McKEE NEIGHBOURHOOD PLAN

2023

ABBOTSFORD

HOW TO USE THIS PLAN

The McKee Neighbourhood Plan has been created to comprehensively facilitate the development process in the neighbourhood. It is intended to be used by everyone who is interested in the growth and development of this neighbourhood within the City of Abbotsford. The Plan has been organized to allow the user to easily find information most pertinent to their interest, or to sequentially read the entire document.

CITY COUNCIL should use this plan to guide decision-making for the neighbourhood.

NEIGHBOURHOOD RESIDENTS AND BUSINESSES should use this plan to understand the long-term vision for McKee, and to gain an understanding of how the neighbourhood will change over the coming years.

DEVELOPERS should use this plan to determine the phasing, allowable uses, building form and densities in order to understand where and what type and scale of development may occur within the neighbourhood. The Plan also provides an understanding of the public realm, and the developer's role in its creation through the funding and installation of infrastructure.

CITY STAFF should use this plan with a lens to each department's responsibilities:

PLANNING should use the plan to guide form and density through zoning, public space integration; and, character and urban design.

ENGINEERING should use the plan to guide utility servicing, road construction, and related street infrastructure and upgrades.

PARKS, RECREATION, AND CULTURE should use this plan to guide park, trail, recreation, culture, and amenity space creation, and required upgrades to the public realm.

HOUSING should use this plan to guide housing policy and project development.

FIRE RESCUE SERVICE should use this plan to guide fire hall planning and wildfire prevention in this forested area.

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MCKEE NEIGHBOURHOOD VISION

CONTEXT AND EXISTING CONDITIONS

History

Long before Abbotsford existed as a community and Canada as a country, the Stó:lō (people of the river) occupied the land called S'ólh Téméxw in the Fraser Valley. They lived in this large geographic area from Yale to Vancouver and spoke Halq'eméylem, also known as the upriver dialect. The Fraser River, its tributaries and fertile lands continue to be essential to the Stó:lō way of life. While Abbotsford may be a young city, the land on which it is built is steeped in history, including Sumas Mountain and McKee Peak.

Context

The McKee neighbourhood is located in the largely undeveloped, mountainous northeastern corner of Abbotsford, identified in the Official Community Plan as the New Neighbourhoods. Approximately 842 hectares in size (2,080 acres), this area covers a lot of topography, and for those who frequent this area they know of its natural beauty and spectacular views in all directions. The rugged forested terrain is traversed by numerous streams, which provide habitat for a number of species of wildlife. Many of these species reside locally within the plan boundary, while others migrate through the area moving further up into the reaches of Sumas Mountain. For Local First Nations, this area is a place of deep cultural and spiritual significance, and preservation of key features of the landscape is of utmost importance.

2016 OCP

The 2016 Official Community Plan envisions Abbotsford as a city of distinct and increasingly complete neighbourhoods rich with public life. The City's cherished trails and natural areas are protected for generations to come, and the quality of our air, water and parks improve each year. It envisions Abbotsford with more affordable housing options, where people can stay in their neighbourhood as they age.

The New Neighbourhoods were introduced in the OCP to facilitate phased development that would ensure details relating to infrastructure, environment, and land uses can be coordinated and implemented in a cost efficient manner. The McKee Neighbourhood Plan is the neighbourhood planning process that will help transform the New Neighbourhoods area into a complete community with a vibrant neighbourhood that is integrated into the natural mountainous landscape.

McKee Neighbourhood Plan

Drawing the boundary for the McKee Neighbourhood Plan area took into consideration natural features such as topography, drainage catchments, watercourses, and man-made features such as Whatcom and Sumas Mountain Roads. The northern and eastern borders are framed by the Urban Development boundary and flanking the eastern border of the plan are existing gravel quarries and an oil terminal. The plan area is approximately 769 hectares in size or 1901 acres. The plan boundary differs from the New Neighbourhoods area, in that the western portion of the Vicarro Lands (west of Whatcom Road) have been excluded from the plan area, and City owned lands south of Straiton Road within the Clayburn Creek ravine have been included. The western section of the Vicarro lands are geographically separated from McKee Peak, and their drainage catchment and Whatcom Road physically reinforce this divide. These lands are an extension of Eagle Mountain. On the other hand, the portion of Clayburn Creek ravine forms an integral component of the greater drainage for all of the lands in between Clayburn Creek and McKee Road, and is topographically connected.

McKee Today

Population and Demographics

The current population living within the McKee Neighbourhood plan boundary is approximately 4,600 people. This is predominantly comprised of residents living within the Auguston and Highlands neighbourhoods. The population is housed within 1,193 dwelling units (including registered suites), and the average household size is comprised of 3.3 persons per dwelling unit. Housing stock within the plan boundary is relatively new, as 87 percent of the dwellings are built in the last approximate decade and a half (2000 to 2016). The remaining 13 percent of the dwellings were constructed from a period spanning 1980 to 2000. Median age for the area is relatively younger than the rest of the city. In Abbotsford the median age is 39 years old, while currently within the McKee NP, the median age is roughly 35 years old.

Total median household income is relatively high within the plan area compared with the rest of the City. The total median household income within the McKee NP is $122,400, while the total median household income for the entire City is $72,500.

Schools, Parks and Trails

Within the plan area there is one existing elementary school. Auguston Traditional Elementary School provides elementary age children within the Auguston area with educational services, while Middle and Secondary age students travel outside of the McKee area to Clayburn Middle School and Robert Bateman Secondary School.

Currently there are six neighbourhood parks within the area. A portion of Lower Sumas Mountain Park is also found within the plan boundary. The six neighbourhood parks are as follows:

- Atwood Park
- Callaghan Park
- Mathers Park
- McKinley Park
- Shadbolt Park
- Tom Thomson Park

There are a few City trails located within the plan area, and they are mostly located within the Clayburn Creek Ravine. Many informal trails are also found on McKee Peak and are used extensively. During Stage 2, City staff conducted a technical analysis to understand what areas within the plan could be used for trails. Many of the areas examined coincide with areas that currently have informal trails in place.

PURPOSE AND SCOPE

Official Community Plan

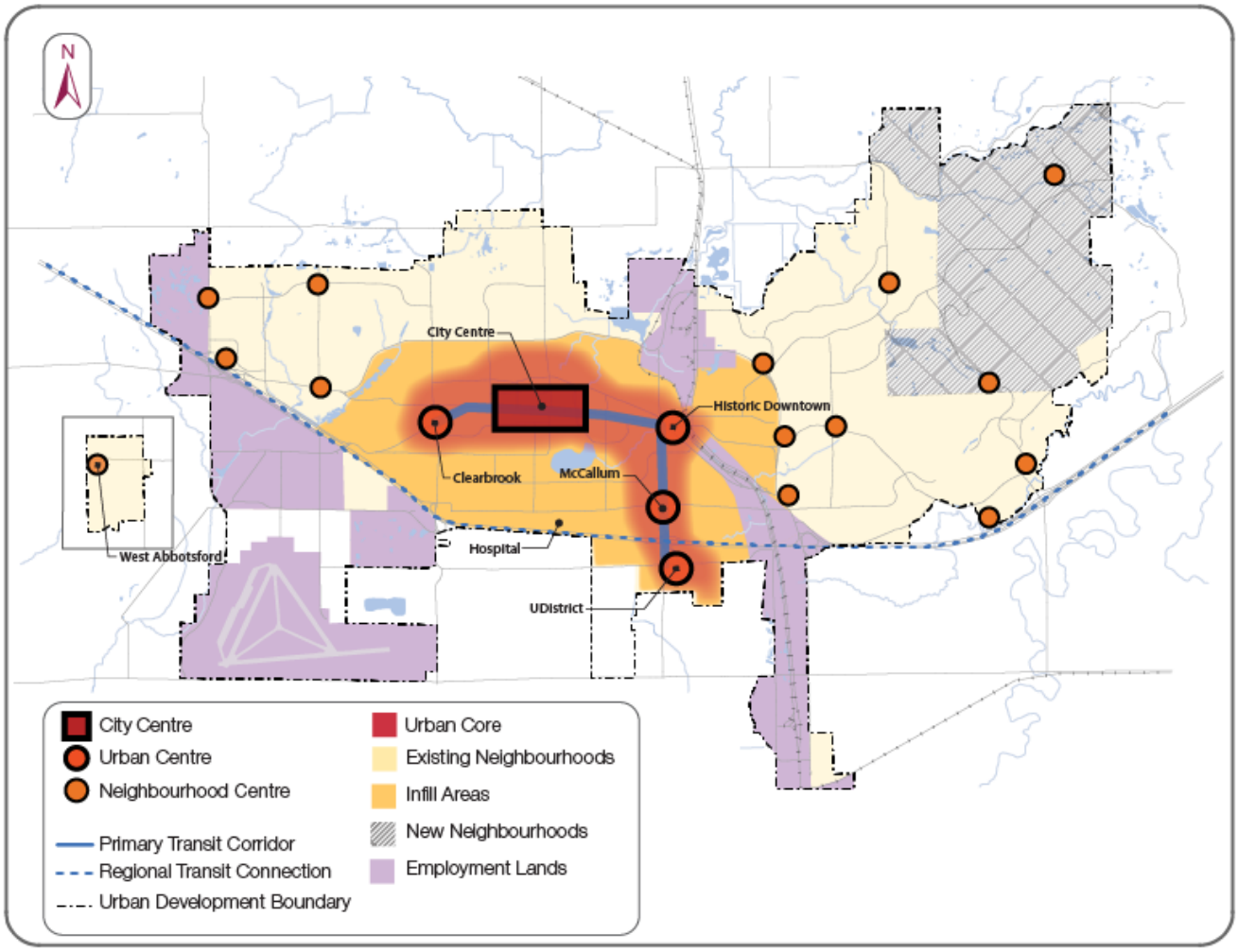
In 2016, the City of Abbotsford Council adopted a new and progressive Official Community Plan (OCP) through a process called 'Abbotsforward'. The new OCP paints a picture of what Abbotsford will be like at 200,000 residents. The Plan reflects a turning point for the City as it aims to implement change in the face of significant challenges and tough choices.

The 2016 OCP identifies seven big ideas that shape policy and comprise the most essential and transformative directions that aim to bring the vision of Abbotsford to life. The Seven big ideas are as follows:

Figure 1. Seven Big Ideas – 2016 OCP

Urban Structure and Growth Plan

The OCP provides clear guidelines about how and where the City will grow in coming years. Abbotsford's urban structure is defined by a hierarchy of mixed-use centres which are connected by a primary transit corridor that intensifies over time. Most of the future growth within the city will occur within existing neighbourhoods (75%), while the remaining 25% will occur within the New Neighbourhoods area (see Map 1). Within the life of the OCP the City is anticipated to add another 60,000 people, and this equates to approximately 15,000 new residents locating within the New Neighbourhoods.



Map 1. Urban Structure

PLAN PROCESS

Figure 2. Four-Stage Planning Process

Stage 1 analyzed current conditions in the neighbourhood to better understand the necessary tools and priorities to create vibrant new neighbourhoods within the McKee Neighbourhood Plan. The Background Research Report was presented to Council on July 20, 2020.

Stage 2 focused on exploring options and preparing a Concept. This was done through a broad engagement process framed by the planning issues and feedback identified in Stage 1. It also included a preliminary technical analysis of infrastructure needs. The Concept Report was presented to Council on February 7, 2022.

Stage 3 focused on preparing the first draft of the McKee Neighbourhood Plan using findings from Stages 1 and 2. It included a technical analysis of infrastructure needs as well as a complete Transportation Impact Assessment. Following a presentation to Council introducing the draft plan on May 9, 2022, this stage will conclude after draft plan engagement has been undertaken by staff.

Stage 4 is the final stage of the McKee Neighbourhood Plan process. During this stage, a Neighbourhood Plan bylaw was presented to Council and underwent a bylaw adoption process, which included referrals to appropriate government entities and a public hearing.

Community Engagement

Important engagement activities over the course of the McKee NP process for residents were held during stage 2, and substantial engagement will occur during Stage 3 after the draft plan is presented to Council. Throughout all of the stages, one-on-one meetings with property owners, local organizations, and the development community will ensure stakeholders are given the opportunity to contribute in a meaningful way to the McKee NP.

Stage 2 engagement consisted primarily of online engagement through Let's Talk Abbotsford. Residents were given the opportunity to participate in a Q & A, a questionnaire, and an interactive mapping exercise. These responses informed the direction of the Concept Report.

Figure 3. In-person Design Workshop

Additionally, there were landowner meetings to discuss the preliminary

infrastructure and proposed land uses. In October 2021, an in-person design workshop was held to learn more about stakeholder's vision for the neighbourhood and incorporate ideas into the Concept Report.

Stage 3 engagement included a Let's Talk Abbotsford Q & A, landowner and stakeholder meetings. Landowners were able to provide feedback on the Concept Report. Trail user groups and environmental organizations also contributed to conversations concerning their priorities for the Draft Plan. First Nations input has also informed the draft plan.

After presenting the draft McKee Neighbourhood Plan to Council, staff introduced the document to the broader community and key stakeholders. The Let's Talk Abbotsford online platform and a few open houses held within the plan area allowed residents to interact with the draft Neighbourhood Plan and provide feedback. Meetings with key stakeholders such as property owners and community groups also took place.

Stage 4 is the final stage of the planning process and engagement took the form of referrals being sent to the appropriate government entities. Additionally, a public hearing was held to hear any concerns from the public.

Plan Objectives

The following objectives have been established to guide the McKee Neighbourhood Plan over its four-stage process. These objectives inform the Neighbourhood Plan process, and the Plan goals.

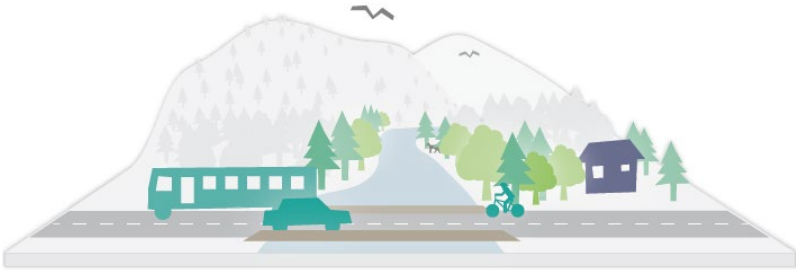
- Undertake a targeted & inclusive community engagement process.
- Integrate the Neighbourhood Plan with a servicing strategy which includes orderly phasing of development.
- Add detail to the OCP's land uses to support a range of predominantly ground oriented housing options which complement the rugged topography.
- Develop design standards and guidelines that contribute to an attractive and unique Neighbourhood Centre which integrates with the mountainous landscape.
- Provide adequate school sites within the plan area to allow School District 34 the ability to meet the educational needs of future students.
- Develop an integrated and connected park and trail network which encourages walking, and both on and off road cycling as viable transportation modes, while maintaining the natural ambience of the mountain environment.
- Protect important cultural heritage sites by discouraging public access and locating trails away from important sites.
- Ensure protection of environmental features, ecosystems and biological diversity, and provide species at risk the ability to migrate safely through the neighbourhoods into the greater Sumas Mountain area.

Plan Goals

These goals provide the building blocks of the vision and the objectives, forming the foundation of the McKee Neighbourhood Plan. Together, these goals work together to inform the policies of this plan, to guide the neighbourhood as it grows and develops.

Enhance Outdoor Recreation:
Design a neighbourhood that will enhance the existing outdoor recreation network on the mountain. This includes determining the land available for outdoor recreation, exploring opportunities for partnerships, and encouraging the McKee Village to cater to outdoor recreation needs.

Work with the Land:
Create policy that will protect the natural environment, respect the mountain's topography, and ensure that the McKee Village is human-scaled.

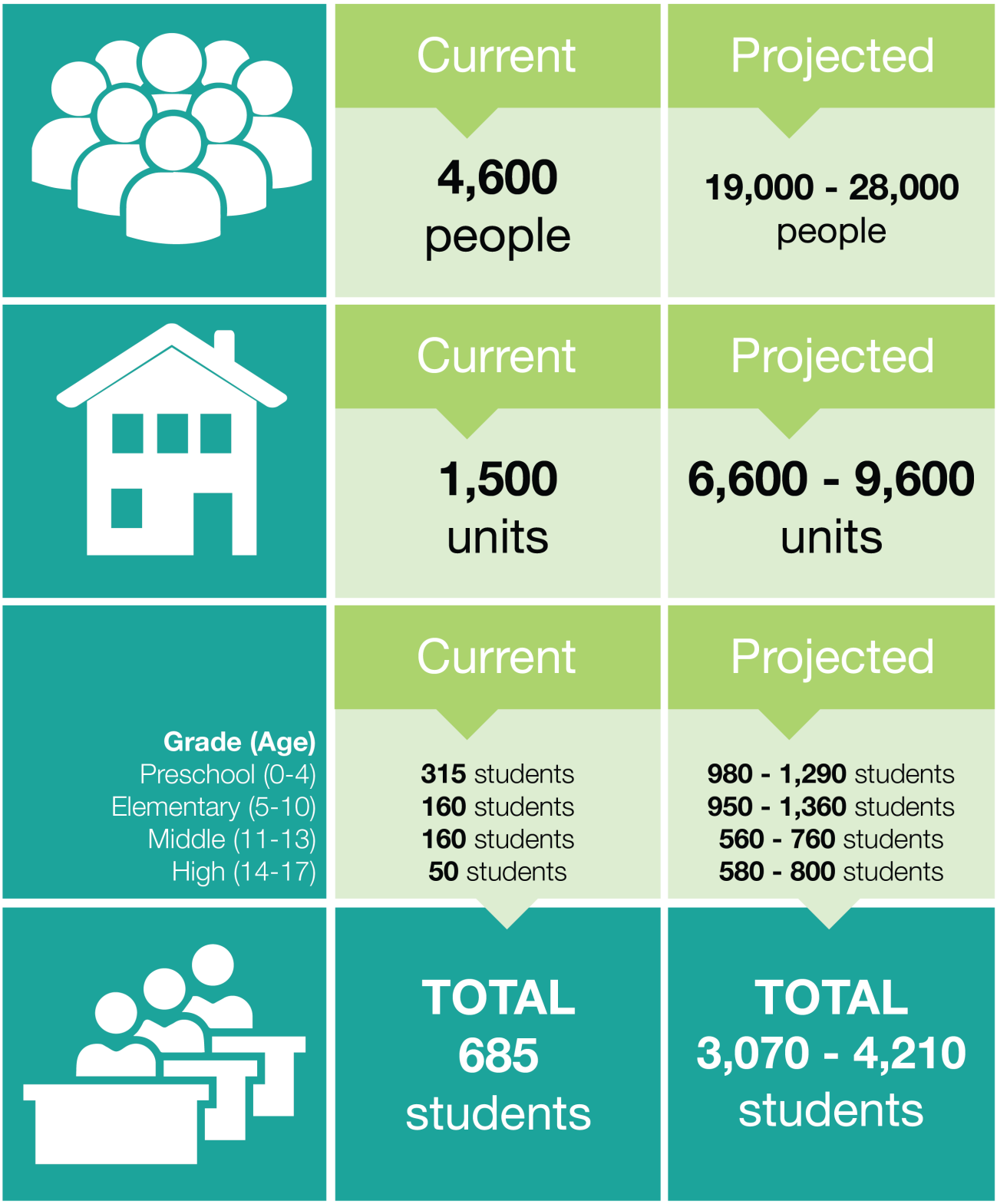


Finding a Balance:
There is space for homes, shops, trails, and natural areas in the McKee neighbourhood. This plan should find a balance between these diverse needs.

Adaptive Neighbourhoods:
Creativity will be needed to design a neighbourhood with homes, schools, parks, trails, and commercial areas on a mountain. Challenges unique to McKee will require unique solutions and adaptability.

Figure 4. Plan Goals

Projections



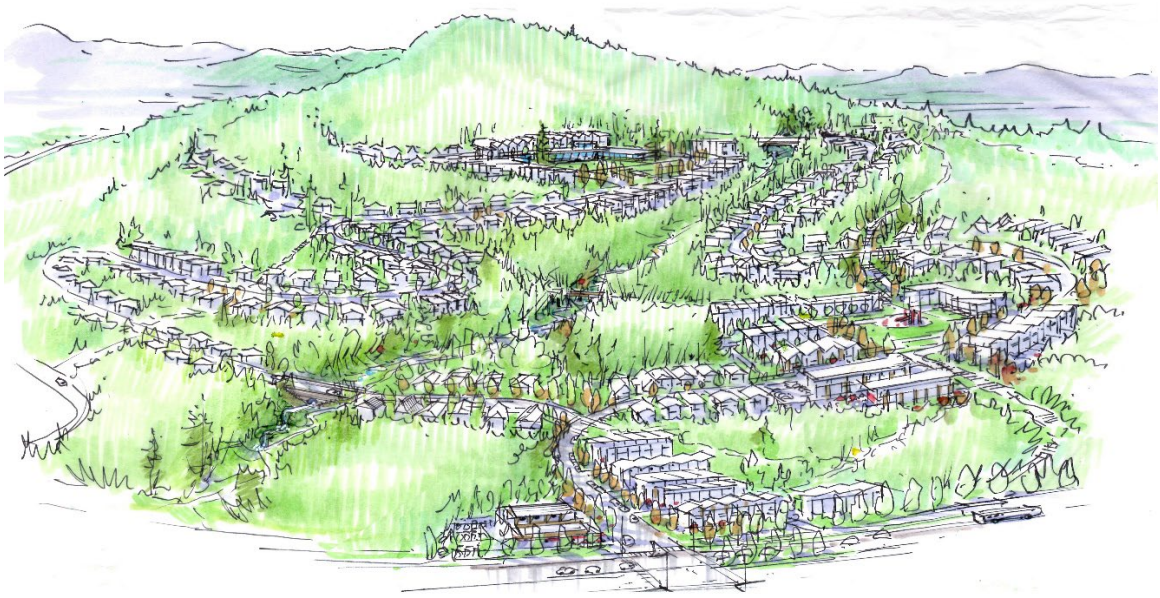
Statistics Canada data - Abbotsford 2016

Figure 5. Population Projections

MCKEE NEIGHBOURHOOD VISION

The McKee neighbourhood is the outdoor adventure hub in Abbotsford, where a mindful balance unifies the diverse interests in this land. Neighbourhoods are seamlessly integrated into the mountain, which continues to be a place of deep cultural and spiritual significance to local First Nations. Trails meander between forests and streams, protecting the environment and offering ways to connect with the land and enjoy the vast outdoor recreation opportunities. Residents and visitors will emerge from the forest on foot or bike into the McKee Village to meet up with friends, shop for daily needs, and experience a vibrant village-like setting that celebrates the mountainous landscape.

Figure 6. Concept Renderings – McKee Neighbourhood Vision



Note: drawings are conceptual and for illustrative purposes only.

PART 2 LAND USE

NEIGHBOURHOOD STRUCTURE

LAND USE DESIGNATIONS

NEIGHBOURHOOD STRUCTURE

Land Use

The neighbourhood structure (Map 2) is comprised of a residential neighbourhood branching off from McKee and Whatcom Roads. Residential development, including land for schools and parks, will be focused in the identified development cells. Density will be concentrated near school and park sites for accessibility and usability. Land that cannot be developed will be transferred to the City and designated as Open Space to be used for a green network through the plan area.

The heart of the new neighbourhood will be the McKee Village, south of McKee Road across from Blauson Boulevard. The McKee Village will be comprised of buildings up to 6-storeys in height that complement the outdoor recreation theme and the mountainous terrain. Residents will be able to meet their daily commercial needs in the McKee Village, while also experiencing a unique outdoor recreation focused public space that is accessible by diverse forms of transportation.

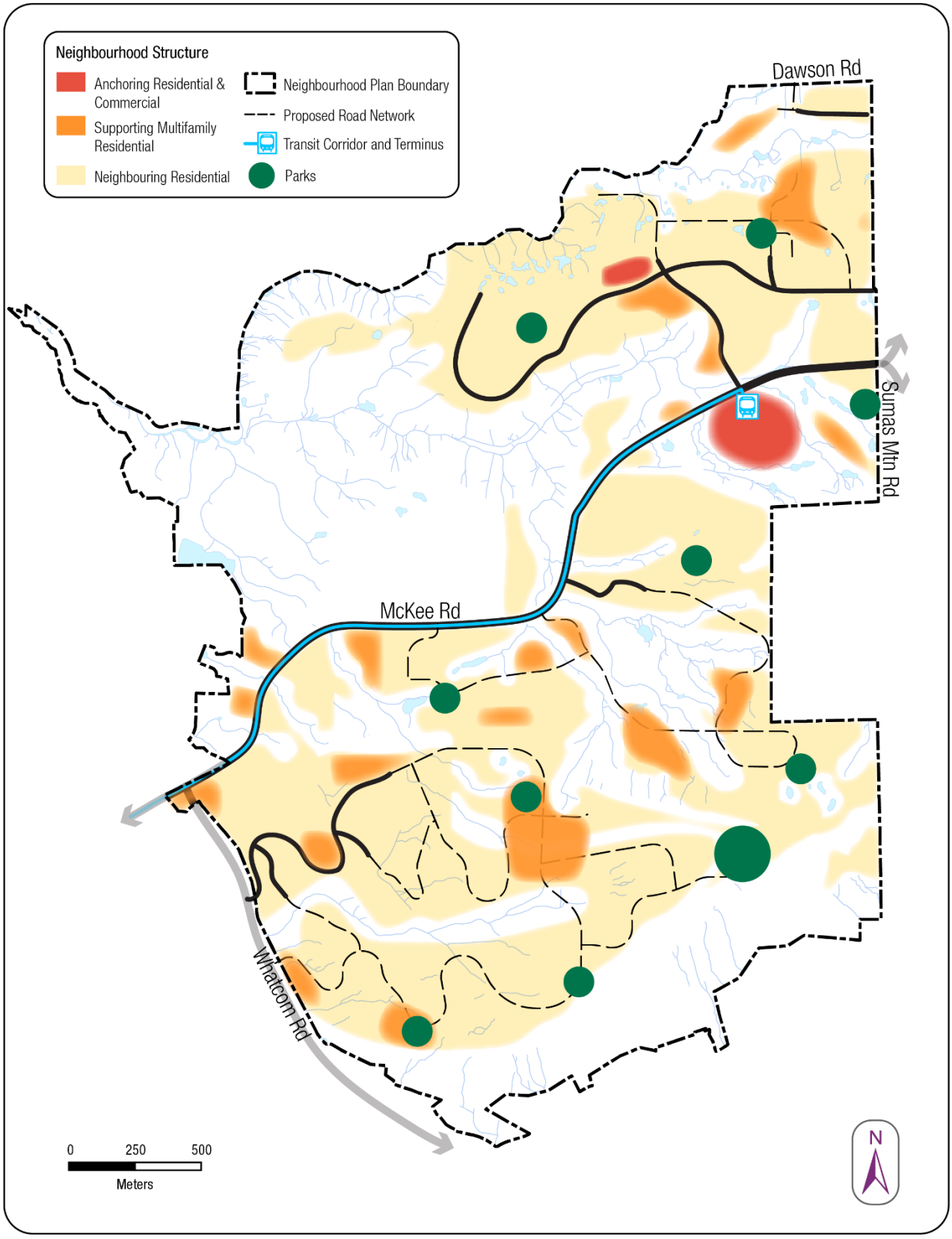
A proposed location for a future fire hall site has been identified in anticipation of the residential growth of the neighbourhood. This location was identified in alignment with the Fire Rescue Services Master Plan.

Mobility

Transportation in McKee will be accommodated for private vehicles, public transportation, and on and off road pedestrians and cyclists. The McKee Village will host the new transit terminus, to provide convenience for the most residents in this mountainous environment. Streets will be designed to accommodate grade changes and winding roads to create a safe environment for everyone on the mountain. Where roads cannot link key neighbourhood destinations due to challenging mountainous topography, the trail network will provide connections for pedestrians and cyclists as a safe and convenient way to get around.

Open Space

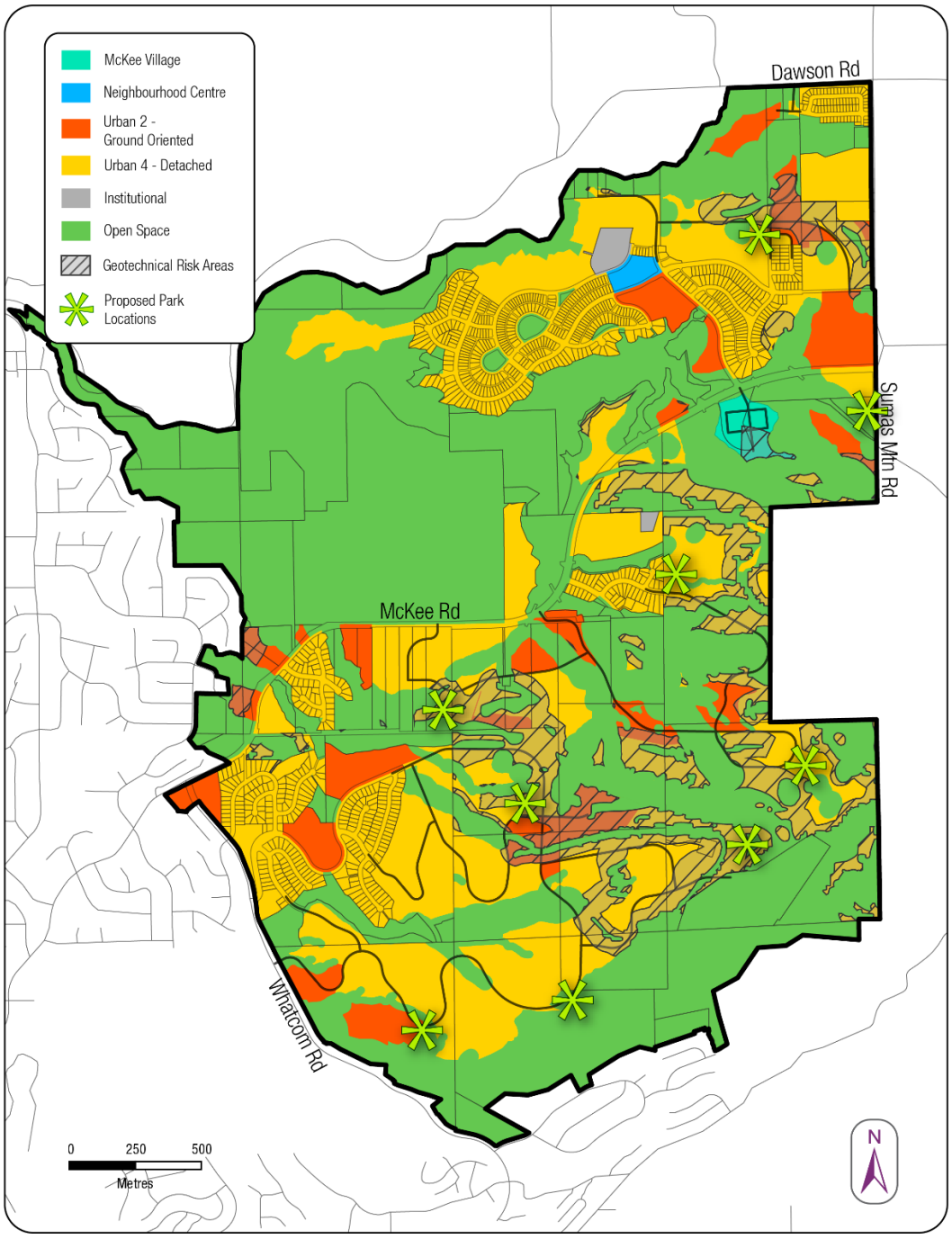
The Open Space network is the highlight of the neighbourhood, comprised of environmentally sensitive areas, geotechnical risk areas, and parkland. This network will be a space for wildlife to thrive, hikers and mountain bikers to explore, and for natural vegetation to be protected. It is intended to function as a corridor to connect key destinations in the neighbourhood, while providing a mountain experience for residents and visitors alike.



Map 2. Neighbourhood Structure

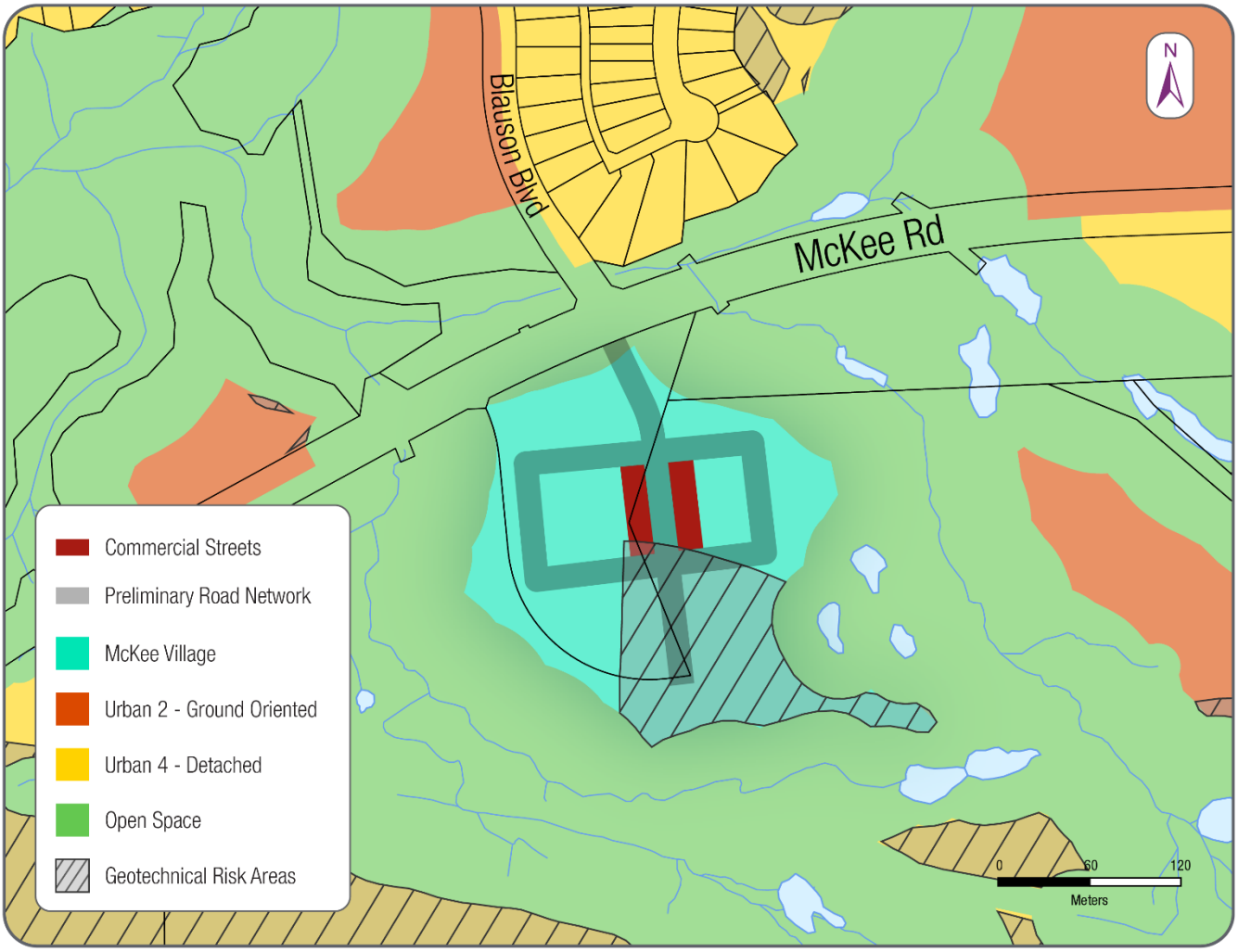
LAND USE DESIGNATIONS

The land use designations in the McKee Neighbourhood Plan include both Parcel and Commercial Street designations shown on Map 3, and described in the following table. These designations supersede the land uses found in the Official Community Plan.



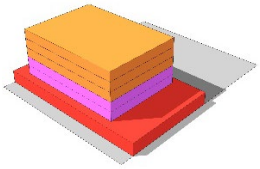
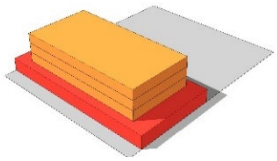
Map 3. Land Use Plan

Parcel designations establish the use and density of each parcel shown in Map 3. Commercial Street designations require certain uses along the building edges that support ground floor activity for the streets shown in Map 4.

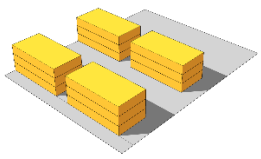


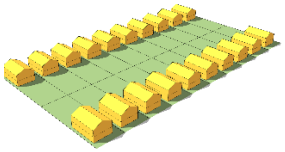
Map 4. Commercial Streets

MCKEE VILLAGE & NEIGHBOURHOOD CENTRE

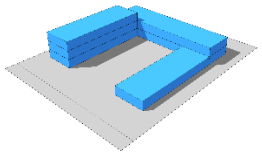
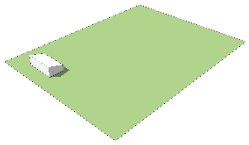
Designation	Purpose and Designation	Building Type and Height	Uses	Density (min and max)
McKee Village 	Enable a mix of uses that creates the primary hub of activity in the McKee neighbourhood. Integrating the outdoor recreation opportunities of the mountain with commercial and residential uses in the village	Mixed Use Buildings Heights are a maximum of 6 storeys	Mixed use (residential and commercial) Multi unit residential Commercial	1.0 to 2.0 FSR
Neighbourhood Centre 	Per the Official Community Plan	Single or multi storey buildings including low rises. Heights are limited to 4 storeys	Per the Official Community Plan	Per the Official Community Plan
Commercial Street - Required	Require active ground floor commercial uses along a key street certain streets to ensure buildings contribute to a vibrant street environment. This area will provide an interface between outdoor recreation and supportive commercial amenities	Per the accompanying designation	The ground floor must be active commercial uses with individual access to the street	Per the accompanying designation

RESIDENTIAL

Designation	Purpose and Designation	Building Type and Height	Uses	Density (min and max)
Urban 2 – Ground Oriented 	Enable multifamily housing to support development in challenging topography and to encourage increased density in proximity to essential services and recreation	Ground oriented multiplex, duplex, row and townhouses. Heights are limited to 3 storeys Large sites (1 ha or greater) will **not** be permitted apartment buildings	Per the Official Community Plan	Per the Official Community Plan

Urban 4 – Detached 	Per the Official Community Plan	Per the Official Community Plan	Per the Official Community Plan	Per the Official Community Plan

SUPPORTING LANDS

Designation	Purpose and Designation	Building Type and Height	Uses	Density (min and max)
Institutional 	Per the Official Community Plan	Per the Official Community Plan	Per the Official Community Plan	Per the Official Community Plan
Open Space 	Active and passive parks, mountain biking and hiking trails, fields, recreation facilities Preserved natural areas, steep slopes, sensitive habitat, streams (by land trust, covenant, or zoning)	Per the Official Community Plan	Per the Official Community Plan	Per the Official Community Plan
Geotechnical Risk Area 	Land identified as geotechnical risk areas Enable the underlying land use designation where land is suitable for development Enable Open Space land use designation where land is not suitable for development, or the slope of the land is greater than 40%	Per the underlying land use designation in accordance with recommendations from supporting geotechnical report	Per the underlying land use designation	Per the underlying land use designation

Proposed Park Locations

Asterisks demarcate proposed park locations. The ultimate locations of the proposed park sites will be determined at the time of development. This will allow parks to seamlessly integrate into proposed development. If a proposed park location is adjusted, the underlying designation will apply.

Geotechnical Risk Area

The Geotechnical Risk Area overlay is made up of areas identified in Stage 1 as being either geotechnical risk, or potentially unstable areas in the plan area. They are slopes greater than 30%, near environmentally sensitive areas, and are generally unsuitable for development.

At the time of development, an applicant will be required to submit a geotechnical report in support of development on these lands. If the City is in agreement with the findings of the report, development may be permitted in these areas.

Notwithstanding the results of any geotechnical report, where land within the Geotechnical Risk Area overlay is over a 40% slope the land is not eligible for development, and is not part of the net land area for the purpose of calculating density.

If an application is submitted for a parcel containing geotechnical risk area, and there is not support for development on these lands, or the slope of the land is greater than 40%, the applicant will transfer these lands to the City. The City will designate these lands as Open Space, and they can be used to form the trail network or protected as a natural environment area to be used by wildlife and species at risk. An OCP amendment will not be required to accommodate Open Space.

The City will acquire all contiguous areas of Open Space that will provide value to the Open Space network. Areas of Open Space will be transferred to the City through measures such as dedication, establishing a restrictive covenant, or rezoning to the satisfaction of the City. At the City's discretion, small isolated pockets of land containing geotechnical risk, or where the slope of the land is greater than 40% may not be acquired.

Density Calculations

The following policies apply when calculating density for development.

Decimals when determining residential units for hectare will be ignored: 1.1 is rounded down to 1; 1.9 is also rounded down to 1. Decimals when determining floor space ratios are rounded to one decimal place; 0.15 and greater is rounded up to 0.2; and 0.149 and lower is rounded down to 0.1.

Net or Gross

Within the McKee Neighbourhood Plan boundary, density will be determined based on the net land area as shown in Map 3.

Net Land Area

Net land area has been determined through the neighbourhood planning process and has taken into account the following:

- Geotechnical considerations
- Watercourses and riparian areas
- Habitat for species at risk/wildlife
- Archaeological and cultural heritage considerations

For clarity net land area includes:

- Park Land Dedications
- Public Road Dedications
- Land required for public infrastructure

Density is calculated as follows:

NET LAND AREA × LAND USE DESIGNATION DENSITY = TOTAL UNITS OR TOTAL FLOOR AREA

Calculating Slope

At the time of development application, slope will be calculated based on a 15m grid using conditions from the City's 2020 LiDAR data. Development applications may provide an alternate slope analysis, to the satisfaction of the City.

Land Use Designation Areas

At the time of development application, the land use designation area is subject to further analysis. The area can be adjusted to accommodate development relative to the net land area shown on Map 3, with the adjacent land use designation. Any adjusted area will not be considered an Official Community Plan amendment. This will enable land use designation boundaries to be refined from technical studies, such as environmental and geotechnical, without triggering an OCP amendment (to accommodate an increased or decreased setback, for example).

PART 3 POLICIES

MCKEE VILLAGE

RESIDENTIAL

GEOTECHNICAL RISK AREA

SUPPORTING LANDS

ENVIRONMENT

GREEN NETWORK

TRAILS

CULTURE

Policy Framework

The Neighbourhood Plan established a list of objectives to achieve through the planning process. The plan objectives informed the Concept Principles, which ultimately contributed to the creation of the plan policies outlined in this section.

These policies were also shaped by existing policies and plans, technical and related constraints, and community and stakeholder input. Existing City policies and plans (including the OCP), and senior government legislation dictate the direction of the neighbourhood plan. With that direction, technical studies were conducted to inform land use decisions in the plan area. Once these limitations were reviewed, the community and stakeholders provide valuable input and contribute local expertise to the formation of the plan.

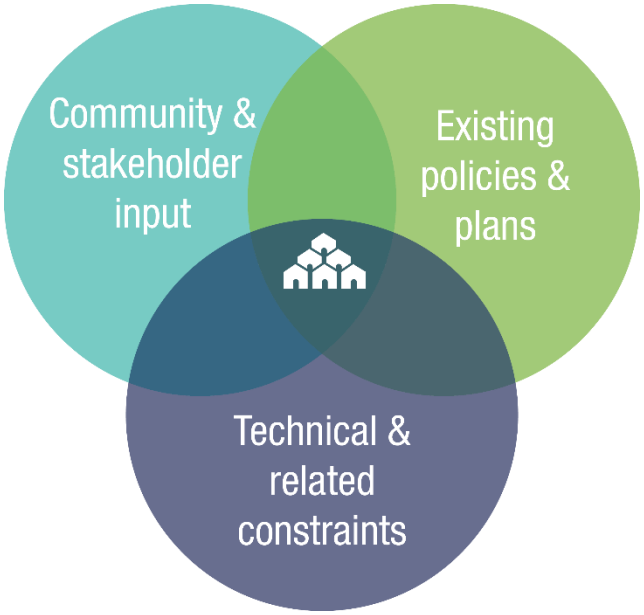


Figure 7. Shaping the Neighbourhood Plan

MCKEE VILLAGE

The McKee Village is intended to enable a mix of multifamily and daily commercial uses that function as a community gathering place and destination. This includes shops, restaurants, cafes and services to serve a neighbourhood. The McKee Village is the gathering place for visitors and residents of the McKee neighbourhood. It will be the adventure hub of Abbotsford, making it a focal point driving recreational tourism and increasing the economic viability of commercial businesses. Buildings will be designed to protect and complement the natural features of the mountainous landscape, with limits to buildings heights and McKee Village design guidelines.

Figure 8. Commercial Street

3.1 Commercial Street

Concentrate retail and commercial businesses on the commercial street in the McKee Village where trails approaching from the mountain converge.

3.2 Outdoor Recreation Services

Encourage outdoor recreation serving businesses on the commercial street of the McKee Village.

3.3 Retail Scale

With the exception of a grocery store, limit commercial rental units to a neighbourhood scale.

3.4 Patios

Promote outdoor patios and other on-street commercial activity to create vibrant streets.

3.5 Building Heights

Keep buildings to a maximum of 6 storeys to maintain views and the mountain-feel of the neighbourhood, while also providing more residential units.

3.6 Development Permit Requirements

Require Development Permit applications to include details of all proposed signage in their drawing submissions to ensure that they are appropriately scaled to a pedestrian retail environment.

3.7 No Drive Thrus

Prohibit drive thrus within the village.

3.8 First Nation Culture

Enable First Nation culture to be represented in the McKee Village, in consultation with local First Nations.

3.9 Housing Variety

Use regulatory tools to enable a diverse mix of housing units and tenures.

3.10 Low-rise Apartment Buildings

Enable low-rise apartment buildings in the McKee Village.

3.11 Street Furniture

Align with the City's Streetscape Standards and Guidelines.

3.12 Underground Parkades Exceeding Ground Level

Enable underground parkades to exceed grade level, with significant landscaping, to accommodate the challenging topography and encourage alternatives to surface parking.

Figure 9. Concept Rendering - McKee Village

RESIDENTIAL

The OCP outlines that 25% of new residential growth in the City will be directed towards the New Neighbourhoods Area, through the McKee Neighbourhood Plan planning process.

The new residential development in McKee will aim to provide a variety of housing options, encouraging a diversity of residents in a range of housing types and tenures. Housing will be most dense near neighbourhood amenities such as parks and schools, and it will be designed to complement the mountainous terrain.

Figure 10. Concept Rendering - Residential Development

3.13 Variety of Ground Oriented Housing Options

Enable a variety of ground oriented housing options, including townhouses and single detached houses, in the residential areas of the neighbourhood.

3.14 Mix of Lots

Enable a mix of lot types and sizes to accommodate diverse housing options in the neighbourhood that accommodate the steep mountain terrain.

3.15 Accessory Units

Meet minimum lot sizes and widths to enable accessory units, as a way to support diverse and affordable housing options.

3.16 Affordable Housing

Facilitate the provision of affordable market and non-market housing in collaboration with government, businesses, and non-profit associations.

GEOTECHNICAL RISK AREA

The McKee neighbourhood is located on a mountain with significant topography and grade changes. As a result, in Stage 1, a Geotechnical Overview Assessment was conducted to gain an understanding of the suitability of the land for development. Through this assessment, large portions of the plan area have been identified as Geotechnical Risk Area, which encompasses potentially unstable areas, open slope hazard areas, and areas with other geotechnical risks.

These areas require extra attention prior to any development, as there is steep terrain with unstable slopes and rockfall hazards throughout the neighbourhood. The creeks and their associated ravine slopes create the potential for debris flood and flow events. Any future earthquakes may create the potential for slope destabilization leading to landslides, slope displacement and liquefaction.

Given the results of the Stage 1 Geotechnical Overview Assessment, to protect both the natural and built environment in the neighbourhood, the following policies will apply.

3.17 Steep Slope Development Permit Guidelines

Applications for lands within the Steep Slope Development Permit area will be required to submit geotechnical assessment at the time of development application.

3.18 Slope Crest and Toe

Limit development impacts within the slope crest and toe buffer of a ravine, as shown on Map 5, to facilitate safe residential development.

3.19 Slope Hazard Area

Conduct a detailed study to estimate the slope hazard level associated with site specific development within the geotechnical risk area, and limit the potential hazards associated with the development.

3.20 Run-Out and Deposition Zones

Assess the run-out and deposition zones of potential slides in areas identified in Map 5. Limit development in these areas to reduce risks to human life, infrastructure, property and/or resources.

3.21 Geotechnical Report Requirement

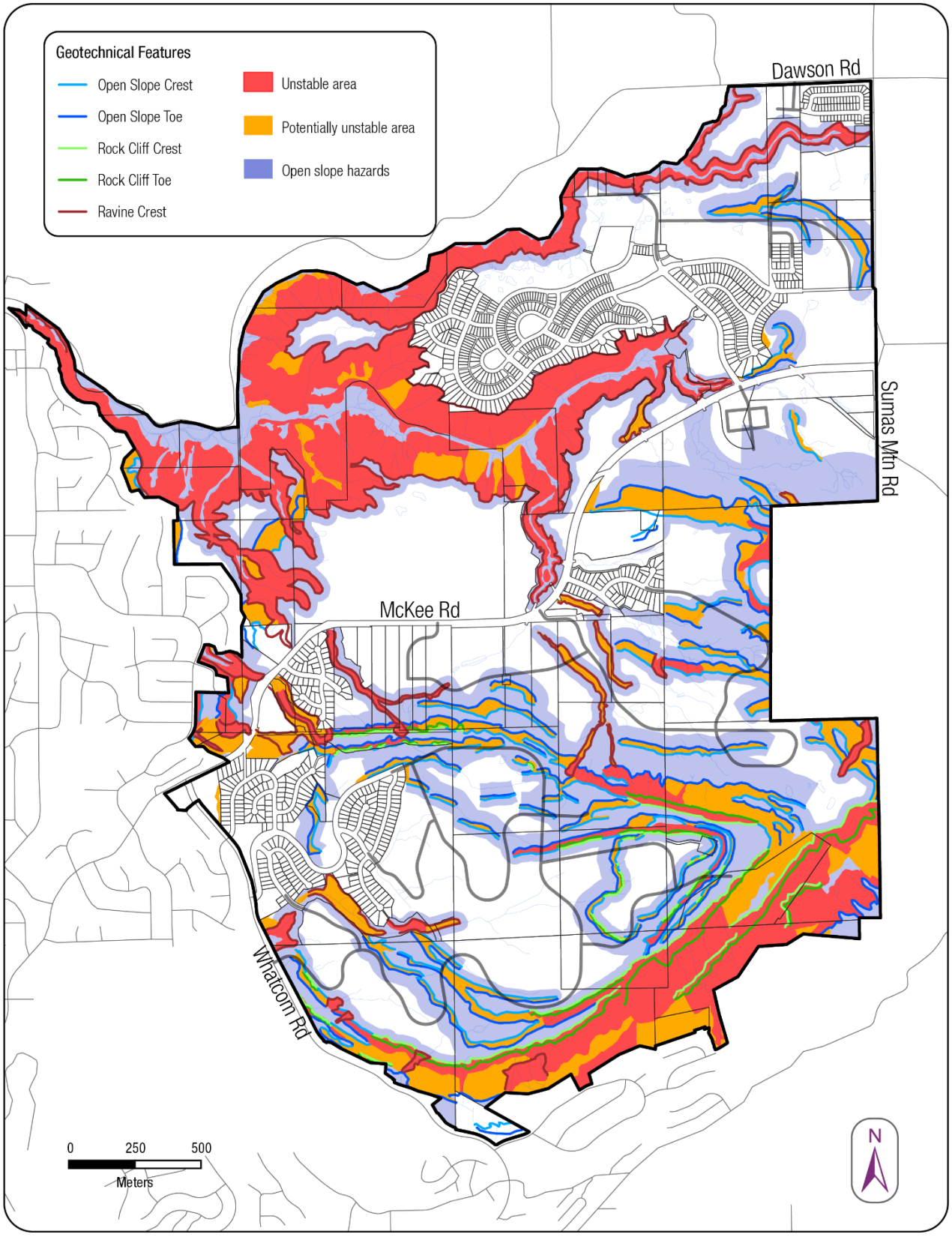
Lands identified as geotechnical risk will remain labelled as such to ensure all development (including future redevelopment) requires an updated detailed geotechnical report to support development.

3.22 Open Space

Land deemed not suitable for development by a geotechnical engineer will be transferred to the City through measures such as dedication to the City, establishing a restrictive covenant, or rezoning to the satisfaction of the City. The City will use all contiguous areas of transferred land to form the Open Space Network for trails and natural areas. At the City's discretion, small isolated pockets of land containing geotechnical risk or where the slope of the land is greater than 40% may not be acquired.

3.23 Climate Change Resilience

Ensure infrastructure and residential development is designed and built to be resilient to climate change risks associated with steep slopes and mountainous terrain.

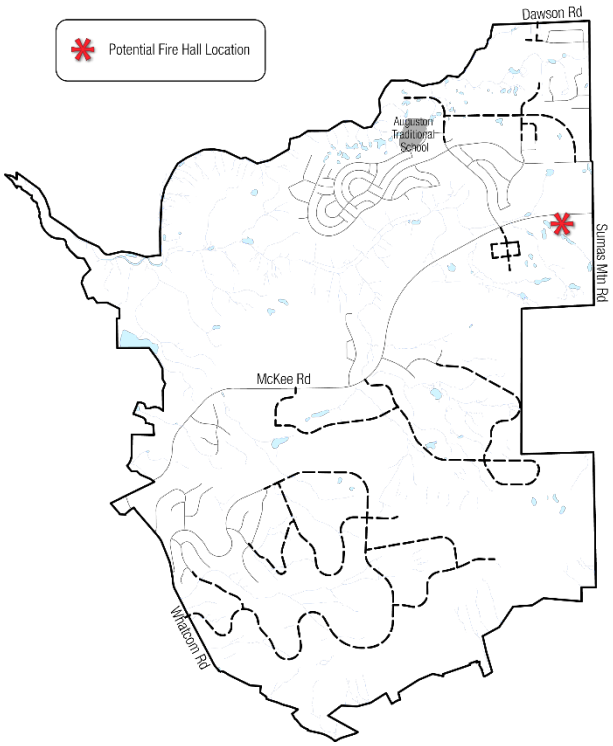


Map 5. Geotechnical Features

SUPPORTING LANDS

The supporting lands in the McKee neighbourhood consist of schools (elementary, middle and high school), a fire hall, and opportunities for corner stores and daycares. The school policies consider the needs of the Abbotsford School District 34, and enable future students to go to school in their neighbourhood where they may be able to walk or bike to school.

The City's Fire Rescue Services Master Plan identifies the need for an additional, or a re-located fire hall to serve the McKee neighbourhood and surrounding areas (Map 6). The future fire hall will provide services beyond the Urban Development Boundary in the rural areas towards Sumas Mountain, it will serve the dense McKee Village and the entire McKee neighbourhood with access from an arterial road.



Map 6. Potential Fire Hall Location

3.24 School Site Acquisition

Future school sites will be secured, for the purpose of future school board acquisition (see section 6).

3.25 School Site Distribution

Elementary, middle and high schools are to be located in the neighbourhood to accommodate future growth. Schools will be distributed across the neighbourhood, on sites that meet the needs of the Abbotsford School District 34.

3.26 Fire Hall Acquisition

The City will acquire land for a new or re-located fire hall as per an existing covenant on title.

3.27 Fire Hall Distribution

Locate the fire hall on an arterial road for optimal response, near the Urban Development Boundary to improve service in the rural area and beyond, and close to the McKee Village.

3.28 Corner Store Policy

The OCP Corner Store Policy applies within the plan area to facilitate corner stores and daycares within the neighbourhood.

ENVIRONMENT

Watercourses and riparian areas, and habitat for wildlife (including species at risk) are essential environmental features in the McKee neighbourhood to be protected.

To assess the watercourses and riparian areas, Stage 1 of the plan included a review to identify watercourses and riparian areas that are protected under the Water Sustainability Act Fisheries Act, and/or the Streamside Protection Bylaw No. 1465, 2005. A GIS based terrain model informed the delineation of major ravine boundaries, informing the top of bank conditions and Streamside Protection and Enhancement Area (SPEA) setbacks (also known as riparian areas). A field review was completed to assess and classify watercourses based on physical characteristics and indicators of hydrologic processes.

A wildlife habitat assessment was completed, and habitat for species at risk was mapped as habitat hubs. This included a review of adjacent source wildlife populations, identification of habitat hubs and priority habitat linkages, an analysis of terrain and ecosystem features, and field verification of habitat suitability for key 'umbrella' species such as Mountain Beaver and Red-legged Frog. The Fraser Valley Conservancy prepared a report that highlights the high productivity of the riparian corridors in the neighbourhood, providing crucial habitat. The report detailed that the integrity of the riparian corridors is critical to landscape level physical and ecological processes. As the primary movement corridors for water, nutrients and species through the landscape, they provide an integral connection within the neighbourhood and beyond

A wildlife linkage analysis was conducted to identify important populations, suitable habitat areas, and to maintain landscape connectivity. Linkages will naturally follow designated watercourses and associated riparian corridors. The SPEA setbacks present opportunities for wildlife movement through contiguous vegetated corridors. Riparian areas provide key linkages based on the protections afforded through senior government legislation *(SARA)* and protections under the City's Streamside Protection Bylaw.

A number of species in the neighbourhood are protected by the federal government through the *Species at Risk Act (SARA)* and by the provincial government through Best Management Practices (BMPs). GIS analysis conducted in Stage 1 confirms the neighbourhood includes high value wildlife habitat for a number of species as defined by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the Province of BC's Conservation Data Centre (CDC). Wildlife and wildlife habitat suitability field studies conducted in 2017 found occurrences of Phantom Orchid, Oregon Forest Snail, Pacific Sideband, Northern Red-legged Frog, Mountain Beaver and Pacific Waterleaf. Other species that have previously been identified in the plan area include, Western Painted Turtle, Townsend's Mole and Peregrine Falcon.

As a *SARA* schedule 1 species, a COSEWIC endangered species, and a provincially red listed species, Phantom Orchids were studied in particular detail in Stage 1 in consultation with Environment Canada's Canadian Wildlife Service. The federal government's Recovery Strategy identifies a 250 metre non-disturbance buffer around each occurrence. To balance these environmental setbacks with the residential development objectives of the Neighbourhood Plan, the City's consultant further analyzed and refined the federal buffer using the following criteria:

- Aspect (sun angle and slope direction)
- Forest type (mixed coniferous forest)
- Hydrology (direction of water flow)
- Windthrow (edge effect on host trees)

Critical habitat for Phantom Orchid has been identified in Map 9, providing protection that meets the intent of the federal government guidelines, yet allows the City to meet its neighbourhood plan residential development objectives.

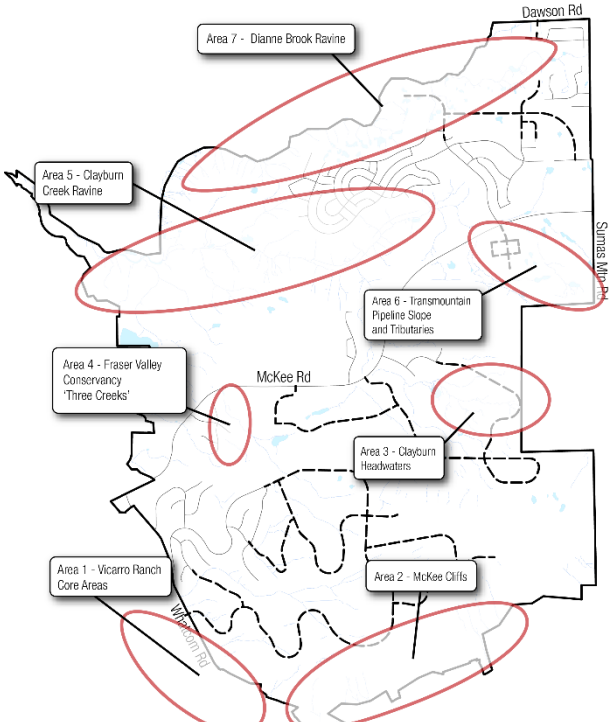
3.29 Watercourses and Riparian Areas

Limit development impacts to the watercourse and riparian area setbacks outlined in Map 8. Further analysis of these setbacks is required at the time of development application for lands adjacent to watercourses and riparian areas.

3.30 Refining Riparian Setbacks

Site-specific aquatic habitat assessments are required to verify watercourse permanence, potential fish bearing status, the presence or absence of active floodplain conditions, field delineation of appropriate top-of-bank boundaries to inform setback requirements, and potential presence of unmapped watercourse or wetland habitat features.

To refine riparian setbacks, additional environmental assessments will be required at the time of development application.



Map 7. Habitat Hubs

3.31 Headwater Wetlands

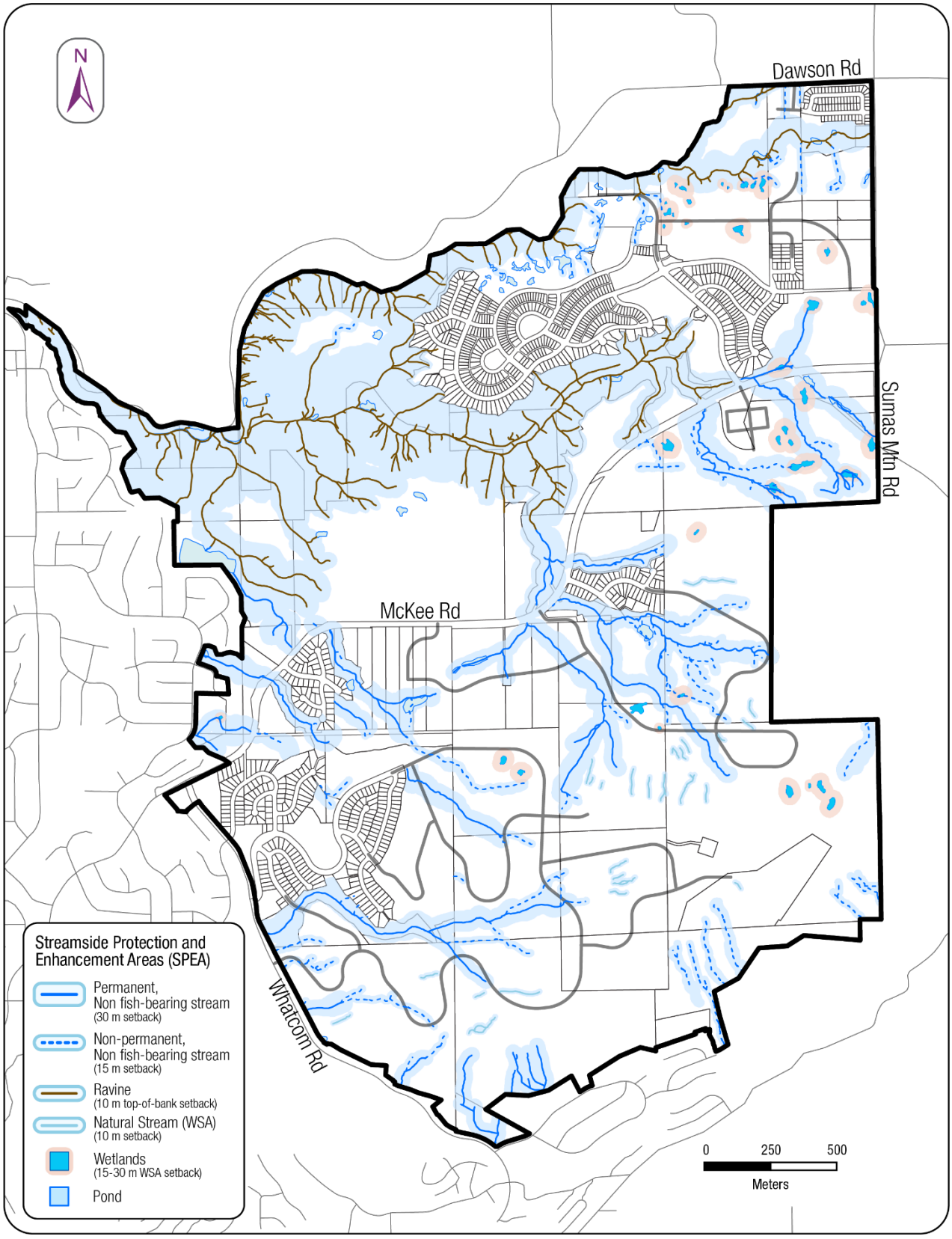
Headwater wetlands confirmed to provide direct water supply to connected ecosystems require SPEA setbacks consistent with the Streamside Protection Bylaw. Isolated watercourses (including wetlands) require protection under the provincial *Water Sustainability Act.*

3.32 Habitat Hubs

Follow federal, provincial and municipal legislation to protect critical habitat required to protect species at risk by locating development away from the identified Habitat Hubs where possible (see Map 7).

3.33 Three Creeks Habitat Hub

The Habitat Hub, 'Three Creeks', identified in Map 7, will be maintained by the Fraser Valley Conservancy. No trails or development will be permitted on the property to ensure the long-term ecological integrity of the site.



Map 8. Watercourses and Riparian Areas

3.34 Wildlife Linkages

Limit development impact on the Wildlife Linkages identified in Map 10, to maintain healthy wildlife populations and contribute to the survival of species at risk in the neighbourhood. Utilize the Open Space network to maintain Wildlife Linkages within and beyond the neighbourhood. Where required, the City may acquire developable land to accommodate wildlife linkages at the time of development.

3.35 Species at Risk

Protect identified Species at Risk in the McKee neighbourhood by limiting development impact in the Habitat Hubs identified in Map 7, and the Wildlife Linkages/Corridors in Map 10.

3.36 Habitat Connectivity

Habitat connectivity is essential to maintaining healthy wildlife populations in addition to the survival of species at risk, and should be maintained as much as possible through development.

3.37 Phantom Orchid

Guide development away from the Phantom Orchid critical habitat buffers identified on Map 9, in accordance with the federal government Recovery Strategy for the Phantom Orchid, and the City's site-specific buffers (37 m to 67 m upslope, and over 250 m downslope).

3.38 Climate Change and Disaster Resilience

Ensure infrastructure and future development is built to sustain impact from more frequent and larger storms, droughts, or other natural disasters such as earthquakes.

3.39 Urban Forest Strategy

Align development in McKee with the City's Urban Forest Strategy. Expand and strengthen a healthy and diverse tree canopy to improve air quality, capture carbon dioxide, reduce heat island effects, support public health and quality of life, and create beauty in the city. Retain trees where possible to maintain a high quality canopy that contributes to the citywide canopy goals.

3.40 Mature Tree Preservation

Where possible, preserve mature trees to enable a significant tree canopy. When necessary to remove mature trees, replace with trees that will contribute to the existing canopy.

3.41 Trails in SPEA and RAPR Setbacks

City trails for recreation may be permitted within SPEA setbacks, and may cross through Riparian Area Protection Regulation (RAPR) setbacks perpendicular to a watercourse crossing. Trails will be subject to site-specific details at the time of development application.

3.42 Crossings through Environmentally Sensitive Areas (ESAs)

Avoid locating trails, roads and utilities across ESAs. If unavoidable, retain a Qualified Environmental Professional at the time of development to design wildlife-friendly crossings that provide for the movement of large mammals at all Wildlife Linkage crossings, and incorporate best management practices to mitigate impacts on the ESA.

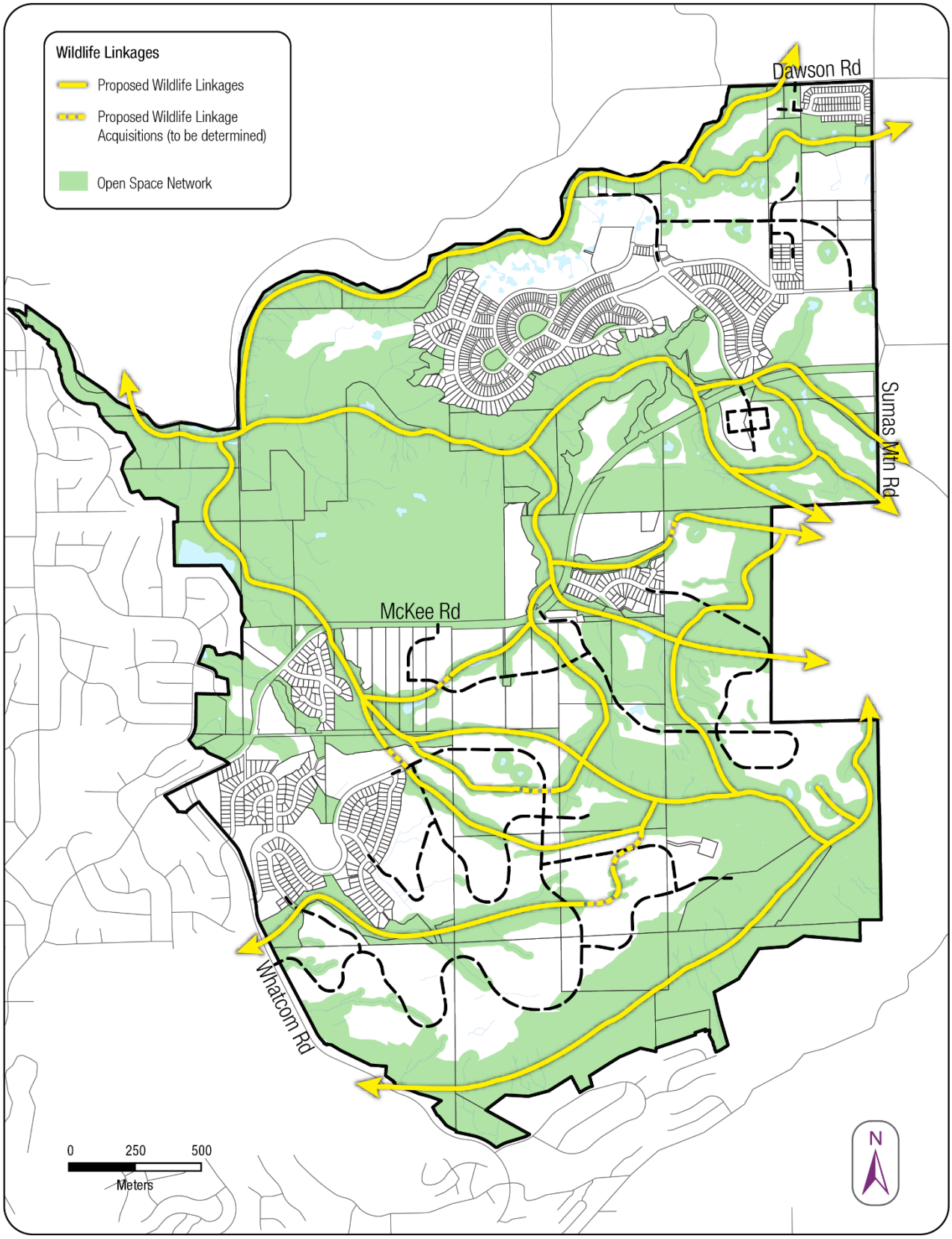
Map 9. Phantom Orchid Habitat

3.43 Utilities Crossing

Utilities will be located under the road network where possible. City and franchise utilities will not be permitted to cross through environmentally sensitive areas.

3.44 Cell Towers

Cell towers should be sensitively incorporated into development areas with screening. Cell towers will not be permitted in environmentally sensitive areas.



Map 10. Wildlife Linkages

GREEN NETWORK

Creating a publicly accessible Green Network which includes **Parks, Open Space, Views and Trails** will be of key importance when planning the McKee neighbourhood (Map 11). Its character will be defined by the existing rich and diverse natural environment comprised of steep wooded slopes dissected by creeks and with surfaces ranging from rich loam to exposed rock. The area is currently known for its informal mountain biking and hiking trails and while residential neighbourhoods will now be added to the landscape, the desire is to retain as much of the outdoor experience as possible. **Parks, Open Space, Views and Trails** will be planned to enhance outdoor recreation opportunities for local residents and visitors. As the natural landscape will be the key feature of the neighbourhood, maintaining environmental integrity will be essential. Creative solutions must be implemented to support this vision and an approach unique to McKee will be required.

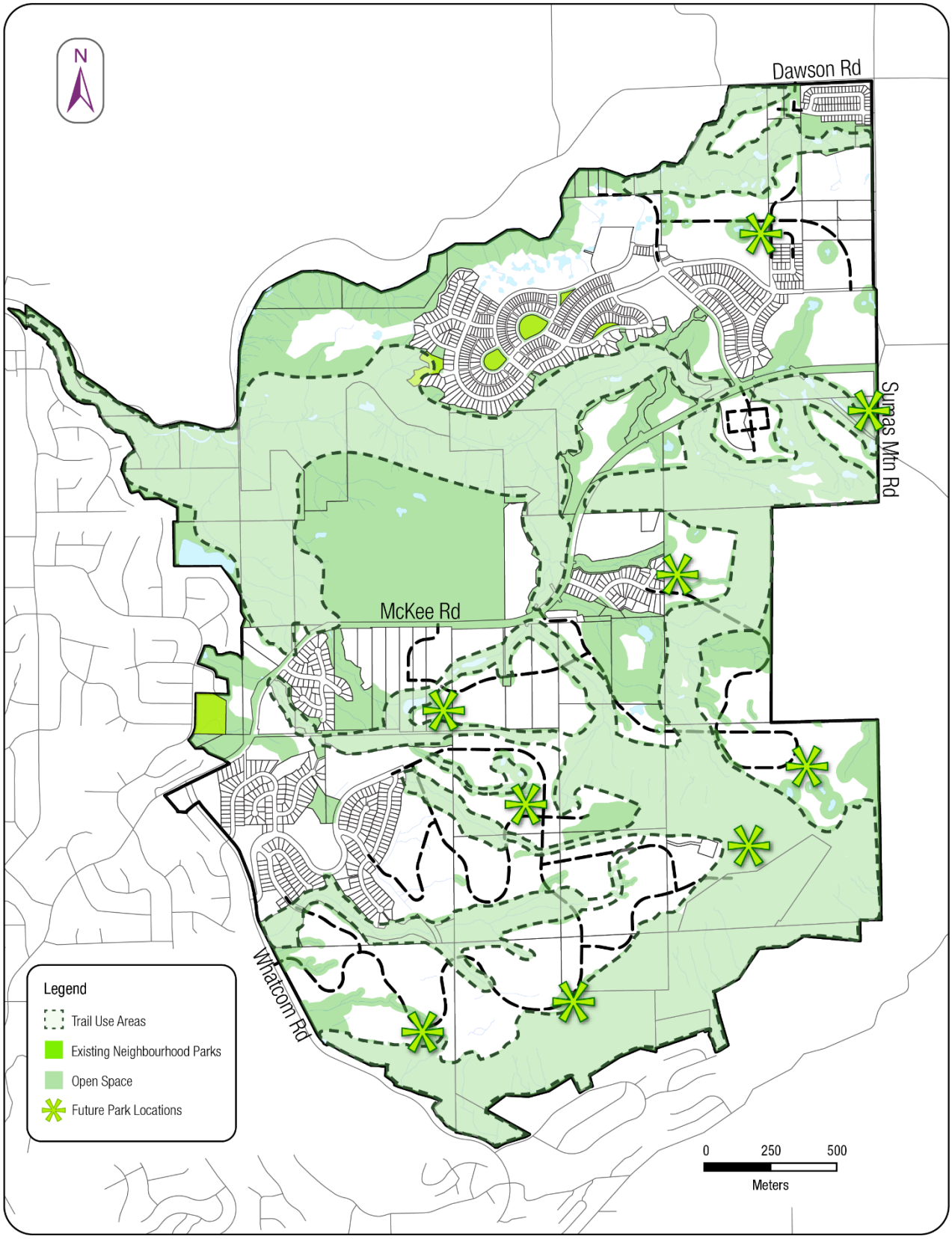
PARKS

Parks are planned, publicly accessible, recreational spaces. The City's Parks, Recreation & Culture Master Plan (2018) provides guidelines and criteria for planning parks such as classifications, typical sizes and amenities and distribution. Parks will be distributed across the McKee Neighbourhood Plan to achieve access equity. Due to the mountainous terrain, parks may be smaller than is typical and it will be important to find a balance between programmable parkland and natural spaces. Within the McKee Neighbourhood Plan, individual park design should be sensitive to the natural environment and support the vision of the overall Green Network.

Park locations were selected based on the following factors:

- Proximity to higher density residential land use
- Flatter sites to minimize grading required for sports fields and play equipment
- Pedestrian accessibility
- Proximity to collector roads for sufficient access, frontage and parking
- Equitable distribution throughout the neighbourhood
- Site to be serviced with city services and utilities

Figure 11. Concept Rendering - Neighbourhood Park



Map 11. Green Network

3.45 Existing and Proposed Parks

Total Parkland in McKee *12.4-19.9 ha	**Existing Parks**	
	Atwood Park	0.2 ha
	Callaghan Park	0.8 ha
	Mathers Park	0.0 ha
	McKinley Park	1.7 ha
	Shadbolt Park	0.5 ha
	Tom Thomson Park	0.9 ha
	New Parks	
	Neighbourhood Park 1	*1.8-3.3 ha
	Neighbourhood Park 2	*1.6-3.1 ha
	Neighbourhood Park 3	*1.0-2.5 ha
	Neighbourhood Park 4	*0.7-2.2 ha
	Neighbourhood Park 5	*1.1-2.6 ha
	Neighbourhood Park 6	0.7 ha
	Neighbourhood Park 7	0.4 ha
	Community Park	0.7 ha
	City-wide Park	0.3 ha
	*Park sizes are approximate, based on current information, and may vary depending on site-specific conditions	

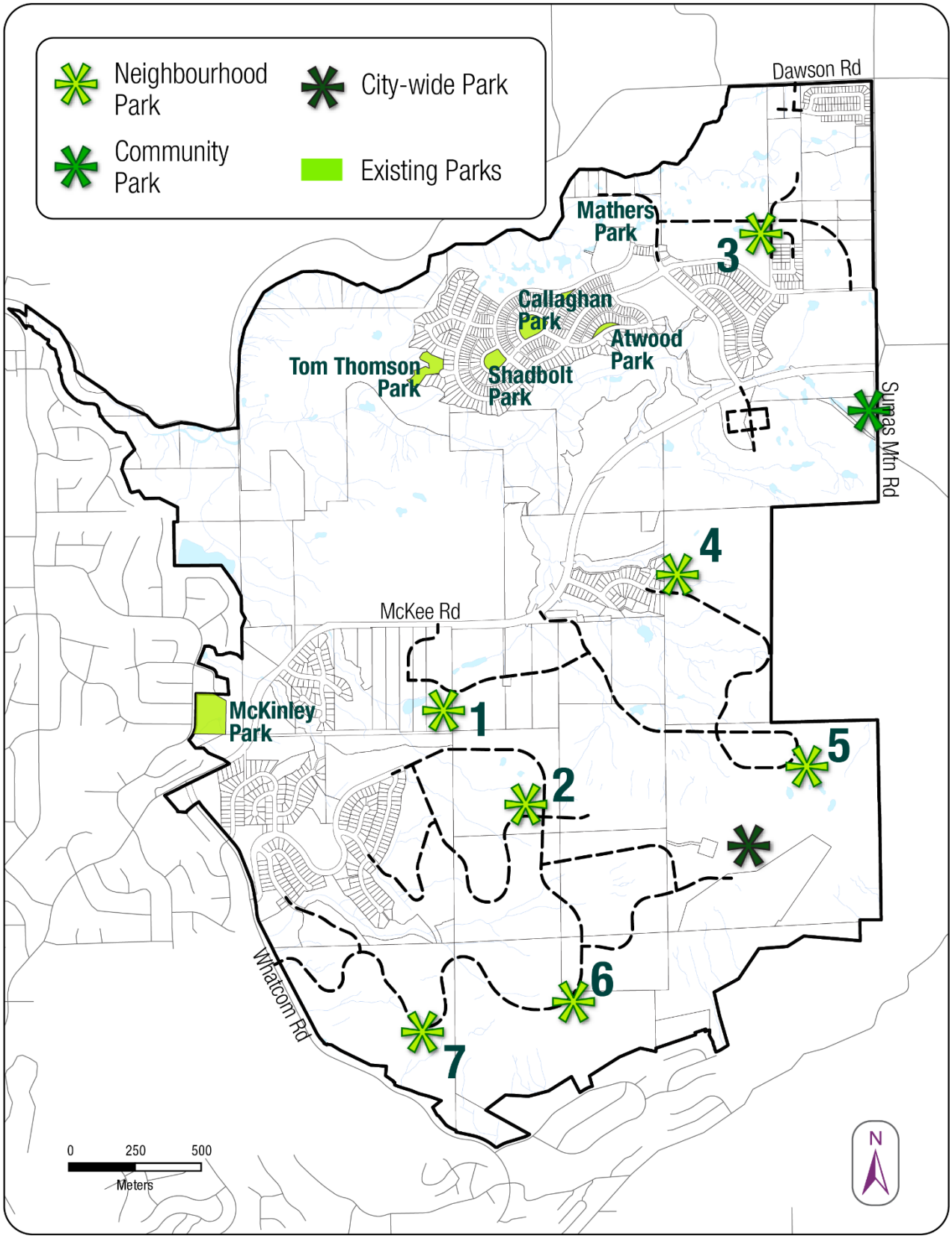
Table 1. Existing and Proposed Parks with Sizes

3.46 Park Types

Neighbourhood Parks
Neighbourhood parks serve as the focal point of the neighbourhood providing active and passive recreational opportunities, often including a social gathering space within walking distance from local residences. They are centrally located to the area they serve and have good pedestrian connections into the neighbourhoods and to the Green Network. Typical amenities may include play equipment, a shade structure, seating, informal active areas, pathways or other amenities as determined by the city. The typical size is between 2 and 4 ha, but due to the mountainous terrain sizes have been adjusted as shown in table 1.

Community Parks
Community parks serve as the visual, physical, and social focus of the community or group of neighbourhoods. They should have good pedestrian connections to the larger community and to the Green Network. Typical amenities may include playgrounds with more challenging play features, sports fields or courts, washrooms, walkways or trails, a parking lot or other amenities as determined by the City. The typical size is between 4 and 8 ha.

The proposed Community Park will have a limited amount of flat area available for programmable parkland and will not meet the size range noted above. However, it is intended to function as a community Park and will include Community Park amenities. Opportunities to expand the size of this park will be explored.



Map 12. Existing and Proposed Parks

City-wide Parks
City-wide parks serve as a destination, expected to draw visitors from the entire city. City-wide parks are sometimes focused on features that are unique to the city rather than size and amenities. This park will feature a unique natural feature on the mountain with extraordinary views.

ACQUISITION STRATEGY

The actual size and total amount of parkland available in the plan area is dependent on the amount of developable land. If areas currently identified as geotechnical risk areas are supported for development through further geotechnical hazard assessment, the area provided for parkland will increase. Conversely, if less land is proven to be developable though further assessment, there will be less land dedicated to the City for the creation of parks.

The McKee Green Network identifies seven new Neighbourhood Parks, a Community/Neighbourhood Park and a City-Wide Park. The acquisition strategies employed in this plan are consistent with the recommendations outlined in the British Columbia *Local Government Act* and the British Columbia Parkland Acquisition Best Practices Guide. Land will be acquired using a combination of a 5% of developable land contribution, 5% cash-in-lieu-of-parkland contribution and a portion of development cost charges (DCC's), as applicable for each development application.

All landowners developing property in the McKee Neighbourhood Plan area must pay parkland DCCs, for the purposes of, in part to acquire Community and City-wide Parks.

PARK DEVELOPMENT

3.47 Developer Requirements
Land dedicated to the City for parkland, as part of the 5% of developable land dedication, shall be zoned for park uses, and be prepared for park use by the landowner/developer prior to dedication, as follows:

a) Preliminary grading to provide positive drainage and flatter programmable areas as determined on a grading plan accepted by the City.
b) Lands must be fully developable and stabilized for the intended use based on a geotechnical assessment.
c) Other site-specific considerations determined through a detailed review at time of rezoning.

3.48 Parkland Requirements Conveyed on Plans
All development application submissions should include all information specified above for parkland requirements.

3.49 Colocation
Parks are an integral part of the Green Network and shall be located with easy access from the street and/or the trail network. Locate parks near higher density land uses to make them easily accessible to more residents.

3.50 Street Frontage and Safety
Substantial street frontage is necessary for visibility within the neighbourhood and along the street. Longer street frontages support greater public awareness of the park, increased natural surveillance, and satisfy principles of

CPTED (Crime Prevention Through Environmental Design) requirements for public safety. Narrow pathways with high visual or physical barriers leading to parks create unsafe entrapment locations and parks located to the rear of residential areas are to be avoided due to lack of natural surveillance.

3.51 Park Development

Once the developer requirements for the parkland and surrounding construction of homes are completed, the park will be designed and developed by the City.

OPEN SPACE

The McKee Neighbourhood Plan will be home to large natural Open Spaces that support natural environment protection, provide areas for trail development, outdoor recreation opportunities and linkages into key neighbourhood destinations. Lands within McKee that cannot be developed, including lands with a slope greater than 40%, and are acceptable to the City will be transferred as Open Space through measures such as dedication, establishing a restrictive covenant, or rezoning to the satisfaction of the City at the time of development, and used to build part of the Green Network. The Open Space network is comprised of contiguous areas of Geotechnical Risk Area, slopes greater than 40%, significant tree stands, environmentally sensitive areas, storm ponds, and other areas not suitable for development.

ACQUISITION STRATEGY

3.52 Open Space Acquisition

Lands within McKee that cannot be developed and are acceptable to the City will be transferred to the City as Open Space through measures such as dedication to the City, establishing a restrictive covenant, or rezoning to the satisfaction of the City, at the time of rezoning or subdivision, as applicable.

VIEWS

There are viewpoints of the surrounding prairies, valley, mountain ranges, and Metro Vancouver from multiple locations in the neighbourhood (Map 13). Views from parks, trails and other common areas in the neighbourhood should be protected, highlighted, and kept publicly accessible through the development process, to ensure everyone can enjoy the incredible views.

Figure 12. Views

3.53 Protect Views

Protect and highlight views of natural features, including predominant peaks and mountain ranges. Throughout the development process, consider impacts on views and ways to keep views public.

3.54 Viewing Platform

Include a viewing platform on the highest elevation water tower on McKee Peak.

Figure 13. Concept Rendering - McKee Peak

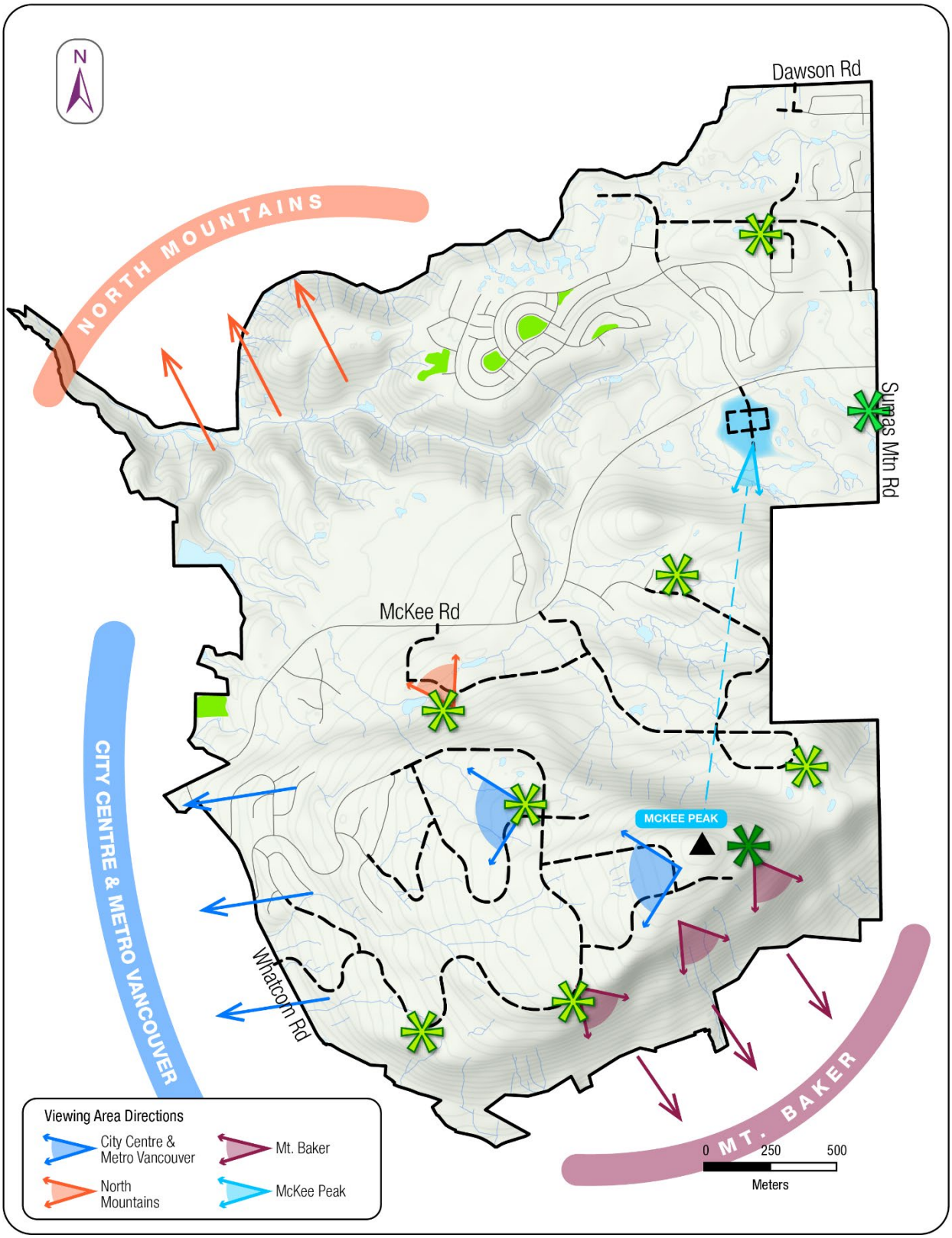
TRAILS

The McKee Neighbourhood Plan envisions a neighbourhood that is an outdoor adventure hub in the City. Trails will meander between forests and streams, offer linkages between neighbourhoods and key destinations, foster connection with and appreciation for the land and the natural areas, and provide various recreation opportunities.

Trails are an essential component of the neighbourhood and will help to prioritize people, not cars. As development continues in the neighbourhood, access to trails on private land will be limited, and creative solutions to maintain existing trails and develop new trails that coordinate with development sites, will be needed. City owned trails in the Green Network will be used for a variety of recreational types, skill and ability levels, while managing the risks associated with recreational trails on the mountain in accordance with the *Occupiers Liability Act*, particularly mountain bike trails.

The OCP highlights the importance of making walking, biking and transit delightful. One way to achieve this in the McKee neighbourhood is to create a connected network of parks, open spaces, views and trails.

Figure 14. Concept Rendering – Trailheads and Green Network


N
Dawson Rd
NORTH MOUNTAINS
Sumas Mtn Rd
McKee Rd
MCKEE PEAK
CITY CENTRE & METRO VANCOUVER
Whatcom Rd
MT. BAKER
Viewing Area Directions
City Centre & Metro Vancouver
Mt. Baker
North Mountains
McKee Peak
0 250 500
Meters

Map 13. Views

3.55 McKee Trail Future Study

The Parks, Recreation, and Culture Department will establish the specifics of the trail network within the neighbourhood in a future detailed study. This study will examine the trail hierarchy and types, general alignments, and trail standards (including hiking, mountain biking, multi-use and universally accessible), in consultation with the community. The study may also examine and supplement guidance on other components of the Green Network such as Parks, Open Spaces and Views.

ACQUISITION STRATEGY

3.56 Trails Acquisition

Land for trails will be transferred to the City at the time of rezoning or subdivision, as applicable. Land transferred will often be comprised of environmentally sensitive areas, steep slopes, riparian areas and species at risk habitat management areas.

To achieve a successful trail network, corridors will need to connect to key neighbourhood destinations. Most of the corridors identified on Map 14 are on private land that may be unsuitable for development. However, when required, acquisition of developable land to connect corridors will be discussed at the time of development.

TRAIL DEVELOPMENT

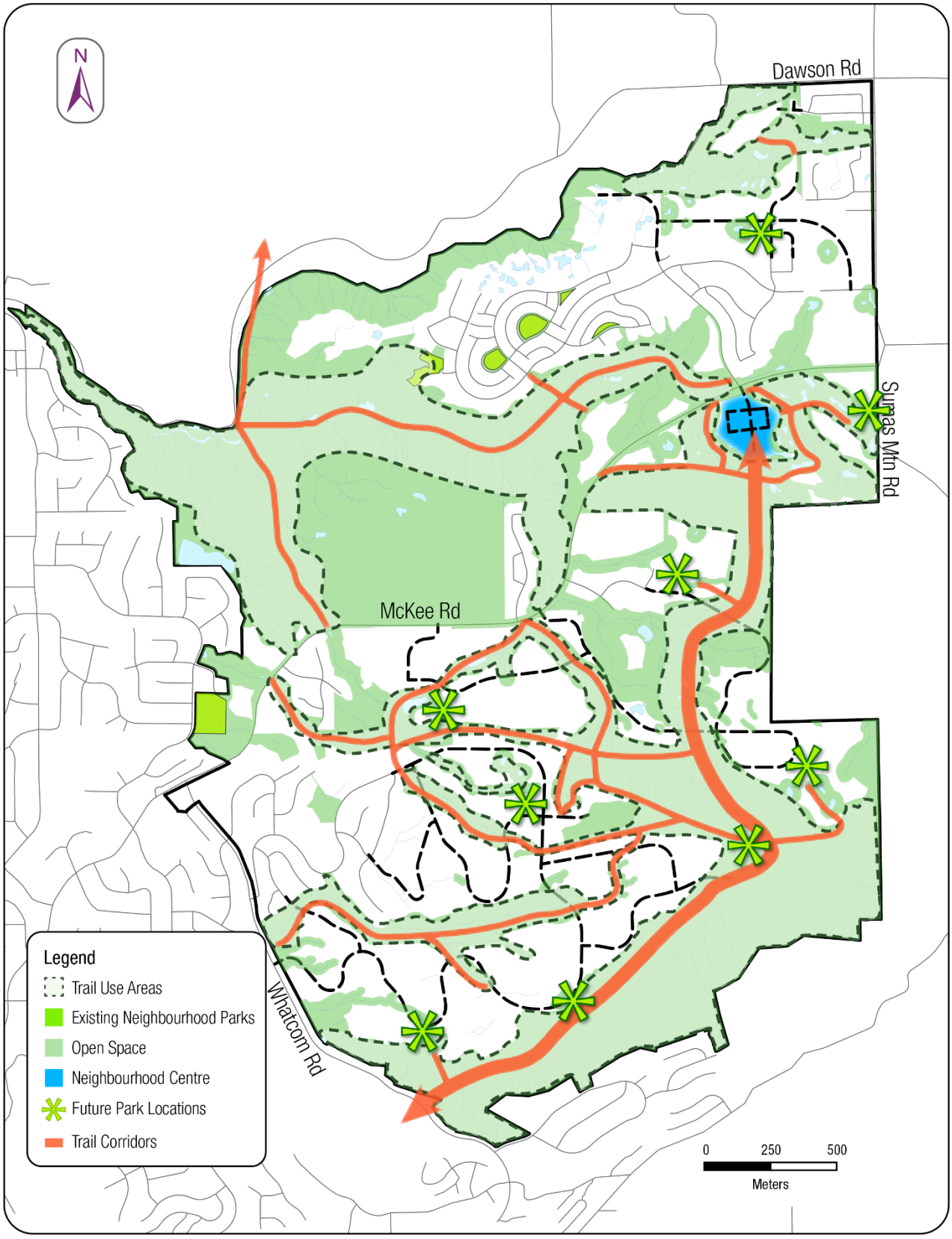
3.57 Variety of Trail Types

One of the goals of the McKee Neighborhood Green Network is to provide access to a variety of recreation opportunities for residents. To achieve that, it is important to build multi-use, recreation, nature and mountain bike trails on the mountain. Trails should be universally accessible where deemed appropriate.

3.58 Trail Design

Trails shall be designed to achieve the following criteria:

a) Trail type feature shall reflect the anticipated trail user.
b) Trails shall connect development areas, existing trail networks (Discovery Trail, the Trans Canada Trail, and trails to Sumas Mountain) and provide looping networks.
c) Trails shall highlight natural features, viewpoints and other points of interest.
d) Trails shall minimize the use of stairs.
e) Where appropriate, trails shall use existing trail corridors, proposed servicing corridors and previously established logging or service roads and driveways to minimize environmental impacts.
f) Trails shall avoid tree and significant vegetation removal, avoid encroachment into ESAs and species-at-risk management areas.
g) Where roads provide inconvenient pedestrian connections between key neighbourhood destinations, prioritize trail connections.
h) Avoid locating trails directly behind private property to create a balance between privacy and user experience of the mountain.
i) Do not permit trails in Environmentally Sensitive Areas (ESA) where human activity may pose a risk to wildlife or natural features.
j) Lands must be developable and stabilized for its intended use based on a geotechnical assessment.



Map 14. Trail Corridors

3.59 Trails in SPEA and RAPR Setbacks

New trail alignments shall be located outside of the top of bank within Streamside Protection and Enhancement Areas (SPEAs). For non-permanent, non-fish bearing streams, the trails may be situated on only one side of the SPEA in order to limit impacts to wildlife. For permanent or fish bearing streams, trails may be situated on both sides of the SPEA. Where Recreation or Multi-Use trails are proposed, the impacts will be compensated for at a 2:1 ratio.

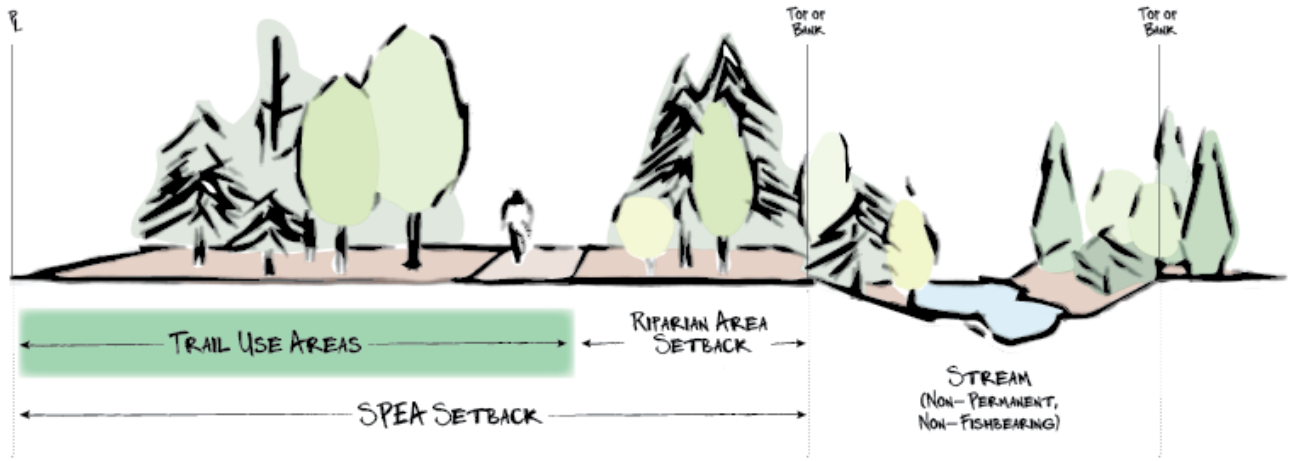


Figure 15. Trails in SPEA and RAPR

3.60 Trail Signage

Provide signage (including maps) within the trail network and at trailheads to inform trail users about risks, closures, for wayfinding and interpretive purposes, and to convey other important information.

3.61 Interim Trailheads

Facilitate continued trail access throughout the phasing of development in the neighbourhood. Provide interim trailhead locations at the end of incomplete roads or in other convenient locations for trail users. Where appropriate, use and maintain existing trail accesses. Use wayfinding signage to help trail users find trailheads, particularly when access points are moved due to construction.

3.62 Ultimate Trailhead Locations

Trailheads will be integrated into the road design, and will be built at the time of road construction, generally at the trail access points identified on Map 15.

3.63 Trailhead Types

To meet the needs of trail users and residents, amenities will be provided at some of the trailheads in the neighbourhood. Trailheads may be classified into different types based on their required amenities. Key Trailheads, for example, at the top of the mountain and in McKee Village should provide parking, public washrooms, water fountains, and mountain bike specific amenities, such as a bike wash. Smaller trailheads throughout the neighbourhood should provide fewer amenities including signage, and 'pocket-parking' for neighbourhood visitors where feasible.

3.64 Fencing

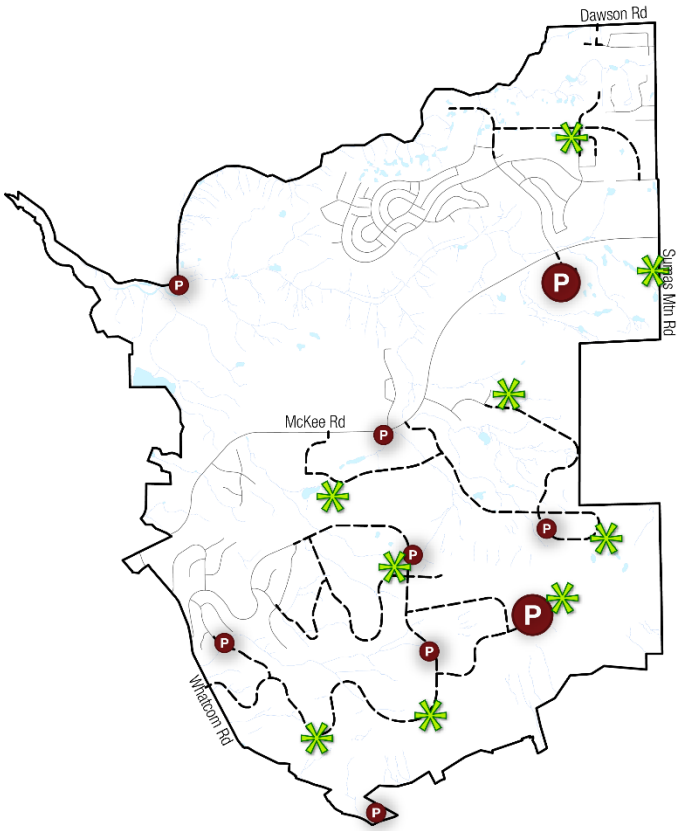
When development and trails are planned adjacent to or within environmentally sensitive areas (ESA), use fencing to protect the ESA and enhance public safety. Use bear and predator resistant chain-link fencing at strategic locations around schools, playgrounds and sports fields near ESAs to reduce human-wildlife conflicts.

3.65 Trails in Culturally Sensitive Areas

Trails located in or near culturally sensitive areas will be decommissioned or rerouted to avoid the site as per the Stó:lō Heritage Policy Manual.

3.66 Trail Construction

New trails are to be constructed by developers to the City's satisfaction, in alignment with this plan and the McKee Trail Future Study, at the time of development. Where possible, use existing trail alignments to limit environmental impact of trail construction.



Map 15. Trailheads

3.67 Trail Design Requirements Conveyed on Plans

All development application submissions should include all design and construction specifications for trails.

3.68 User Group Partnerships

Where interest is expressed, encourage partnerships with trail user groups for trail design and maintenance.

3.69 Trails Liability

Identify trails within the City's jurisdiction to be marked as trails for recreation, in accordance with the *Occupiers Liability Act.*

3.70 Educational Opportunities

Use the City's website and social media channels to provide educational material regarding trail etiquette and safety.

CULTURE

The McKee neighbourhood is within the asserted traditional territory of the Sumas (Sema:th), Leq'a:mel and Matsqui First Nations of the Stó:lō Nation, and is a sacred landscape to the local First Nations. The City hired an archaeological consultant to conduct the archaeological and cultural heritage work required prior to development on this land.

An Archaeological Overview Assessment (AOA) was conducted in Stage 1 to determine the distribution of known and potential archeological sites within the neighbourhood. This AOA consisted of a field investigation/preliminary field reconnaissance, which found a total of fifty-two (52) areas of archeological potential (AOPs), and four (4) Culturally Modified Trees (CMTs).

In Stage 2, an Archaeological Impact Assessment (AIA) was conducted to determine if any of the identified AOPs that conflicted with the proposed infrastructure contained archaeological remains. Access was granted for 6 out of the 11 AOPs that conflicted with the proposed infrastructure. Within the locations tested, there were no archaeological materials identified. The negative data gathered from the shovel testing provides a positive indication that infrastructure can be located as proposed in this plan. The remaining AOPs will be tested by individual landowners or developers at the time of development.

The McKee neighbourhood will continue to be a gathering place for outdoor recreation enthusiasts. The neighbourhood and the McKee Village will facilitate a welcoming environment with opportunities for public communal spaces and outdoor adventures.

Policies in this section aim to protect cultural heritage and archaeological sites, increase the Indigenous presence in the neighbourhood, and to create spaces for residents to gather and build a sense of community.

3.71 Unstudied AOPs

Any Areas of Archaeological Potential (AOPs) identified in this plan (Map 16) that were not studied at the time of the City-led Archaeological Impact Assessment will be required to be examined by a Registered Professional Archaeologist retained at the applicant's expense, at the time of development application. Further examination of AOPs may require the archaeologist to obtain a *Heritage Conservation Act* Permit in order to complete an Archaeological Impact Assessment.

3.72 Chance Find Procedure

A *Chance Find Procedure* should be followed by construction staff during project construction, including notification to all local First Nations when construction is beginning on a property. Stó:lō Research and Resource Management Centre (SRRMC) should be included in on-the-ground *Chance Find Procedures*.

If chance archaeological or heritage materials are encountered during ground disturbance activities, all impact activities must cease immediately and the Archaeology Branch and all First Nations with interests in the area must be notified. SRRMC should be involved in any *Chance Find Procedure* work, and notified and given the opportunity to compete for a contract for future City-led Archaeological Impact Assessments.

3.73 Avoid Cultural Sites

Protect important First Nation cultural heritage sites by establishing development setbacks based on City of Abbotsford environmental policy and senior government legislation.

3.74 Cultural Inclusiveness

Encourage cultural expression through events, public art, and other means that reflect diverse community interests and needs.

3.75 Public Artwork

Encourage public artwork, particularly in the McKee Village. Engage with local First Nation artists to explore public artwork opportunities.

3.76 Place Names

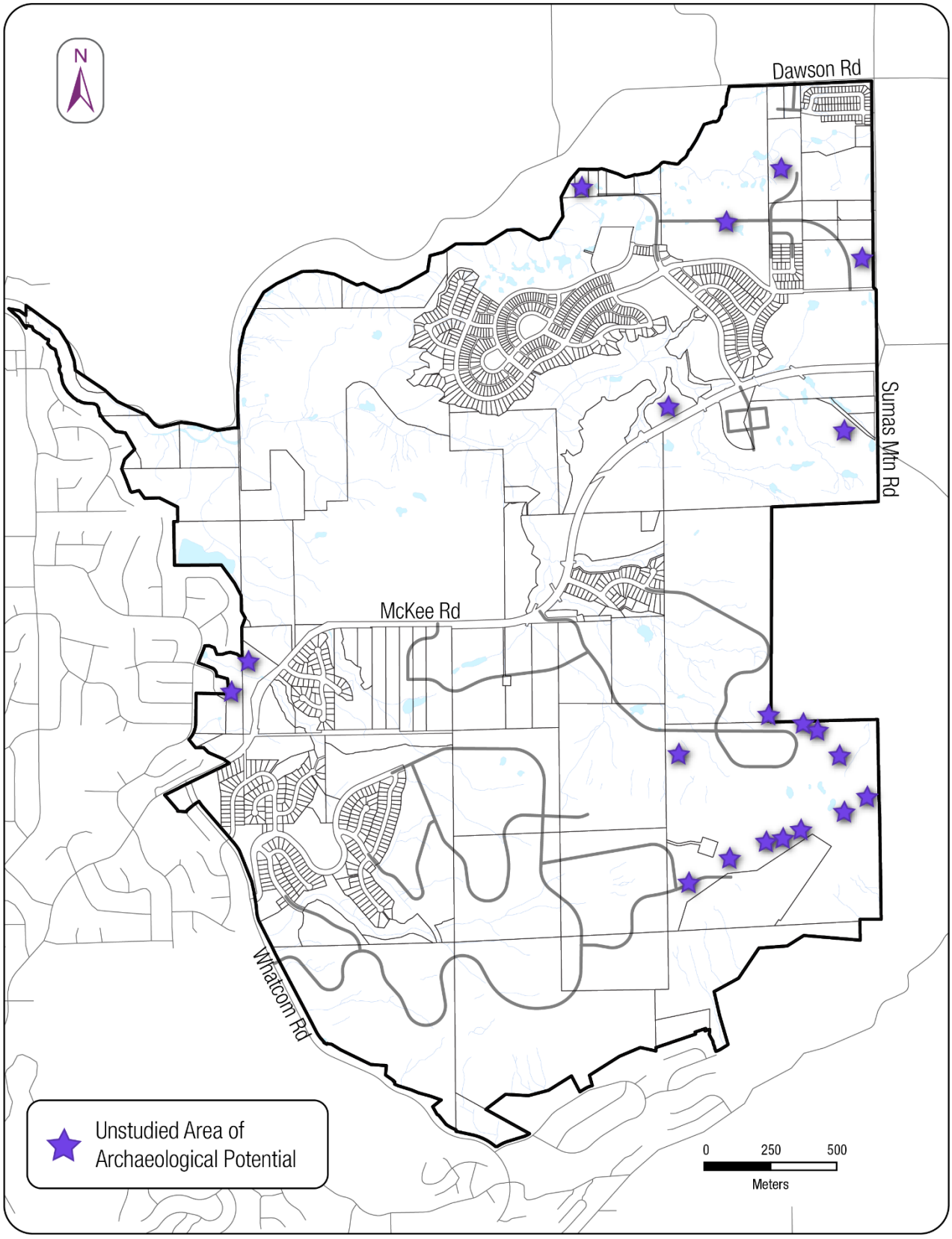
In consultation with local First Nations, identify appropriate street, trail, and place names within the neighbourhood to reconnect First Nation traditions to the landscape. Include Halq'eméylem spelling on signage in the McKee Village to enhance the cultural experience.

3.77 Special Events

Support special events in public spaces to help create a sense of community.

3.78 Gathering Spaces

Create opportunities for group seating throughout the neighbourhood, including in the McKee Village and at trailheads, to encourage informal gathering spaces and to create a sense of community.



Map 16. Unstudied AOPs

PART 4 DEVELOPMENT PERMIT GUIDELINES

MCKEE VILLAGE

STEEP SLOPE

WILDFIRE HAZARD

DEVELOPMENT PERMIT GUIDELINES

Local governments are authorized to create and adopt Official Community Plans (OCP) through the *Local Government Act* in British Columbia. Official Community Plans provide the long-term vision for a community and set the policies relating to land use management within the area covered by the plan.

Within the OCP, local governments can designate Development Permit Areas (DPAs) for several reasons, such as:

- the protection of the natural environment,
- protection from hazardous conditions,
- protection of agricultural lands,
- and/or to guide the form and character of development.

Development Permit Areas can help to achieve the objectives set forth in the Official Community Plan. Once an area has been designated, land development and construction can only take place after a development permit has been issued.

To establish objectives for the form and character of development in the McKee Neighbourhood Plan, the City designates lands as subject to the following Form and Character Development Permit Guidelines, in the McKee Village land use designation. All development outside these areas remain subject to the Official Community Plan Development Permit Guidelines.

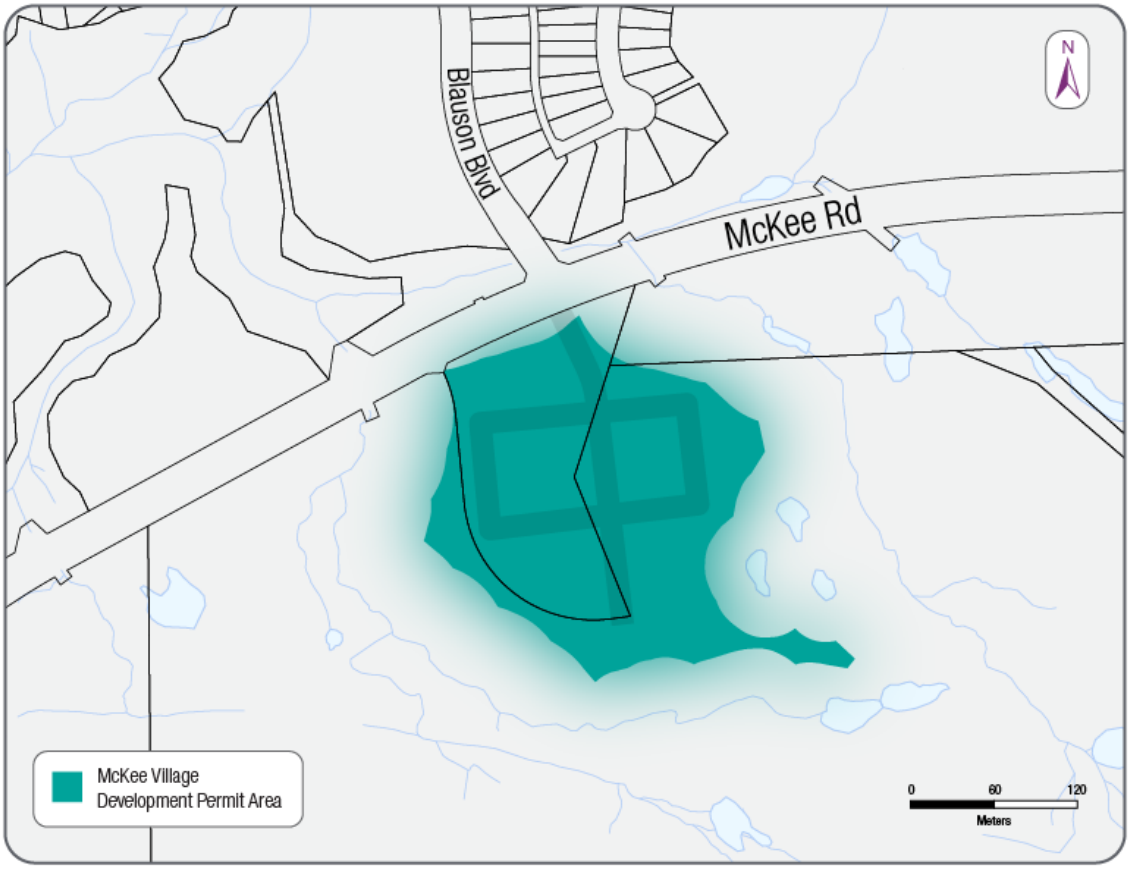
To protect development from hazardous conditions, the City designates land subject to McKee Steep Slope Development Permit Guidelines, and the Wildfire Urban Interface Development Permit Guidelines. All development outside these areas remain subject to the Official Community Plan Development Permit Guidelines.

The McKee Development Permit Guidelines supersede the Development Permit Guidelines contained within the Official Community Plan. Where there are inconsistencies between the Official Community Plan Development Permit Guidelines and the McKee Development Permit Guidelines contained in this chapter, the latter will supersede.

MCKEE VILLAGE DEVELOPMENT PERMIT GUIDELINES

AREA

McKee Village guidelines apply to all development in the McKee Village land use designation, as indicated on Map 17.



Map 17. McKee Village Development Permit Area

JUSTIFICATION

As the McKee neighbourhood develops, the McKee Village will act as the focal point for economic, cultural, and recreational opportunities in the community. It will be important for this area to have a distinct character that integrates the natural landscape into the everyday life of residents and visitors. This includes the integration of First Nation cultural elements and economic opportunities. This core area will become the vibrant centre of the neighbourhood by providing the widest range of uses and will actively support outdoor recreation activities including, but not limited to, mountain biking and hiking.

OBJECTIVES

The following guidelines are intended to encourage the construction of a dynamic, livable neighbourhood that caters to daily commercial needs and outdoor recreational pursuits. Development in the McKee Village should seek to create a distinct ‘village in the mountain’ feel, which respects the natural environment.

EXEMPTIONS

1. Subdivision
2. Interior Renovations
3. Façade renovations limited to repainting and recladding without changing the building roofline, footprint, or openings
4. Murals on building façades that do not face a public street, to the satisfaction of the City
5. Signage copy changes that do not change the sign structure
6. Minor landscaping improvements that do not reduce or remove amenity space
7. Emergency circumstances to remove an immediate danger
8. Buildings that have been destroyed by fire and/or natural disaster less than 75%, as determined by the building inspector, provided the building massing, siting and appearance are as prior to destruction and the use conforms to the City’s Zoning Bylaw

GUIDELINES

The following guidelines provide direction for all development in the McKee Village and may be applied when setting Development Permit conditions.

Site Context

To guide the design of development sites that fit within the broader context of the McKee Village and are compatible with adjacent properties.

MV1 Neighbourhood Connectivity

Design the site to enhance direct pedestrian and bicycle connections in the area. Specifically, sites providing access to the trail network should ensure pedestrian and bicycle connections are a priority.

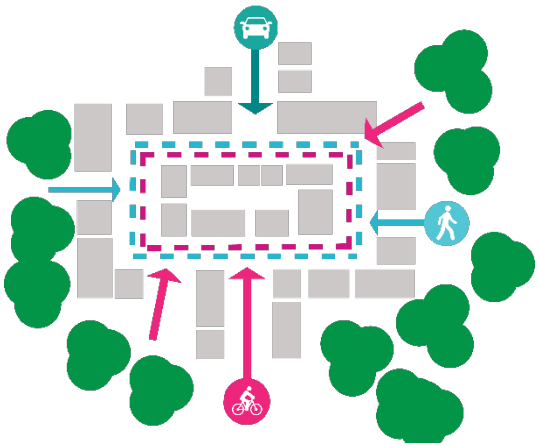


Figure 16. Neighbourhood Connectivity

MV2 Neighbourhood Compatibility

Design mixed use development to be compatible, in terms of scale and design, with the surrounding natural environment, trail and park network, and future land uses.

MV3 Streetwall Continuity

Design commercial, residential, and mixed use areas with distinct, pedestrian friendly streetwalls by aligning architectural features and establishing patterns with neighbouring buildings.

MV4 Landscape Integration

Site and design development to integrate with existing significant natural features, topography, and vegetation.

MV5 Climate and Comfort

Maximize sun exposure to public open spaces, nearby buildings, and dwelling units through site planning and building height adjustment.

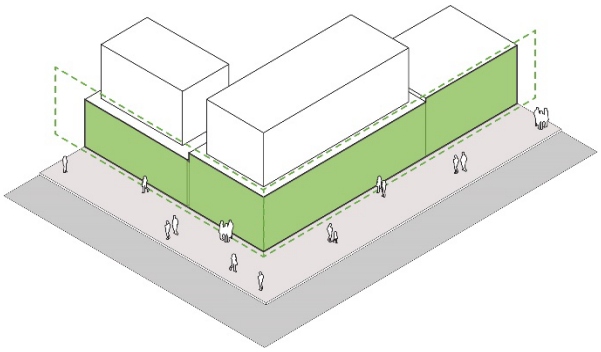


Figure 17. Streetwall Continuity

Site Planning

To guide the design of development sites in the McKee Village with efficient circulation, safety and positive interfaces with public streets.

MV6 Defined Streetscape

Site buildings so they front and frame public streets. For corner sites, site buildings to front both streets.

MV7 Hierarchy of Spaces

Define the spaces that are public from those that are private, with elements such as patios, paving treatments, grade changes, fencing, or landscaping.

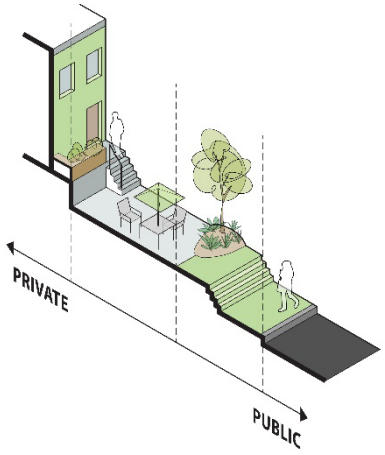


Figure 18. Hierarchy of Spaces

MV8 Walking and Cycling Connections

Connect main entrances and unit entrances to public sidewalks, trails, bicycle paths, parking areas, and adjacent residential and commercial sites with a minimum 2-metre wide pathway.

MV9 Access to Transit

Design buildings to provide direct access and clear sightlines to bus stops and the transit terminus.

MV10 Public and Private Amenity Spaces

Integrate usable public and private open spaces, including squares, parks, and roof top gardens. Locate these adjacent to active uses (cafes, shops, small businesses, etc). Provide benches, shelters, bicycle infrastructure (parking, wash stations, repair tools, water fountains, etc.) and other amenities near main entrances.

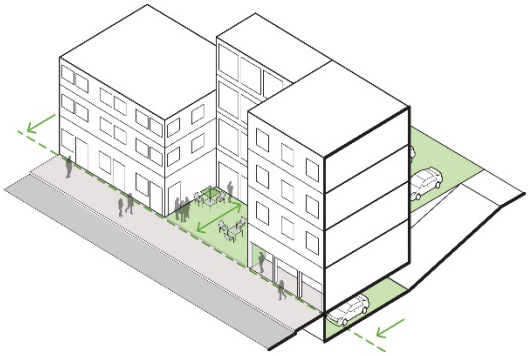


Figure 19. Street Relationship

MV11 Street Relationship

Require that buildings either: front directly onto the street property line; or be set back to allow space for outdoor functions of the building occupancies.

MV12 Views and Street End Vistas

Orient views from buildings and open spaces towards prominent features including McKee Peak and the mountains to the north. Site architecturally significant buildings and/or provide strong massing where visible at the terminus of a street or walkway.

Ensure that McKee Peak is visible upon entering the McKee Village.

To maintain the mountainous feel of the neighbourhood, existing trees along the edge of the McKee Village should be retained as a ‘green edge’ to maintain a natural street end vista.

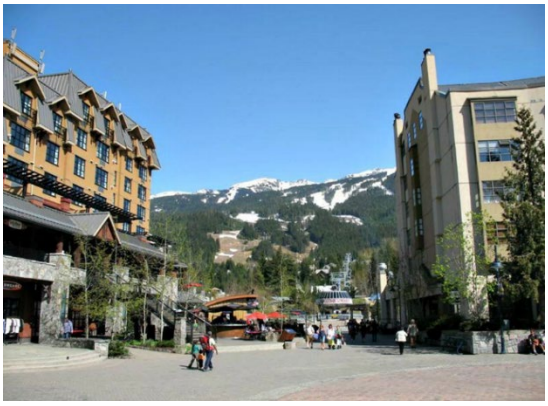


Figure 20. Views and Street End Vistas

MV13 Site Grading

Avoid the use of retaining walls. Step buildings along the length of a sloping street. When retaining walls are required, limit the height to 1.2 metres and terrace and landscape them.

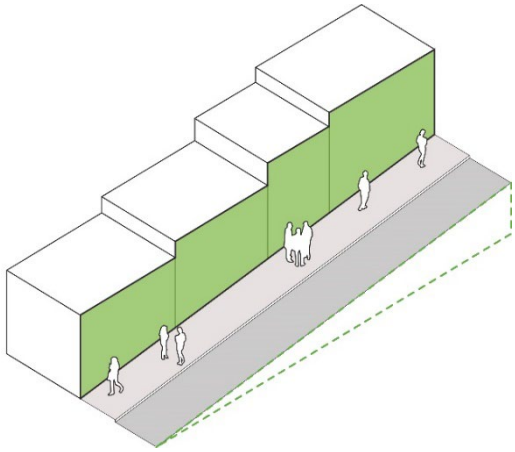


Figure 21. Site Grading

MV14 Public Overlook

Ensure housing units, offices, and other upper floor uses overlook public spaces and connections such as trails, parkland, and strata roads to provide views over activity areas.

MV15 Bicycle Parking

Locate secured and weather protected bicycle parking near building entrances and lobbies, preferably on the main floor. Commercial buildings should also locate short-term secure bicycle parking in highly visible locations to encourage the use of bicycles for short trips within the McKee Village.

MV16 Parking Location and Design

Provide the majority of required off-street parking underground, with limited surface parking for commercial uses and residential visitors. Reduce the number of accesses by providing easements to adjacent properties. Parking for persons with disabilities must be easily accessible and centrally located.

Figure 22. Bicycle Parking

Underground parking should not exceed grade level. Where it must be partially above grade, use attractive, high quality materials on the exposed structure and screen with landscaping.

Surface parking should be located beside or behind the building. When it is beside a building on a public street, it must not exceed 25 metres in length, including any accesses, and be visually deemphasized and screened with landscaping.

MV17 Bear-Resistant Garbage, Compost and Recycling

Incorporate bear resistant containers for garbage, compost and recycling internally within buildings where possible. Otherwise, locate them behind or beside buildings in secure containers. Screen them with attractive, high quality materials and architectural treatments that are complementary with the associated building(s).

MV18 Loading Areas

Make loading areas and facilities accessible to service vehicles without interfering with pedestrian and cyclist circulation, and screen them with landscaping with fencing. Locations within buildings or with rear accesses are preferred.

MV19 Drive Thru Facilities

Drive thru facilities for any purposes are not permitted.

MV20 Street Name Signage

Street name signs to be provided in both English and Halq'eméylem, and be representative of the traditional place names in consultation with local First Nations.

Figure 23. Street Name Signage

MV21 Artwork

Artwork is encouraged and should be located in a prominent location on or around a building. Artwork should be representative of the surrounding mountain and forest landscape, and should be selected in consultation with the City and local First Nations.

Building Design

To guide the design of buildings that are people focused, attractive and functional with the streets in the McKee Village.

MV22 Building Length and Height

Buildings should not exceed 90 metres in length along public streets. Buildings must exhibit a minimum three storey expression, either in terms of height or actual storeys.

MV23 Corner Buildings

Design a building at the corner of two streets to front both streets. Strongly mass the building at its corner to exhibit a visually prominent, landmark architecture.

MV24 Scale Transition

Incorporate complementary building forms and transitional heights to harmonize with the height and scale of adjacent buildings, especially when next to lower density residential land use designations.

MV25 Grade Transition

On sloping sites, step ground floor slabs to ensure a level transition between the sidewalk and the building/storefront entrances. Similarly, design the roofline to follow the slope of the site.

MV26 Architectural Interest

Vary building materials, colours, rooflines, and other architectural components. Establish a rhythm to the streetscape by integrating vertical elements and breaks in the façade of a building. The use of Post and Beam architectural elements is strongly encouraged. Use red, black and white as accent colours for architectural features, in alignment with local First Nations culture. Collaboration with Indigenous architects and/or artists is encouraged

Figure 24. Architectural Interest

Visually break down the length of a building in larger projects by establishing a vertical emphasis in the façade treatment. Provide depth and variety to the building mass through the use of elements such as balconies, moldings, cornices, and porches.

Large, blank, flat street facing walls, and large expanses of singular materials are not permitted.

MV27 Building Materials

In keeping with the thematic visual elements of the McKee Village, the use of natural wood accents, specifically cedar should be used where possible. Ground floor levels should be clad in a different material than upper levels to provide a visual break in the façade. Vinyl siding is not permitted.

Figure 25. Building Materials

MV28 Self-Contained Uses

For mixed use buildings, separate and distinctly design entrances for upper storey uses from the entrances to ground floor commercial uses. Design buildings to ensure each different use is self-contained, with a focus on security for residential uses.

MV29 Building Entrances

Provide well-lit and visually prominent entrances. Main commercial and residential entrances must face the street and connect directly to the public sidewalk. Large recessed entryways should be avoided.

MV30 Retail and Transparent Fronts

Design street facing ground level storefronts and lobbies to promote visibility with large amounts of transparent glazing. Do not obscure ground level facades with reflective glazing or excessive window signage.

MV31 Residential Ground Floor

In residential buildings, incorporate ground-oriented units along public streets. Design each unit with an individual front door accessible from the street. Where grades permit, elevate the entrance 0.5 metres from the public right-of-way for privacy.

MV32 Residential Building Setback

Set back residential ground floors from the street property line to enable privacy and broaden pedestrian facilities, and to allow for front patios, courts, and gardens for ground floor units. Upper floors may step back further to accommodate outdoor balconies or decks.

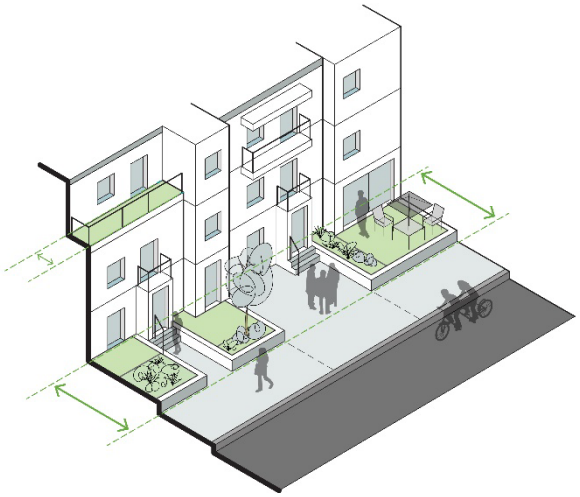


Figure 26. Residential Building Setback

MV33 Rooftops

Landscape rooftops and make them accessible to residents as usable common/private outdoor space and install water and electrical services for their functional use. Screen or enclose mechanical equipment and appurtenances on rooftops.

MV34 Accessibility

Design buildings and entrances to address the functional needs of persons with disabilities including those who are mobility, visually, and hearing impaired, and/or have reduced strength or dexterity.

MV35 Weather Protection

Provide weather protection along the street frontage of buildings. Commercial uses must have weather protection that may be adapted to the building context with occasional breaks, and 2.0 metres of depth is desirable. For residential uses, weather protection may be used more sparingly to highlight windows or other façade features, but must be provided at building entrances.

MV36 Integrated Signage

Directly integrate signage into building façades. Design signage to be architecturally consistent with associated buildings.

Landscaping

To guide the design of landscaping for a development's natural beauty, legibility, and ecological sustainability.

MV37 Visual Interest

Provide landscape elements to enhance visual interest and define the pedestrian experience. These should integrate with the surrounding natural environment, architectural details of the building's street front and screen elements such as parking, loading, utility areas and garbage enclosures.

MV38 Public Realm

Design the spaces between buildings and street curbs as safe, convenient and interesting people places. Integrate the surrounding natural environment forest and mountain features into the public realm where possible. Enliven the public realm with attractive amenities for outdoor adventure enthusiasts such as bicycle racks, water fountains, bicycle repair tools, etc. Seating, plantings, transit shelters, public art and water features are also encouraged. Street and site furnishings should be designed to meet the needs of a wide range of users including children, seniors, and persons with disabilities.

MV39 Climate and Comfort

Strategically plant trees, shrubs, and other vegetation to protect from high winds and excessive heat.

MV40 Context

Use landscape materials that respect and align with the context of neighbouring properties and the overall form and character of the neighbourhood.

MV41 Tree Retention

Where possible, preserve mature trees and significant specimens and integrate them with new landscaping and buildings.

MV42 Tree Plantings and Canopies

Ensure tree plantings match site conditions. Consider soil volume, tree siting, and mature tree size, and plant appropriate tree species that align with the conditions and overall plan objectives. Where sightlines are required, use tree species that allow for a canopy at least 2.0 metres in height.

MV43 Tall Hedges

Tall, visually concealing hedges along public sidewalks and streets are not permitted.

MV44 Native Species

Where appropriate, use native and drought tolerant plant and tree species.

MV45 Fence Height and Design

Use materials that integrate the surrounding natural environment into the built environment of the McKee Village; this may include rock fence, wood fences, or split rail. Keep fences below 1.5 metres along public streets. Chain link fences are not permitted along public streets.

Figure 27. Fence Height and Design

Lighting

To guide the design of lighting for the protection of residents and environmentally sensitive areas from light pollution and for a development's security.

MV46 Light Pollution

Avoid light pollution by directing lighting downwards and using full cut off fixtures with horizontally aligned flush mounted (non-protruding) lens. Lights in the vicinity of environmentally sensitive areas should be minimized by directing lighting away from these areas.

MV47 Pole Mounted Lighting Height

Place lighting fixtures no higher than 6.0 m from the ground.

MV48 Pole Mounted Lighting Orientation

Direct lighting fixtures on the perimeter of a site 45 degrees downwards away from adjacent residential uses with a side-to-side horizontal aiming tolerance of no more than 22.5 degrees. Lighting fixtures located inside the perimeter may be lit at 90 degrees from the pole.

MV49 Up-lighting

Use up-lighting sparingly and only for accenting architectural elements or landscape features.

MV50 Sensor Activated Lighting

Use sensor activated lighting for security lighting.

MV51 Even Wash

Create an even wash of light across surfaces desired to be lit that are not adjacent to rural and residential uses.

MV52 Nighttime Use

Do not light areas not intended for nighttime use. Focus lighting on popular pathways that provide key connections between destinations that people desire to use at night.

Commercial Streets

To guide the design of commercial streets in the McKee Village to create a pedestrian and cyclist friendly environment.

MV53 At-Grade Entrances and Height

Provide individual commercial unit entrances at grade and be directly accessible from the public sidewalk. The height of the ground floor should be 3.5 – 5.5 metres to facilitate a long-term range of commercial uses while maintaining pedestrian scale

MV54 Minimum Transparency

Provide a minimum of 80% transparent glazing at the ground level, including entrances. No more than 25% of the glazing may be signage.

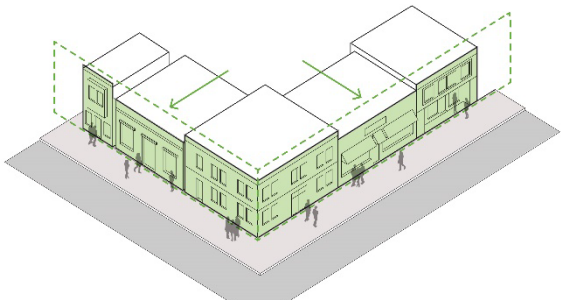


Figure 28. Build-to and Setbacks

MV55 Building Build-to and Setbacks

Front all buildings directly onto the street to provide a continuous street wall reinforcing the continuity of retail fronts and building facades along the street. A maximum setback of 3.0 m is allowed to provide space for elements such as outdoor seating, commercial spill out, and weather protection.

MV56 Setback Treatment

Locate seating close to building entrances. Similarly, locate store display areas, restaurant menu displays and sandwich boards within the setback.

Ensure that paving schemes in (or planned for) the public street right-of-way extend into the setback to provide visual uniformity.

Use a continuous paving band to demarcate the private realm from public realm, and areas used for outdoor display, patios and awnings.

MV57 Patios

Locate commercial patios adjacent to the street, or on building rooftops. Railings should have a complimentary design that considers the immediate and adjacent building architecture, and street and public realm standards.

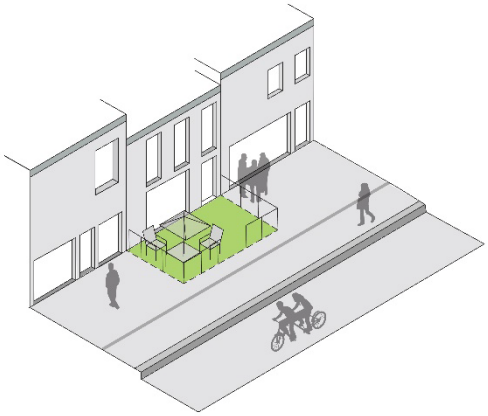


Figure 29. Patios

MV58 Weather Protection

Provide continuous 2.0 m deep weather protection. A minimum height clearance of 3.0 m is required to not obstruct pedestrians, and where possible they should be designed to avoid rainwater dripping directly on the travel path of pedestrians and cyclists.

MV59 Signage

In addition to MV35, use building signage that is focused on a pedestrian environment to facilitate a commercial street experience.

Figure 30. Weather Protection

Figure 31. Concept Rendering - McKee Village Streetscape

STEEP SLOPE DEVELOPMENT PERMIT GUIDELINES

AREA

Subdivision or alteration of land (including grading, tree clearing, and installation of services); and construction of, addition to, or alteration of a building or structure that occur in areas shown on Map 18 are subject to these Steep Slope Development Permit Guidelines. The areas shown on Map 18 include:

- land with slopes of 20% or greater
- land within 20 m of slopes that are 20% or greater

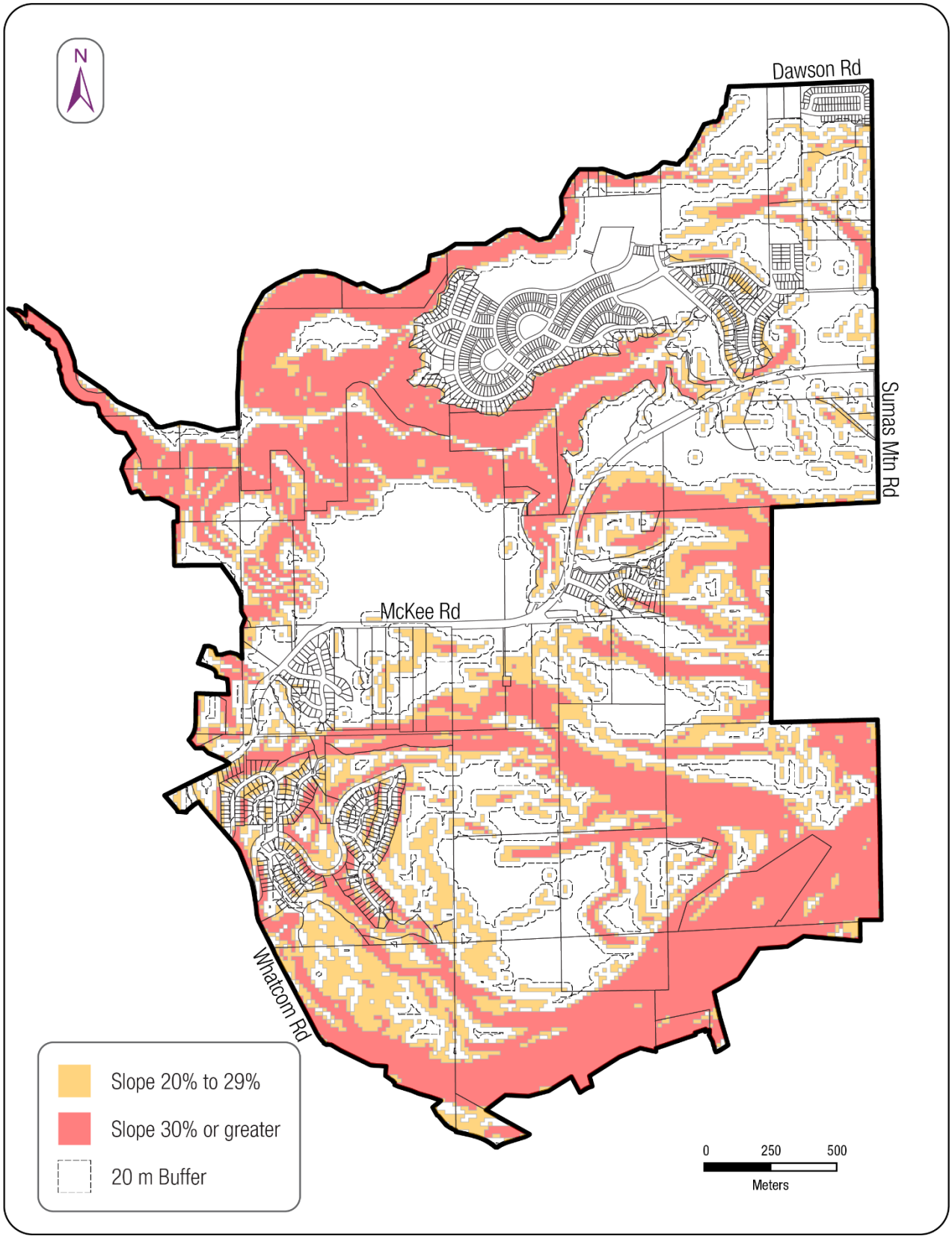
JUSTIFICATION

As the McKee neighbourhood grows, development will occur in areas with steep slopes where the potential risk of natural hazards such as landslides, erosion, debris flows, etc. present a danger to people and their property. Steepness of slopes does not necessarily correlate with stability of slopes, which depends on factors such as geological material, soils, moisture content and vegetation cover. However, precautions are needed to ensure development activity or resulting retaining structures do not create hazardous conditions.

Throughout the planning process, the plan area was celebrated for its natural beauty, environmental quality, and prominent views. In order to sensitively integrate new development into this context, development on steep terrain will also be reviewed for form and character. This approach to hillside development includes strategies for preserving significant natural features, suitable grading and massing techniques, and good site design.

OBJECTIVES

The following guidelines allow for land to be used for its intended purposes, while also protecting residents and property from the potential risk of natural hazards and preserving the natural hillside character. In many cases throughout the neighbourhood, development on or near steep slopes is unavoidable and requires measures during site and building design, construction, and long term maintenance to minimize the associated risks and ensure a high standard of design.



Map 18. Steep Slope Development Permit Area

EXEMPTIONS

Notwithstanding the following exemptions, the Community Charter enables a building inspector to require a geotechnical report.

1. A subdivision for lot consolidation or road widening
2. Construction, addition or alteration not exceeding 10 m^2 (100 ft^2) where no variance(s) is (are) required
3. Notwithstanding exemption 2, all interior/exterior building alterations that do not expand the existing building foundation
4. Buildings that have been destroyed by fire and/or natural disaster less than 75%, as determined by the building inspector provided the building massing, siting and general appearance are as prior to destruction and the use conforms to the Zoning Bylaw
5. Emergency circumstances to remove any immediate danger
6. Municipal works, services and maintenance activities carried out by, or on behalf of, the City generally in accordance with these guidelines
7. A restrictive covenant which effectively protects the property from the hazardous condition(s) is (are) already registered on the subject property, all the conditions in the covenant are met, and the proposed activity will not affect any portion of the hazardous conditions
8. Where the proponent provides satisfactory information to the City that clearly demonstrates that the proposed activity will not be in conflict with the Development Permit Guidelines. The determination may need to be by a qualified professional, which concludes that the portion of land being developed is not subject to hazardous conditions

GUIDELINES

The following guidelines may be applied when setting Development Permit conditions.

Hazardous Conditions

To identify parts of a parcel that require special consideration.

MSS1 Slope

Prohibit development on land with slopes over 40%. Development may be considered on slopes less than 40% where it can be demonstrated that the proposed development will not create environmental or visual impacts, can be sensitively integrated with terrain, and presents no hazards to persons or property.

MSS2 Unique Hazards

Identify unique hazards such as abandoned mine shafts and implement mitigation measures to deal with the hazardous conditions.

Conditions for Development

To establish general conditions and expectations of development in areas with steep slopes.

MSS3 Geotechnical Assessment Report

A Geotechnical Assessment Report is required for a parcel subject to a Steep Slope Development Permit to determine any risks from natural hazards and any required mitigation measures to the satisfaction of the City. All steep slopes on the subject site should be assessed as part of a Geotechnical Assessment Report, regardless of whether development or site alteration activity will occur on the particular steep slope(s). A third party peer review of a Geotechnical Assessment Report may be required at the expense of the applicant.

MSS4 Slope Protection

Protect slopes identified as unsuitable for development by a Geotechnical Assessment Report through measures such as dedication to the City, establishing a restrictive covenant, or rezoning to the satisfaction of the City.

MSS5 Mitigation and Conditions

Do not develop in areas with a potential for natural hazard, unless a qualified geotechnical professional provides recommendations for:

- mitigation measures to reduce risk of natural hazards for both the subject site and any adjacent and/or other potentially affected areas to an acceptable level during all stages of development;
- conditions (i.e. conditions relating to the permitted uses, density or scale of building) necessary to reduce risk of potential natural hazards to acceptable levels.

MSS6 Minimum Setback from Steep Slopes

Ensure all development, in addition to septic fields, swimming pools, hot tubs, ponds, or other uses at or near the top or base of steep slopes is set back a minimum of 10 metres from the top or base of any steep slope except as otherwise recommended by a qualified professional. Where development is near steep slopes greater than 30%, increase setback to a minimum of 15 metres except as otherwise recommended by a qualified professional.

Alteration of Slopes

To guide the alteration of slopes to reduce the risk of potential natural hazards to the property and its surroundings.

MSS7 Road Alignment

Align roads to follow natural site contours, conforming to existing topographic conditions rather than cutting across contours.

MSS8 Grading

Provide site grading that is smooth and stable. Finished slopes of all cuts and fills should not exceed a three-to-one (3:1) grade unless the applicant can demonstrate that steeper slopes can be stabilized and maintained adequately.

MSS9 Undercutting

Avoid undercutting the base of steep slopes for building, landscaping or other purposes except in accordance with the recommendations of a qualified professional.

MSS10 Location of Fill

Ensure fill is not located within 10 metres of the top of a steep slope.

MSS11 Retaining Wall Height

When designing retaining walls, respect the natural characteristics of the site and terrace walls to avoid overpowering the site with a large uniform wall face. As a general guide and where practical, retaining walls should not exceed 3.0 metres in height adjacent to roads and services and 1.2 metres in height between individual properties.

MSS12 Retaining Wall Terraces

Terrace retaining walls with sufficient width to allow plantings and maintenance. The height and depth of the retaining wall steps should be consistent with the natural terrain or with the slope above and below the walls. Lock block style retaining walls are not permitted.

MSS13 Building Forms and Massing

Step and articulate building forms and integrate and reflect the natural site contours and slope conditions. Avoid large unbroken building masses unsuitable for sloped conditions.

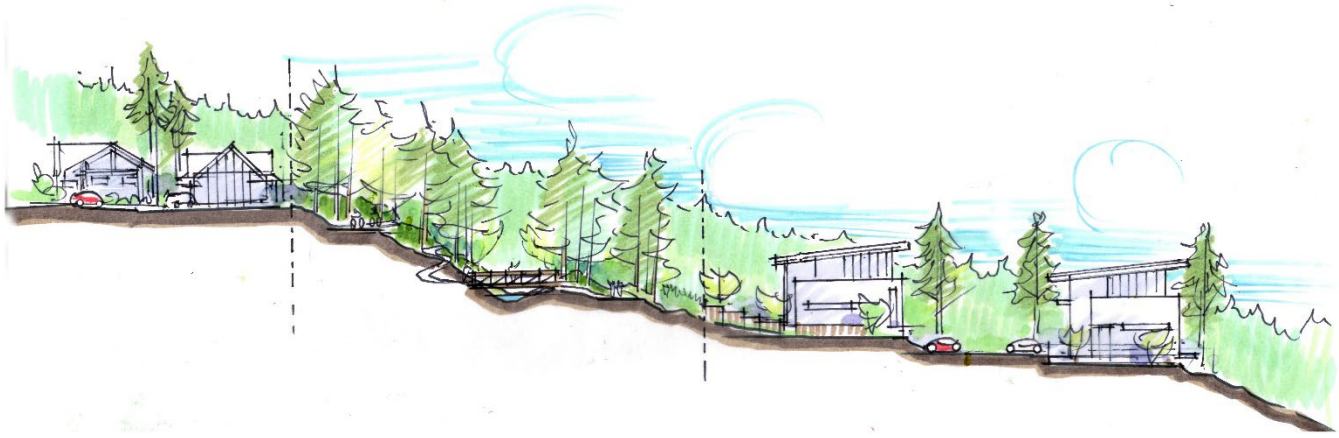


Figure 32. Concept Rendering - Building Forms and Massing

Landscape

To guide the design of landscaping for the mitigation of hazardous conditions on a property with a steep slope.

MSS14 Vegetation Maintenance and Reinstallment

Maintain and/or reinstall vegetation on the slopes and within any required setback above the slopes in order to absorb water and minimize erosion.

MSS15 Slope Reinforcement

Reinforce and revegetate disturbed slopes, especially where gullied or where bare soil is exposed, as soon as possible. Plant in accordance with the recommendations of a qualified professional. Ensure monitoring and maintenance of restored areas by qualified professionals until such time as the vegetation is established.

MSS16 Native Species

When revegetating steep slopes, plant species native to the Coastal Western Hemlock Biogeoclimatic Zone.

MSS17 Tree Removal

Avoid tree removal on steep slopes and retain trees as much as possible elsewhere.

MSS18 Maintenance and Monitoring

Maintain and monitor mitigation measures to ensure that the works are completed in accordance with the Development Permit.

Drainage and Erosion Control

To implement the use of sound stormwater management practices for the mitigation of hazardous conditions on a property with steep slopes and its surroundings.

MSS19 Stormwater Management Plan

A drainage or stormwater management plan assessing the collection, conveyance and control of stormwater on and off site is required in order to mitigate potential impacts on slopes, particularly downstream drainage routes. The plan shall be reviewed to the satisfaction of the City.

MSS20 Site Drainage

Design and maintain property, roof drainage and landscaping to shed water away from slopes. Lots should be graded towards the street, directing water away from slopes. Avoid ponding near slopes.

MSS21 Erosion and Sediment Control

Where appropriate, follow erosion and sediment control measures in accordance with the Erosion and Sediment Control Bylaw. Use erosion control mechanisms during the construction of all developments to minimize the flow of sediment into the surrounding environment.

MSS22 Road Surfaces

Roads should provide adequate surface drainage, avoid alteration of natural drainage patterns, and should be kept to minimum width and length to minimize the area of disturbance.

MSS23 Irrigation

Limit the use of irrigation. Where irrigation is essential, employ water conserving principles in the design of the irrigation system. Provide automatic shut-off valves for irrigation systems to reduce the risk of accidental erosion in the event of a system failure.

MSS24 Rockfall, Debris Flow, Landslide Mitigation

Mitigation recommendations by a qualified professional are required for rockfall, debris flow and landslide hazards for the subject property and any other potentially affected properties. The report should provide direction for modifications, including blasting techniques, and to verify overall slope stability, hazard mitigation and long-term maintenance requirements.

MSS25 Phasing

Phase land clearing to minimize the area exposed to loss and erosion at any one time.

MSS26 Natural Drainage Patterns

Ensure that natural drainage patterns are protected where possible. Modifications must not cause adverse impacts on adjacent lands.

MSS27 Direction of Flow

Flows should be contained by capturing roof and pavement drainage and conveying it to a comprehensive site drainage system that anticipates off-site drainage impacts.

MSS28 Impervious Surfaces

Reduce run-off and erosion by minimizing impervious surfaces.

MSS29 Detention Facilities

Stormwater should be collected and conveyed to a detention facility in a manner which avoids negative impacts to natural features or adjacent properties.

MSS30 Source Controls

Construct stormwater source controls to maintain baseflows and minimize downstream erosion and habitat degradation. Examples of source controls include: rain gardens, vegetated swales, pervious pavers, absorbent soil layers, green roofs, and rainwater harvesting. Source controls are not permitted in geotechnical setback areas unless approved by a geotechnical engineer.

MSS31 Peak Flow Control

Pipe new stormwater run-off to ravine bottoms to minimize bank erosion and instability.

Site Context

To guide the design of development sites within the unique hillside character of the neighbourhood.

MSS32 Site Design

Design a project to fit the site rather than altering the site to fit the project.

MSS33 Cluster Development

Cluster development as a means to minimize slope disturbance. Minimize density on the steepest slopes and cluster more density on flatter areas to reduce visual and structural impact.

MSS34 Lot Configuration

Use variation in lot sizes and subdivision layout to reflect the natural site contours, minimize cut and fill, and maximize developable areas. Do not create large flat terraces on hillsides to expand developable area.

MSS35 Ridgelines

Development must be sited below ridgelines, and should avoid the placement of roads, clear cuts, and large or continuous buildings on or over ridgelines. Trees and other vegetation on ridgelines should be retained as much as possible, so that the ridgeline is seen predominantly as a continuous line of natural terrain or vegetation.

MSS36 Sightlines

Design ground floor elevations and heights to be sensitive to adjacent properties and neighbouring sightlines. Optimize view corridors using staggered lots, strategic road placement, sensitive lot grading and appropriate landscaping.

Building Design

To guide the design of buildings that are people focused, attractive and responsive to the unique hillside character of the neighbourhood.

MSS37 Building Height

Limit building heights to the height of the existing tree cover and no higher than natural ridgelines.

Figure 33. Building Height

WILDFIRE HAZARD DEVELOPMENT PERMIT GUIDELINES

AREA

Subdivision or alteration of land (including grading, tree clearing, and installation of services); and construction of, addition to, or alteration of a building or structure that occur within the neighbourhood plan boundaries are subject to these Wildfire Hazard Development Permit Guidelines (Map 19).

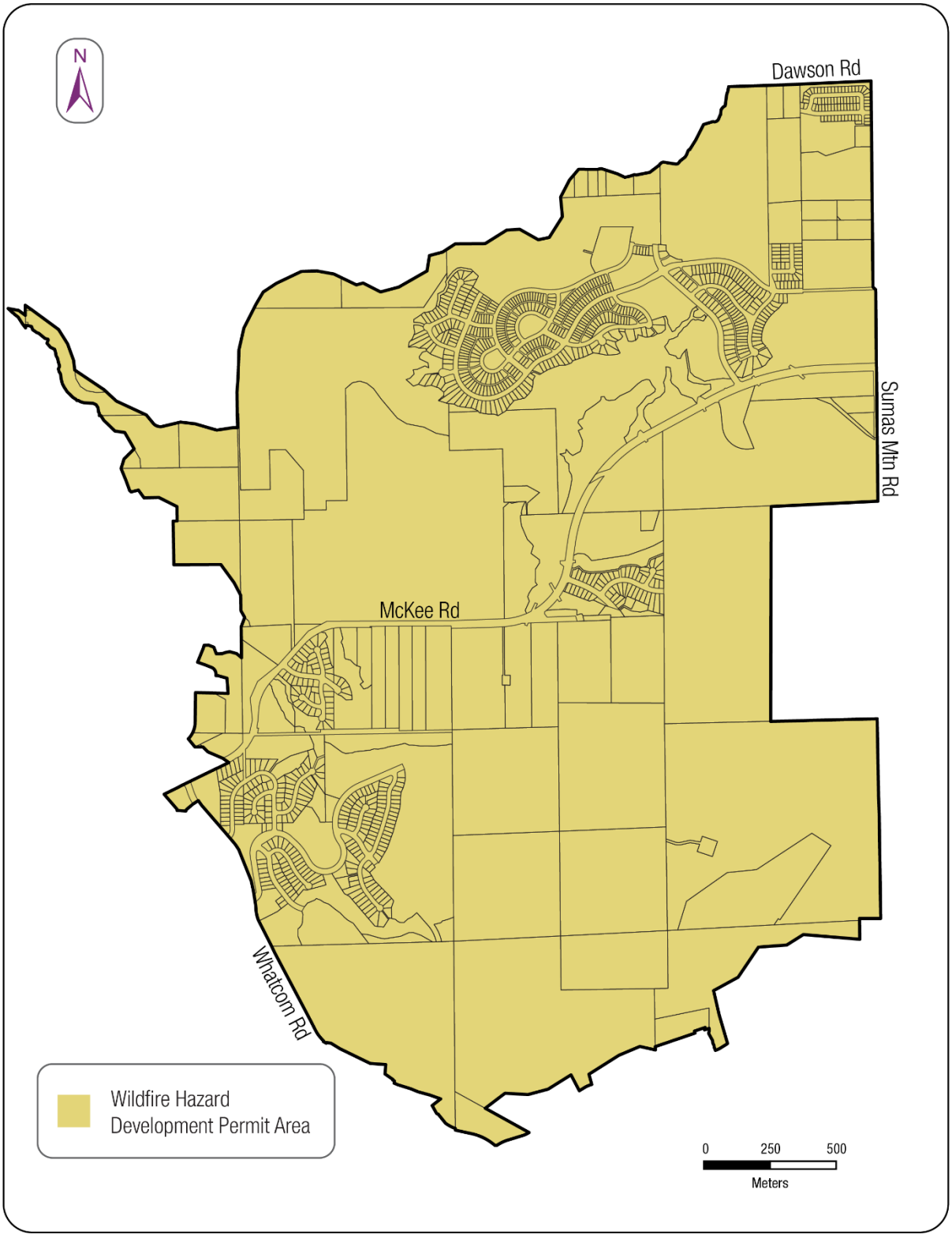
JUSTIFICATION

The McKee neighbourhood is located along the City's Wildland Urban Interface, and development adjacent to forested slopes may be exposed to wildfire risk areas. Wildfires are able to spread rapidly from forests to homes if unable to be controlled. Conversely, once the neighbourhood becomes developed, the surrounding wildland areas may be at a greater risk of fire exposure. Wildfires present a danger to people and their property, and to the diverse forest ecosystems within and beyond the plan area.

OBJECTIVES

The following guidelines are intended to adapt FireSmart principles and wildfire management and prevention best practices for development within the McKee neighbourhood, ensuring that:

- wildfire risk to people and property is minimized
- risk of fire to surrounding forests and ecosystems is minimized
- conditions affecting potential fire behaviour are managed and wildfire hazards are reduced



Map 19. Wildfire Hazard Development Permit Area

EXEMPTIONS

1. Construction, addition or alteration not exceeding 10 m^2 (100 ft^2) where no variance(s) is (are) required
2. Notwithstanding exemption 2, all interior building alterations that do not expand the existing building foundation
3. Emergency circumstances to remove any immediate danger
4. Municipal works, services and maintenance activities carried out by, or on behalf of, the City generally in accordance with these guidelines
5. A restrictive covenant which effectively protects the property from the hazardous condition(s) is (are) already registered on the subject property, all the conditions in the covenant are met, and the proposed activity will not affect any portion of the hazardous conditions
6. Where the proponent provides satisfactory information to the City that clearly demonstrates that the proposed activity will not be in conflict with the Development Permit Guidelines. The determination may need to be by a qualified professional, which concludes that the portion of land being developed is not subject to hazardous conditions
7. Development applications in-stream at the time of bylaw adoption

GUIDELINES

The following guidelines may be applied when setting Development Permit conditions.

Hazardous Conditions

To identify hazards to property that require special consideration.

WH1 Wildfire Risk Areas

Site new buildings, structures, and building additions as far away as reasonably possible from contiguous forested areas, ridgelines, cliffs, and ravines. If permanent structures already exist, avoid building between existing structures and wildfire risk areas.

WH2 Emergency Access

Enable adequate road access to isolated developments in the event of evacuation or fire control. Site buildings and design roads to accommodate emergency vehicles and equipment.

Conditions for Development

To establish general conditions and expectations of development in areas with wildfire hazards.

WH3 Wildfire Hazard Assessments

A Wildfire Hazard Assessment Report conducted by a Registered Professional Forester, Registered Forest Technician, or Registered Professional Engineer qualified by training or experience in fire protection may be required and reviewed to the satisfaction of the City.

WH4 Tree Assessment, Retention & Restoration

A tree assessment and retention/restoration plan conducted by a qualified professional may be required and reviewed to the satisfaction of the City.

WH5 Restrictive Covenants

Any registered covenants on title should notify future property owners of any of the following landscaping and building requirements.

Building Materials

To minimize wildfire risk through the use of fire-resistive building materials and construction practices.

WH6 Roofing

Use fire resistant or fire retardant roofing material as referenced in the current BC Building code.

WH7 Eaves, Vents & Openings

All eaves, vents, and openings under floors should be screened with non-combustible materials.

WH8 Windows

Windows should be tempered or double-paned. Minimize number and size of windows on the building face(s) most exposed to the wildland-urban interface or increase clearance distances between windows and vegetative fuels.

WH9 Exteriors

Use fire-resistive materials for all exterior siding. Untreated wood and vinyl siding are not permitted.

WH10 Decks, Balconies & Porches

Sheath decks, balconies and porches with fire-resistive materials.

WH12 Wood-Burning Appliances

Wood-burning fire appliances are not permitted.

WH13 Accessory Buildings

Consider constructing garden sheds and other small accessory structures with non-combustible materials.

Landscaping

To minimize wildfire risk by eliminating fuel and combustible debris using landscape design and maintenance.

WH14 Priority Zones

If deemed necessary by a qualified professional for the purpose of reducing wildfire risk, maintain a 10 metre radius around all structures to include only fire-resistant plants and materials. Consult the current FireSmart BC Guide to Landscaping for planting types and recommendations for priority zones beyond 10 metres.

WH15 Fire Breaks

Incorporate fire breaks into developments by strategically locating cleared parkland, detention ponds, and roads between wildfire risk areas and development sites.

WH16 Sprinklers

In areas where strata roads create limited access to properties, a requirement for residential fire sprinklers should be considered.

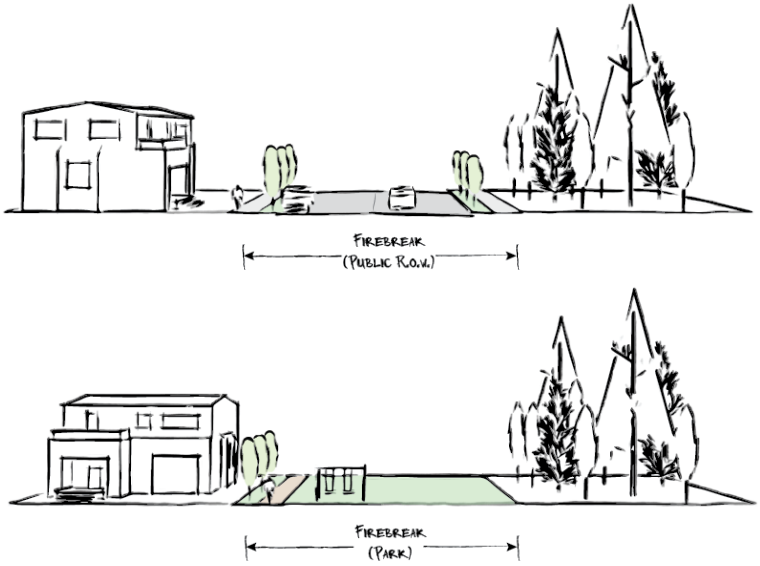


Figure 34. Fire Breaks

PART 5 INFRASTRUCTURE

TRANSPORTATION

PARKING

SERVICING

TRANSPORTATION

The Neighbourhood Plan establishes a foundation for the phasing of development in McKee, and this will provide an opportunity for walking, cycling, and transit to become easy transportation choices. Streets in the McKee Village have been designed as complete streets, where all modes (walking, cycling, transit, and vehicles) can safely and comfortably move throughout the neighbourhood. Streets in the neighbourhood will become more attractive, vibrant, and interesting places with sidewalks, street furniture, street trees, and wayfinding signs.

Pedestrians

Walking will be encouraged as a primary mode of transportation within the neighbourhood to access daily needs. Sidewalks will be required in residential areas of the neighbourhood, with pedestrian connection points to access trailheads. Trails within the Open Space network will be used for pedestrian access between neighbourhoods within McKee that are unable to connect with streets.

5.1 Reduce Crossing Distances

Reduce crossing distances on local streets, and where possible on collector streets, by introducing curb bulges and other appropriate sidewalk treatments at intersections.

5.2 Wayfinding

Provide wayfinding at key intersections along McKee Road, in the McKee Village, and at trailheads.

Cycling

The Open Space network will provide access for cyclists to connect to key destination points within the neighbourhood and beyond. This off-road cycling will be supported by the trails and appropriate road connections when necessary. Where a trail leads to a road, appropriate cycling infrastructure should support road cycling to connect to the nearest neighbourhood destination.

The McKee Village will cater to outdoor recreation activities, including mountain biking and cycling. There will be bicycle parking and wash stations to encourage the use of bicycles on the trail network.

5.3 Cycling Network

Connect trailheads to roads with bicycle infrastructure, such as bike lanes, to ensure continuity of each trip.

5.4 Pavement Demarcation

Demarcate areas of potential conflict between cyclists and other modes of travel through pavement markings along roads, and at intersection and crossings.

5.5 End of Trip Facilities

The provision of end of trip facilities such as bicycle racks, lockers and access to public washrooms should be considered as part of development.

Transit

A transit terminus will be located in the McKee Village to support the residential and commercial growth in the neighbourhood. In the northeastern edge of the City's Urban Development Boundary, the terminus will enhance transit accessibility for the neighbourhood in this central location. In addition, a transit loop will be added to the

neighbourhood once the extension of Westview Boulevard is constructed and there is sufficient development to support the route.

Streets will be designed to accommodate far side stops, as is BC Transit best practice. Transit stops will have bus shelters for an improved quality of trip, particularly in the rain.

5.6 Transit Terminus

Locate a transit terminus in the McKee Village in a location that facilitates transit and supports development.

5.7 Far Side Stops

Where possible, locate bus stops on the far side of intersections, and keep buses in traffic for stops to allow for optimal service.

5.8 Bus Shelters

Improve the comfort, safety and convenience of bus shelters in McKee to create a positive waiting experience for all transit users through targeted improvements such as weather protection, seating, lighting, and real time bus scheduling.

5.9 Timing and Design

The timing and design of both interim and ultimate transit routes, will be determined by BC Transit in consultation with the City of Abbotsford, and is subject to ridership demand in the plan area and available funding for the service.

PARKING

Strategic and sufficient parking for residents and outdoor recreation visitors will be essential to the success of the neighbourhood. It will enable visitors from elsewhere in the City and beyond to find safe parking that does not interfere with the parking needs and accessibility of residents. With additional residents, and increased visitors on the trails each year, on-street parking, trailhead parking, and small parking lots in key locations will enable the neighbourhood to thrive.

5.10 Underground Parking

Encourage all development in the McKee Village to locate required parking underground.

5.11 Maximize Parking

Maximize opportunities for permanent on-street parking throughout the neighbourhood by allowing parallel parking stalls on all public streets where sight lines permit.

5.12 Parking Pockets

Enable parking pockets to be built at identified trailhead locations (off street with gates).

5.13 Recreation Parking Lots

Build a parking lot for trail users in the McKee Village, and at the top of McKee Peak.

SERVICING

The servicing section of this plan outlines the road, water, wastewater, and stormwater systems to service the growth and development planned in McKee. The servicing is based on the land use map (see Map 3), which took into consideration land use analysis, and population projections. This information was used to inform modelling exercises for each of the infrastructure systems. To ensure that the servicing within the neighbourhood can be implemented, and allow the contemplated land use and density to be achieved, policies have been included within each servicing subsection. At the time of development application infrastructure systems are subject to further analysis and any adjusted infrastructure will not be considered an Official Community Plan amendment. This will enable infrastructure systems to be refined from further technical studies such as environmental and geotechnical without triggering an OCP amendment.

5.14 Servicing Re-Assessment

Any proposed land use or transportation network changes to what is shown in this Neighbourhood Plan may require re-evaluation or modification of servicing infrastructure.

ROAD NETWORK

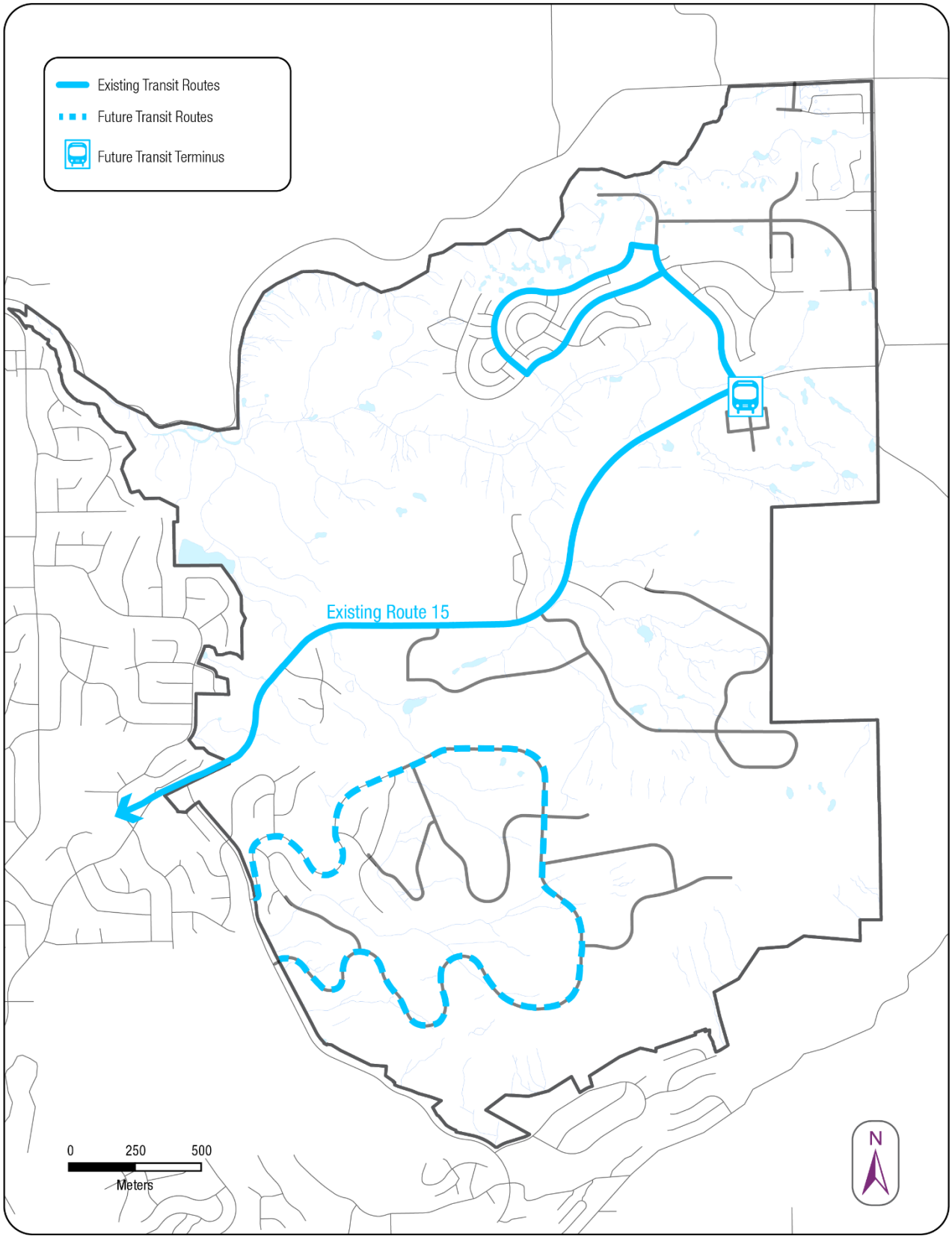
The road network was designed to provide access to development cells within the Neighbourhood Plan and to lands beyond. The internal roads identified will function as collector roads, and the local roads will be determined at the time of development application. The road network will align with the City's Development Bylaw, and with the Transportation Association of Canada (TAC) guidelines. Road grades are generally a maximum of 12% in most cases, however there are a few sections that were necessary to permit 15% to accommodate the steep mountain terrain. Given the topography, the road network will limit cut and fills, respect environmental setbacks, and minimize watercourse crossings.

During Stage 2 of the McKee Neighborhood Plan, the internal road network was developed based on concept alignments within the proposed neighborhood boundary. The development of the internal road network determined key elements to provide transportation form which included intersections, access points, network circulation, and neighborhood connectivity. Establishing the internal road network for the McKee Neighbourhood Plan provides the interaction basis with the external transportation network to complete the multi-modal traffic impact assessment (TIA).

Traffic Impact Assessment

During Stage 3, the multi-modal traffic impact assessment included the following major external roadways (included all key existing and future intersections along the corridor) in the immediate vicinity of the proposed McKee Neighbourhood to provide key connections to the City of Abbotsford to the west and with Highway 1 to the south:

- McKee Road
- Whatcom Road
- Sumas Mountain Road



Map 20. Transit Services

Traffic volume, growth, and distribution patterns developed for the study were determined from historical data collected.

Based on the developed internal neighborhood road network, existing external transportation network, and current understanding of the proposed McKee Neighborhood, the following key future road upgrades are anticipated:

1) Major Roadways

- McKee Road upgrade to 4-lane arterial (plus left turn lane)
- Whatcom Road upgrade to 4-lane arterial (plus left turn lane)

2) Intersections for Future Signalization

McKee Road

- Blauson Boulevard
- McKee Drive
- Ledgeview Neighborhood Access (New intersection)
- Buckingham Drive (Contingent on neighborhood build-out)
- Sumas Mountain Road (Contingent on neighborhood build-out)

Whatcom Road

- Westview Boulevard
- McKee Peak Neighborhood Access (New intersection)

3) Internal Roadways

- Collector road classifications

Other network capacity increases and localized intersection upgrades will be required along the external road network.

5.15 Lands Beyond Access Points

Access points to lands beyond and existing roads have been established and are shown on Map 21. By indicating access points to lands beyond, it facilitates development in a fair and equitable manner, and ensures that a collector network is possible given the steep terrain. These points are to provide guidance as to where roads should connect to lands beyond, but are not fixed points. Notwithstanding, City engineering staff will review proposed lands beyond points to ensure the integrity of the road network is maintained, and principles of fairness and safety are upheld.

Within developable lands, road alignments as shown on Map 21 are conceptual and can respond to proposed development, so long as the proposed network meets City Development Bylaw Standards.

5.16 Off-Set and Skew Intersections

All intersections must be perpendicular, in accordance with the Transportation Association of Canada (TAC) guidelines. Off-set and skew intersections will not be permitted.

5.17 Cut and Fill

Limit cut and fill, and reduce the impact where necessary.

5.18 Roads in Environmental Areas

Respect federal, provincial, and municipal environmental setbacks for roads, and reduce the impact of road construction in environmental areas.

5.19 Trans Mountain Pipeline

New roads crossings will not be permitted within the Trans Mountain Pipeline right-of-way.

5.20 Road Grades

Maintain a maximum road grade of 12% throughout the neighbourhood. To accommodate the steep mountainous terrain, 15% grade will be permitted in select scenarios and will be determined at the time of development.

5.21 Cross-Sections

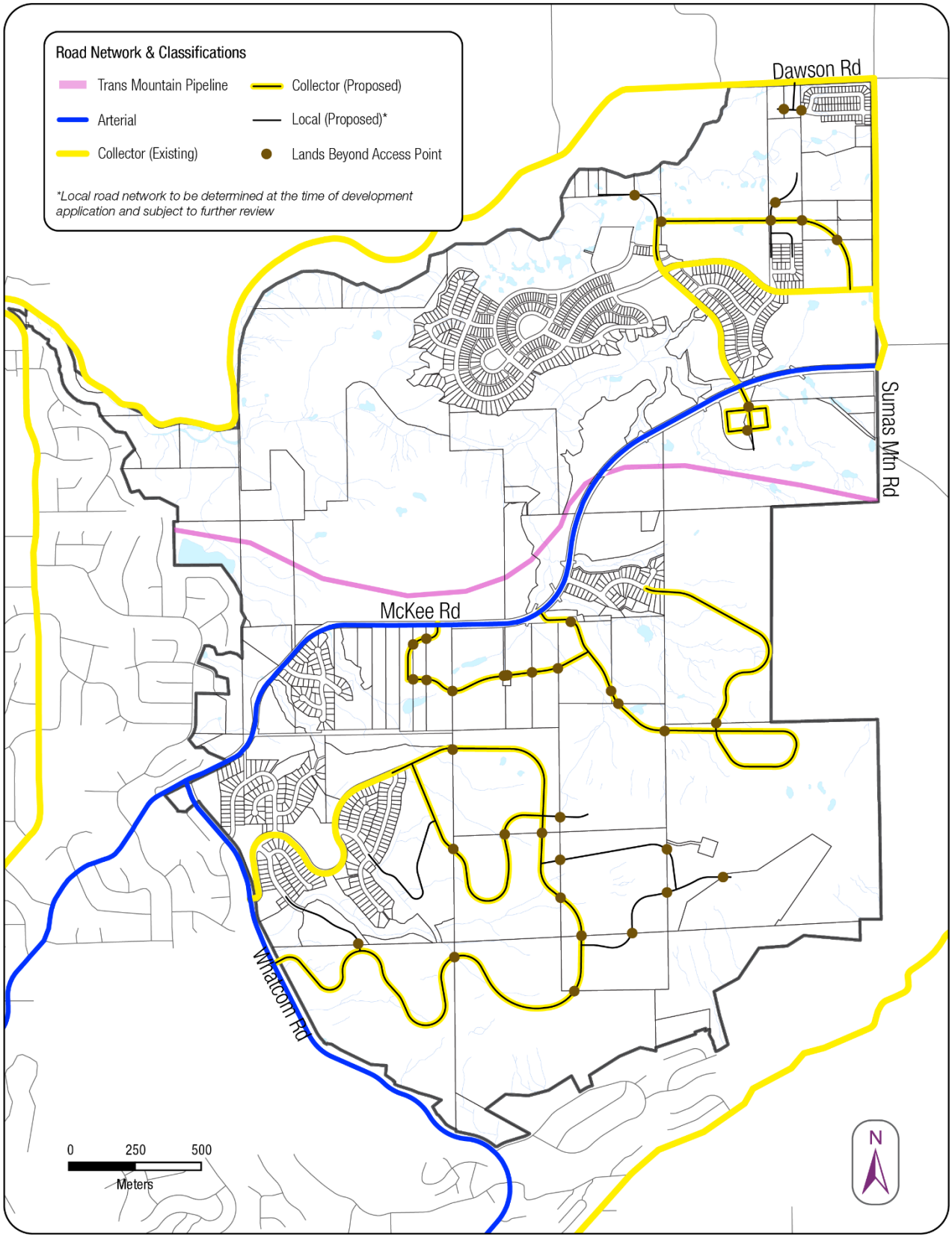
Hillside neighbourhood standards will be applicable throughout the McKee neighbourhood as per City Development Bylaw Standards. Hillside collector roads will vary between 14.5 m to 20 m right-of-way. Similarly, hillside local roads will vary between 13.5 m to 16.5 m right-of-way. Areas not considered to be within hillside development areas will use typical urban cross-sections as per the City Development Bylaw.

STORMWATER MANAGEMENT PLAN

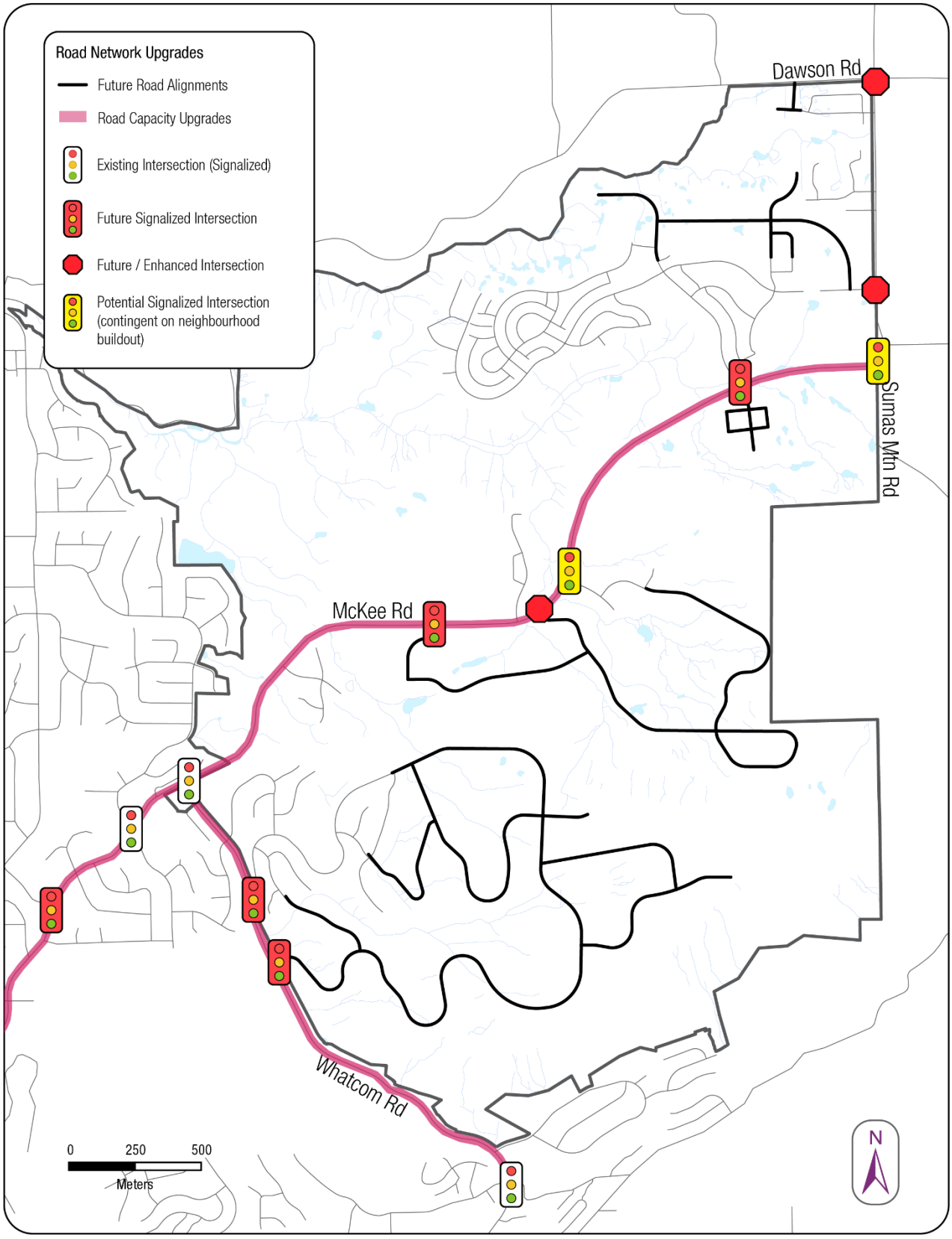
The primary goal of the proposed stormwater system is to efficiently capture and convey runoff from the development while protecting the health and well-being of the public and environment. The neighbourhood will use a community detention facility based system where all development within a catchment will contribute.

The proposed system is designed to mitigate and reduce the impacts of development on downstream infrastructure and habitat by reducing peak discharge rates and discharge volumes. Catchment sizes and boundaries have been kept as similar to existing boundaries as possible in order to maintain existing flow patterns. The components comprising the drainage system include:

- Underground storm sewer mains to collect and convey runoff from the various development zones proposed within the NP
- Detention systems (ponds and tanks) to control post-development flows to established targets for the 6-month, 2-year, 5-year, and 100-year pre-development return periods, or 5L/S/ha, whichever is less
- Low flow diversion structures designed to maintain the existing flow to existing watercourses where necessary
- LID measures located throughout the development to provide stormwater retention in order to meet runoff volume targets



Map 21. Road Network and Classifications



Map 22. Road Network Upgrades

Urban 2 –Ground Oriented developments that are strata based, commercial, and institutional zoning are expected to have their own on-site detention and discharge at a release rate at or below the target rates for the various return periods. Due to numerous constraints, including topography, watercourse crossings and Streamside Protection and Enhancement (SPEA) setbacks, not all proposed development areas within the MNP area are able to drain to the proposed community detention facilities.

The proposed community detention facilities with their corresponding preliminary volumes are shown below:

Community Detention Facility	Total Volume
Pond 1	5150 m^3
Pond 2	2080 m^3
Pond 3	8630 m^3
Tank 4a, 4b	9740 m^3
Pond 5	6580 m^3
Pond 6	2950 m^3
Pond 7	12570 m^3
Pond 8a, 8b	6120 m^3
Pond 9a, Tank 9b	7250 m^3
Tank 10	4510 m^3
Tank 11	8280 m^3
Tank 12	2350 m^3

Table 2. Proposed Community Detention Facilities

The Neighbourhood Plan identifies the proposed catchment areas, and associated community detention facilities as well as the few locations where private onsite detention will be required (see Map 23).

5.22 Catchment Based System

Ensure all development contributes to the Community Detention Facility for the associated catchment area. When this is not feasible, private on-site detention may be permitted.

5.23 Base Flows

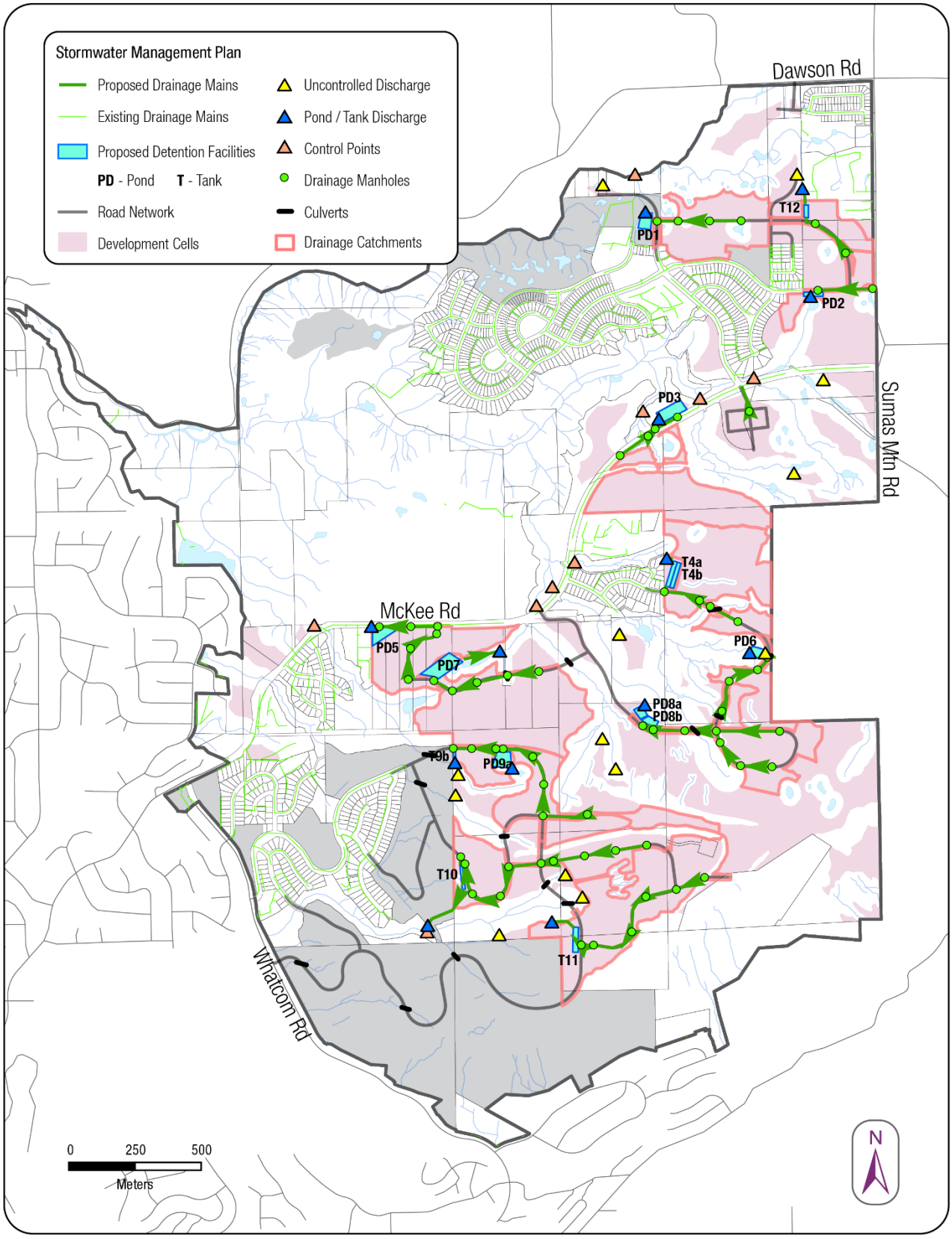
Maintain the base flows of existing watercourses.

5.24 Infrastructure in Roads

Ensure stormwater infrastructure is located under roads, and not located on private property or through environmental areas.

5.25 Community Detention Ponds

Constructed community detention ponds must be designed so that they provide storm flow retention, water quality improvement, aesthetic benefits, and ecological value.



Map 23. Stormwater Management Plan

WASTEWATER SYSTEM

To take advantage of the topography, the neighbourhood will utilize a gravity based system with some force lift stations and forcemains as needed, as per Map 24.

Three tie in points have been identified for McKee Peak, one at the end of Treetop Drive, one at the end of Westview Boulevard and one at the end of Harvest Dr. All piping is anticipated to be via gravity with the exception of one private lift station proposed at the Whatcom Rd tie in. This is a low point where the sewage would need to be pumped via forcemain either up Whatcom Rd or up McKee Peak.

The Ledgeview development area is east of McKee Peak and is accessed opposite to the Ledgeview Golf Course and by extending the Westminster Rd. This area will be serviced by 200 mm diameter gravity main with tie-ins along McKee Road. Three municipal lift stations and one private lift station have been proposed at low points in the system.

Auguston is made up of short segments of sanitary main tying into the existing system and five (5) private lift stations at low points that cannot tie in to the existing gravity mains.

5.26 Catchment Based System

Ensure all development contributes to the catchment area.

5.27 Use Gravity

Use gravity to collect wastewater where possible. When this is not feasible, pump stations may be permitted.

5.28 Infrastructure in Roads

Ensure wastewater infrastructure is located under roads, and not located on private property or through environmentally sensitive areas.

WATER SYSTEM

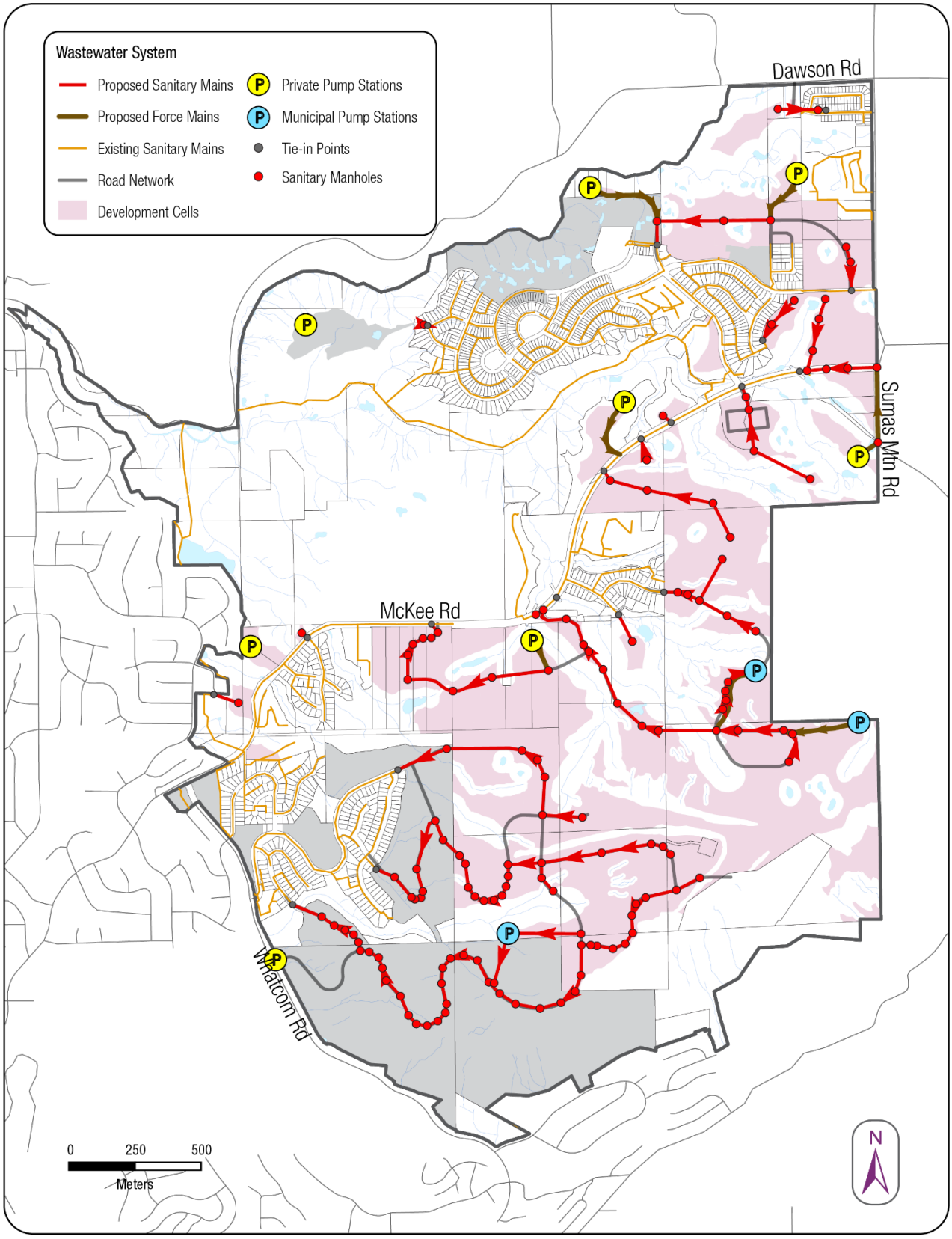
To distribute water throughout the neighbourhood there will be water reservoirs, pump stations, and a water main trunk network. The Neighbourhood Plan provides options for the ultimate location of the water reservoir to facilitate phasing for developers.

Reservoirs

There are three reservoirs and one expansion cell in the ultimate build-out scenario for the McKee Water Servicing Plan, as follows:

- The existing McKee reservoir off McKee Rd with an expansion cell;
- The Phase 1 and Phase 2 McKee Peak reservoirs on McKee Peak; and
- The Ledgeview reservoir in Ledgeview.

A reservoir volume is also provided should McKee Peak be developed in one phase at the phase 2 location. The McKee Peak Phase 1 reservoir services both multi-family and single family, requiring a fire flow of 150 l/s for total duration of 2.5 hours. The McKee Peak Phase 2 reservoir services single family residential and a proposed elementary school, therefore requiring 200 l/s at 2.5 hours for fire flow.



Map 24. Wastewater System

As per the 2018 Water Master Plan, the Existing McKee reservoir is designed with a fire flow of 167 l/s at 2 hours duration with 0.11 ML of excess storage under existing conditions. The proposed reservoir's expansion tank is designed to provide 200 Lps for a total duration of 2.5 hours for fire flow, plus the 2051 MDD for Auguston minus the 0.11 ML surplus and existing fire storage resulting in a total additional storage of 1.24 ML required to meet the needs of the future Auguston area. The completion of the expansion cell will upgrade the system to meet current FUS fire flow requirements.

Pump Stations

For McKee Peak, three new pump stations are required to service the development, named as McKee Pump 1, McKee Pump 2, and McKee Pump 3, respectively. McKee Pump 1 will be located at the same location as the Westview pump station and will pump water to the proposed reservoir at 349m (for PZ 349). The existing pump stations service Westview (PZ 290) as a closed loop system and will no longer be needed once the McKee Peak system is tied into Westview and serviced by gravity. McKee Pump 1 will require sufficient head to pump the proposed reservoir at 349m and sufficient flow to service the full buildout scenario. There is an existing 350 mm watermain along Westview that will be used for the dedicated service line to the McKee Peak Reservoirs. The McKee Pump 2 will sufficient head to pump from the proposed reservoir at 349m to the second reservoir at 468m and flow to service the full build out scenario. McKee Pump 3 will be a closed system that will pump from the reservoir at 468m to the top of McKee Peak (PZ 492) and will require a fire pump.

Ledgeview, like McKee Peak, will require two new pump stations in series (Ledgeview Pump 1 and Ledgeview Pump 2) to supply water to Ledgeview Reservoir. The existing pump station building and electrical/mechanical infrastructure is available at the Westminster Pump station so that only a new pump installation is required. A 350 mm watermain with pressure class 250 (1723 kPa) is already installed along Westminster Drive that can be used. From the stub out point, a 250 mm watermain is required to supply the Ledgeview Reservoir. The first pump will require sufficient head to reach the second pump while the second pump will require the head to service the closed system at the top of Ledgeview (PZ 431). Note that the required flow must meet PHD for the closed system at PZ 431 and MDD for the gravity system. A fire flow pump will also be required for the closed system and is proposed downstream of the Ledgeview Reservoir. In order to allow for phasing of development along McKee Rd an interim pump station will be required to service upper bench of the properties along McKee Rd. In the ultimate build out scenario these properties will be gravity fed from the Ledgeview Reservoir.

Distribution System

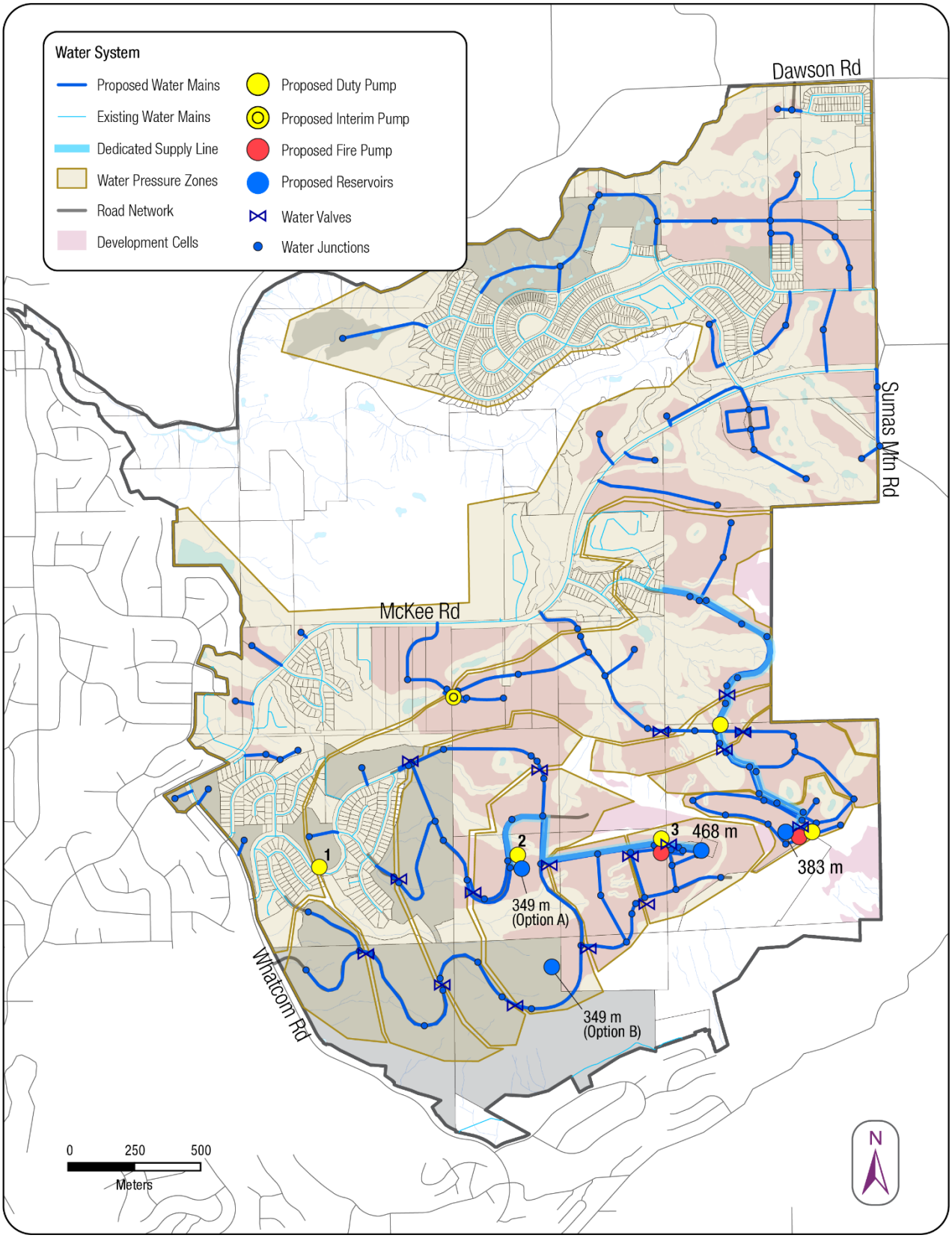
The distribution main along McKee Rd from the McKee Reservoir is a 400 mm watermain until 310m from the McKee Rd and Blauson Blvd intersection where its reduced to a 300 mm watermain. During fire flow scenarios run in Auguston, minimum pressure of 150 kPa cannot be maintained in Auguston. The twinning upgrade is required prior to the development of multi-family, commercial or institutional developments.

5.29 Options for 349 Metre Reservoir and Pump Station

One of the two options identified on Map 25 will be constructed by the developer. This will allow for efficient phasing and servicing for the neighbourhood. However, Option B will require re-routing of the existing 350mm water main to feed the proposed location of the reservoir.

5.30 Infrastructure in Roads

Ensure water infrastructure is located under roads, and not located on private property or through environmental areas.



Map 25. Water System

PART 6 IMPLEMENTATION

FINANCIAL STRATEGY

PHASING PLAN

FINANCIAL STRATEGY

The McKee financial strategy is intended to assist in the orderly, predictable, and equitable development of the neighbourhood and is based on the principle that those creating additional demand and burden to the infrastructure pay for it. Generally, development is required to provide and pay for the infrastructure needed to support their development, and the City does not finance, nor provide infrastructure required for development. As such, the Transportation and Utilities sections in Part 5 identifies general infrastructure needed to support the entire McKee Neighbourhood Plan area.

Developer Responsibility

As individual properties are developed in McKee, the developer is responsible to provide the infrastructure needed to support their individual development proposal. This may include frontage infrastructure works (with potentially enhanced finish and furnishings) as well as applicable offsite infrastructure works. In other words, the developer constructs and pays for the infrastructure needed to support their development proposal.

Applicable latecomer agreements may be an option if “excess” or “extended” infrastructure is required that benefits other developable properties along the upgraded infrastructure. This provides the developer a tool to collect from future benefitting developments. Another option available to developers to assist with recovering a proportion of front ended infrastructure investments is the use of development works agreements.

Capital Programs

The City may decide to upgrade some of the infrastructure within or around McKee if there is a benefit to the broad community, and not development related. For example, the City may decide to fund a specific transportation project such as building a parking lot on City-owned land. The infrastructure that may be funded through the capital program is unknown at this time.

Grants

Senior government grant programs are constantly changing and there may be future opportunities for some infrastructure to be funded through these programs. Generally, these programs do not fund growth related projects but are available for more broad and strategic initiatives such as green infrastructure to reduce the community impact on the environment, or affordable housing partnership projects. The City may determine the need for a project in McKee aligns with an available grant program at any time during the life of this plan, and proceed with applying for and implementing that project.

Development Cost Charges

The City has a Development Cost Charge (DCC) Bylaw to set fees that are collected from developers to offset some of the infrastructure costs incurred as a result of new development. The rates of fees are updated from time to time based on the need for projects to meet the demands of growth across the City.

If any of the infrastructure works identified in the McKee Neighbourhood servicing study are included in a future DCC Bylaw, there may be opportunities for rebates and/or credits to be applied to the specific infrastructure works. The infrastructure that may be included in future DCC Bylaws is unknown at this time.

PHASING PLAN

The following general prerequisites must be satisfied prior to adoption or a rezoning bylaw. This list is not deemed to be exhaustive, as other requirements may be added based on site specific conditions and changes to City bylaws, policies and procedures.

Servicing

Water

- Assessed with each application
- Considerations for cash-in-lieu for ultimate build-out
- The developer must provide statutory ROW's over neighbouring lands to construct the water system

Stormwater

- The community detention facility located with the catchment must be secured through the first development application in the applicable catchment (see Map 23)
- The storm system will be built to the development's needs, but the system will be designed and sized to accommodate upstream development
- Site specific stormwater facility to accommodate development land outside of the community detention facility catchment boundary
- The developer must provide statutory ROW's over neighbouring lands to construct the drainage system

Wastewater

- Sanitary system to be constructed from existing downstream system to the development lands with consideration to lands beyond
- The developer must provide statutory ROW's over neighbouring lands to construct the sewer system
-

Road Network

- All collector roads must be constructed through the development to connect to lands beyond
- The developer must provide statutory ROW's over neighbouring lands to construct the collector road network
- All traffic signals must be secured at the time of development
- Traffic calming methods to be secured at the time of development

Schools

Elementary, middle and high schools are to be located in the neighbourhood to accommodate future growth. Schools will be distributed across the neighbourhood, on sites that meet the needs of Abbotsford School District 34. Auguston Traditional Elementary School fulfills the elementary school requirement within the Auguston area, and the school district has already secured a middle school site for the neighbourhood, which fronts the future extension of Farina Road (Map 26).

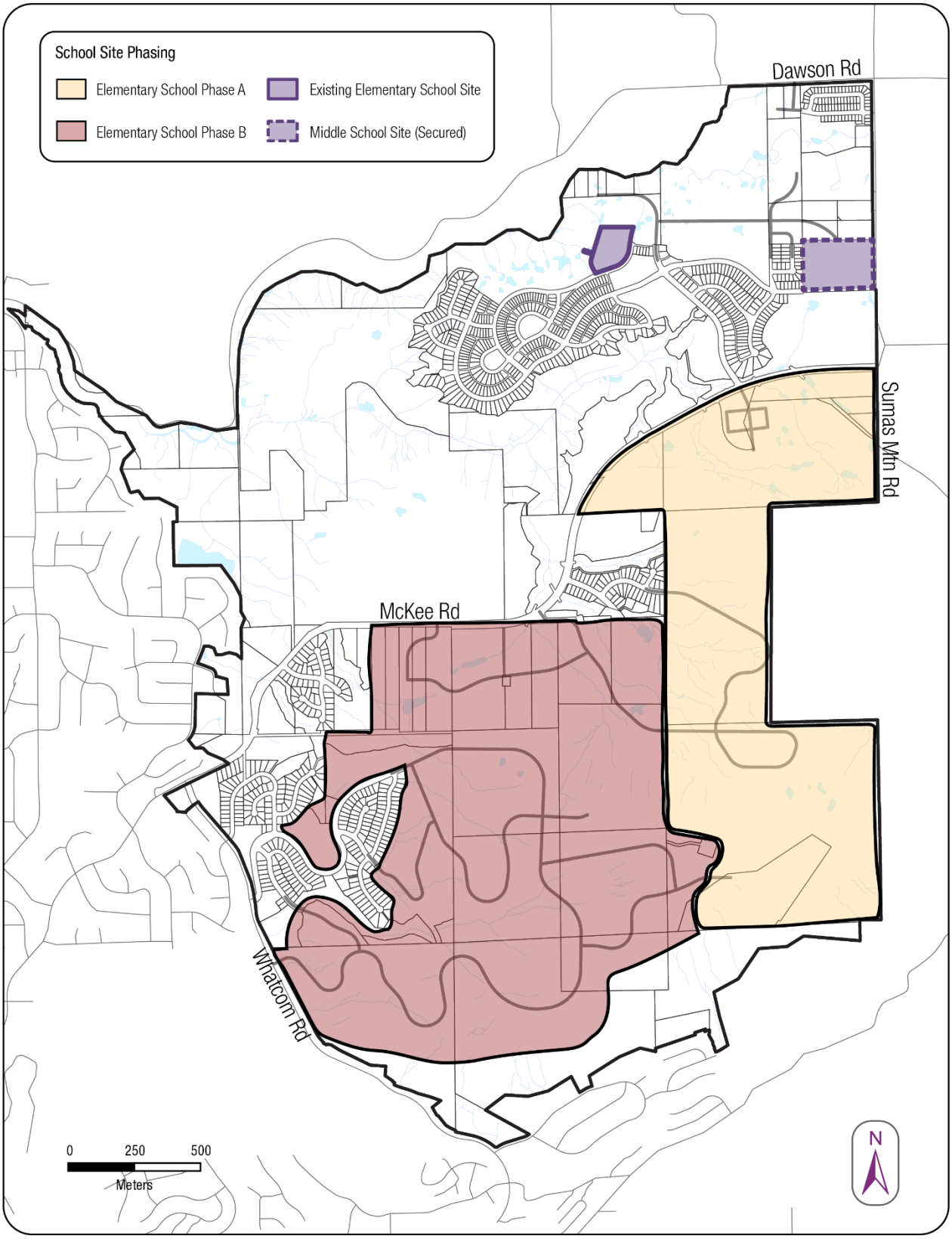
To accommodate future student population growth within the plan area, two more elementary schools and a secondary school are required. To ensure school sites are provided in a fair and equitable manner, elementary school sites will be secured as follows:

- Future elementary school sites must be secured through the first rezoning application in the applicable elementary school phase (see Map 26).
- Elementary school sites should be located adjacent to collector roads. Site size requirements are to be discussed with the school district and the City.

The required secondary school site will be secured when 50% (3,300 principal dwelling units) of the total number of principal dwelling units within the plan area is reached, and this is subject to City Council approval. Currently there are 1,500 principal dwelling units within the plan area, and in order to reach the 50% threshold of 3,300 units, another 1,800 units will be required to be approved. The secondary school site should be located adjacent to collector or arterial roads, and site size requirements are to be discussed with the school district.

Note: the 50% principal dwelling units is derived from the lower projected units bound of 6,600, found in Figure 5. Population Projections.

Figure 35. Concept Rendering - Schools



Map 26. School Site Phasing

McKEE NEIGHBOURHOOD PLAN

ABBOTSFORD