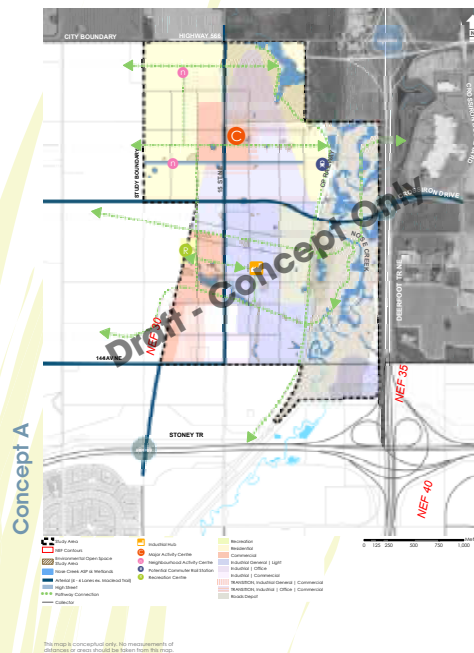
- 1 **Put People First:** integrate health into planning and design consider health impacts
- 2 **Encourage Physical Activity:** co-locate activities and design for flexibility
- 4 **Empower Champions for Health:** community engagement through a shared vision of a healthy community
- 5 **Make Healthy Choices Easy:** sidewalk design, bikeways, refuge, accessibility
- 7 **Ensure Equitable Access:** provide access to services and amenities, schools and the quality of experience travelling to school
- 8 **Mix it Up:** provide a variety of land uses, building types and public spaces to improve physical and social activity
- 10 **Promote Access to Healthy food:** access to grocers and other forms of healthy foods including community gardens and orchards

Onward/ We will continue to foster distinctive, complete communities with a strong sense of place.

Nose Creek area structure plan

features & activities

Which features concept best exemplifies the goals of a healthy community?



Related healthy community planning principles:

- 1 **Put People First:** integrate health into planning and design consider health impacts
- 2 **Encourage Physical Activity:** co-locate activities and design for flexibility
- 5 **Energize Shared Spaces:** community assets, re-think public spaces
- 7 **Ensure Equitable Access:** provide access to services and amenities, schools and the quality of experience travelling to school
- 9 **Embrace Unique Character:** integrate natural systems into the community
- 10 **Promote Access to Healthy food:** access to grocers and other forms of healthy foods including community gardens and orchards

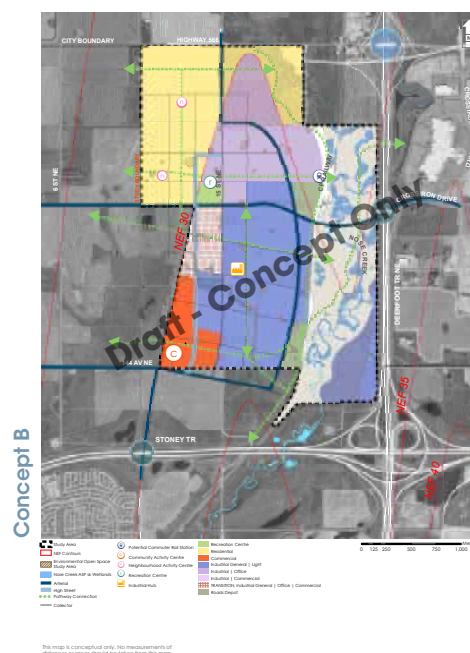
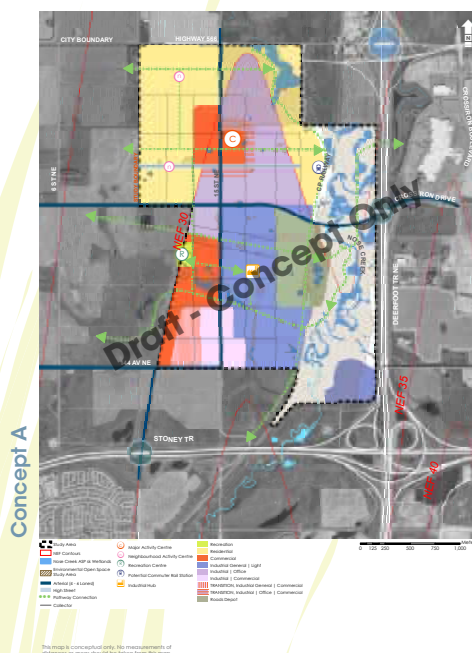
Onward/ We will continue to foster distinctive, complete communities with a strong sense of place.

Nose Creek

area structure plan

general land use

Which overall land use concept best exemplifies the goals of a healthy community?



Principles in planning that can reduce the leading risk factors that are recognized by researchers and industry are:

- 1 Put People First:** integrate health into planning and design consider health impacts
- 2 Encourage Physical Activity:** co-locate activities and design for flexibility
- 3 Recognize the Economic Value:** existing desire for more walkable, mixed-use, transit-rich communities
- 4 Empower Champions for Health:** community engagement through a shared vision of a healthy community
- 5 Energize Shared Spaces:** community assets, re-think public spaces
- 6 Make Healthy Choices Easy:** sidewalk design, bikeways, refuge, accessibility
- 7 Ensure Equitable Access:** provide access to services and amenities, schools and the quality of experience travelling to school
- 8 Mix it Up:** provide a variety of land uses, building types and public spaces to improve physical and social activity
- 9 Embrace Unique Character:** integrate natural systems into the community
- 10 Promote Access to Healthy food:** access to grocers and other forms of healthy foods including community gardens and orchards

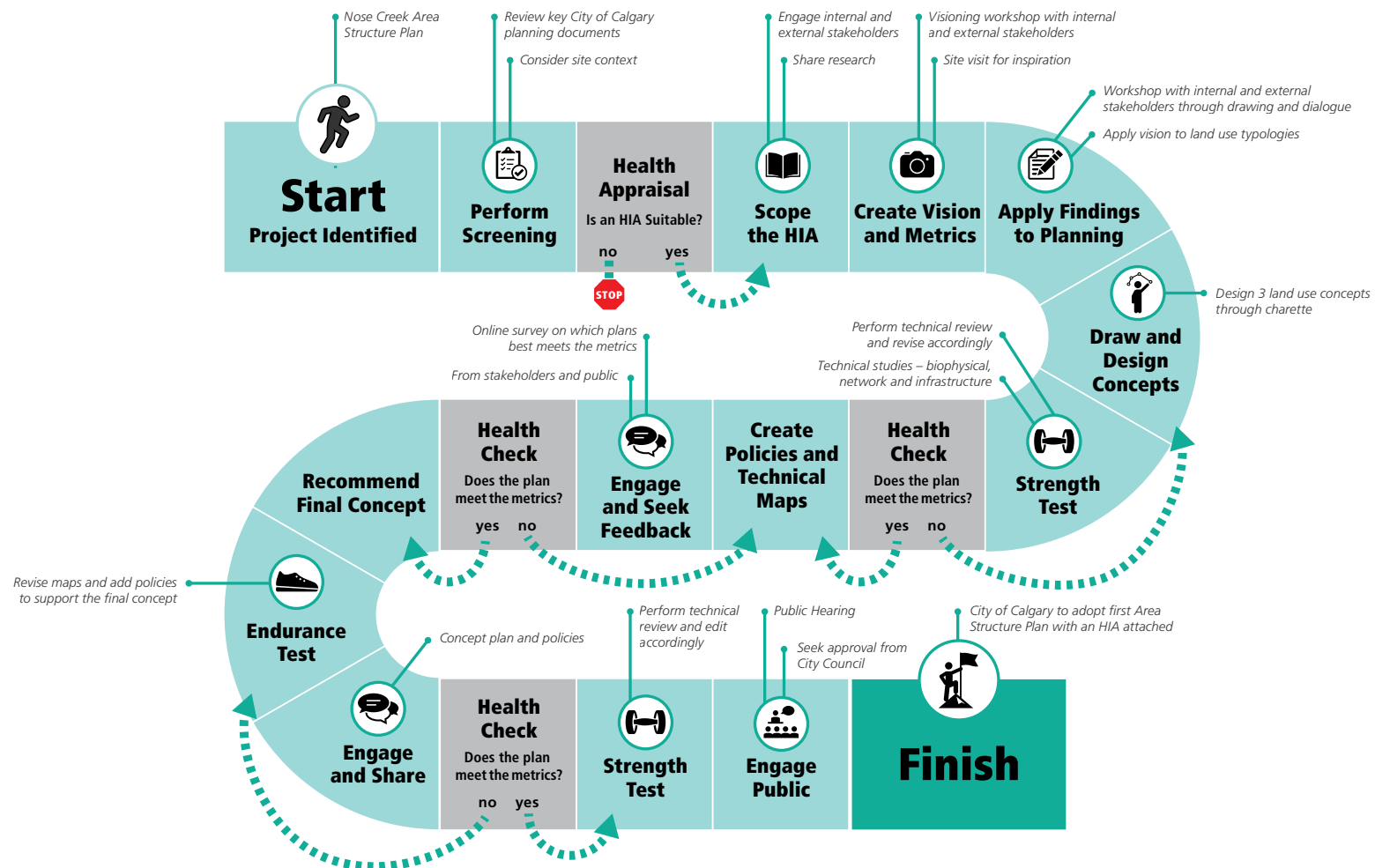
Onward/ We will continue to foster distinctive, complete communities with a strong sense of place.

APPENDIX 2: HIA METHODS

As described in the main body of this report, the main steps of HIA are: screening, scoping, assessment, reporting and evaluation/monitoring. In this case, the HIA steps were integrated into the larger process of the development of the ASP.

The figure below shows the full suite of steps that were taken in the Nose Creek ASP process, including both those steps that happened within the HIA and those that happened outside the HIA. In total, this figure describes the route that was taken from concept to completion to ensure that the Nose Creek area plan:

- Took into account the values of stakeholders
- Fit in with the City's vision for a healthy community
- Met regulatory requirements



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Appendices

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APPENDIX C: JOINT USE SITE REQUIREMENTS

The purpose of the Joint Use Site (JUS) guidelines is to address the type of JUS, school jurisdiction and size of the JUS, as shown on **Map 3: Land Use Concept**.

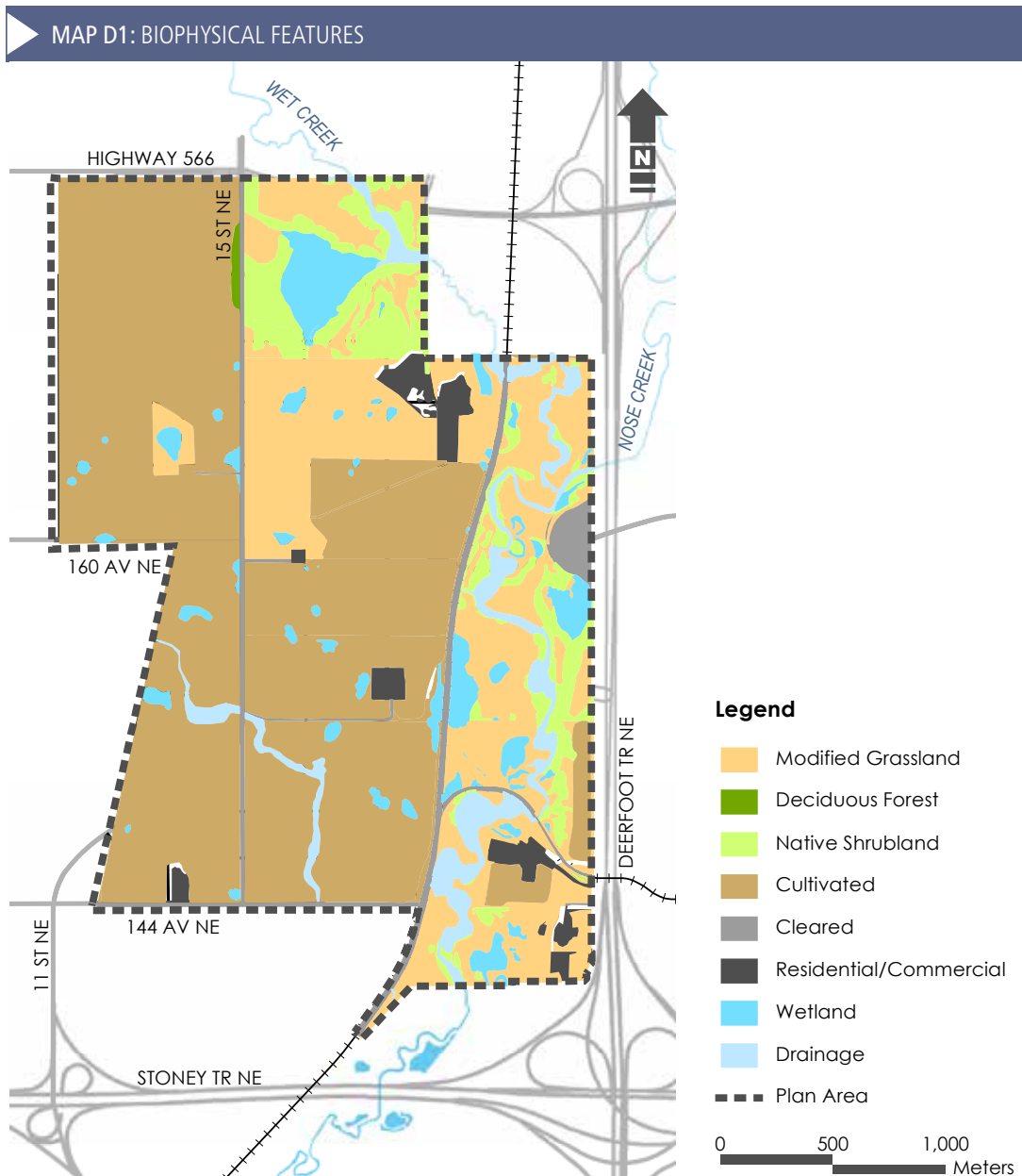
The JUS requirements for the Plan Area are identified in **Figure B1: Joint Use Site Requirements** and shown on **Map 3: Land Use Concept**. **Figure B1** is provided for reference purposes; the exact type of school, school board jurisdiction and size of the JUS will be determined at the Outline Plan/ Land Use Amendment stage by the Joint Use Coordinating Committee.

FIGURE C1: JOINT USE SITE REQUIREMENTS		
School Type	School Board	Size
Elementary	Calgary Board of Education	4 ha (10 ac)
Elementary	Calgary Catholic School District	4 ha (10 ac)

APPENDIX D: BIOPHYSICAL BACKGROUND INFORMATION

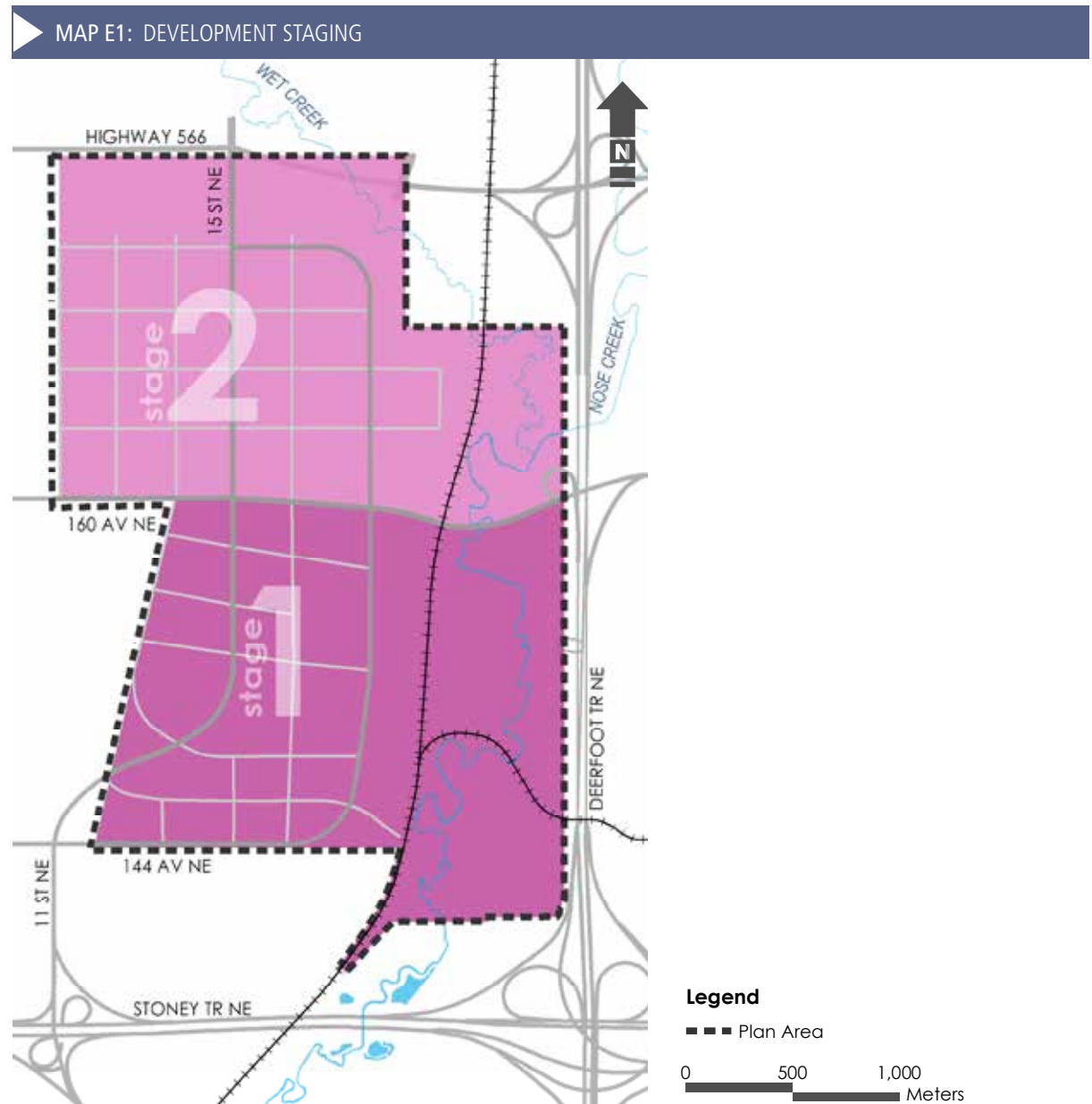
The following important biophysical resources have been identified in the Plan Area (Stantec Consulting Ltd. 2015) and are shown in **Map D1: Biophysical Features**:

- Nose Creek River Valley, including escarpments and coulees;
- drainages (intermittent, small permanent [perennial], large permanent);
- wetlands (Class II-III);
- native grassland primarily associated with escarpments, coulees and drainages;
- native shrubland primarily associated with escarpments, coulees and drainages;
- provincially listed rare plants: few-flowered aster, western blue flag, yellow cress, firedot lichen, rim-lichen, hairy-leaved beardless moss, speck lichen and sunburst lichen; and
- wildlife species of management concern: great blue heron, Swainson's hawk, northern pintail, American white pelican, northern harrier, western wood-pewee, least flycatcher, bank swallow, Sprague's pipit, grasshopper sparrow and American badger



APPENDIX E: DEVELOPMENT STAGING

Development of the Plan Area should follow the alignment and timing of the proposed water, sanitary and stormwater services. Once fire coverage and proposed water, sanitary and stormwater services, and transportation infrastructure solutions are accepted, development could follow in two stages, beginning from the southern portion of the Plan Area and travelling north (see Map E1: Development Staging).



APPENDIX F: ENGAGEMENT SUMMARY

The engagement process is summarized in Figure E1: Engagement Summary and was a key component of the ASP process. A detailed engagement report is also available as part of the Calgary Planning Commission Report and can also be found on the project website. In summary here are the stats from the engagement process:

- Workshops = 12
- Group External stakeholder meetings = 3
- Individual external stakeholder meetings = 14
- Land owner meetings = 39
- Open Houses held = 2 (108 ppl)
- Newsletter emailed = 128
- Online feedback forms = 19

FIGURE F1: ENGAGEMENT TIMELINE

