



Sandstone



Sandstone Master Plan (SMP2021)

October 2021

SANDSTONE MASTER PLAN (SMP2021)

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Prepared for: City of Nanaimo

Prepared by: Seacliff Properties (Sandstone) Ltd.

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Overview

The purpose of the SMP2021 is to outline a vision and policy framework for land use for the Sandstone development lands, referred to in the *planNanaimo Official Community Plan* (the “OCP”) and corresponding area plan as “the Sandstone lands” and the “Sandstone Master Plan” respectively. The SMP2021 reflects changes in the planning boundaries and the community direction for the lands since the original Sandstone Master Plan was adopted in 2009. The new plan has a focus on economic development and employment as well as social, economic and ecological sustainability to bring it current with today’s policies and priorities. Additionally, the SMP2021 provides for increased diversity and flexibility, ensuring that a planning framework is established for a successful long-term development that can respond, adapt and evolve to rapidly changing market conditions as well as technological innovations.

Executive Summary

The Sandstone development (Sandstone) is a 294-hectare site located in the southern most boundary of the City of Nanaimo, at the junction of Highway 1 and the Duke Point Highway.

The purpose of the SMP2021 is to establish the long-term vision and planning framework for the creation of a successful, comprehensively planned development in Nanaimo's south end. The SMP2021 also describes key components including land use designations and densities (described by precincts), transportation, parks and open spaces, sustainability, infrastructure and urban design policies and guidelines. The intent of the SMP2021 is to:

- Act as a guide to shape future growth and manage change providing direction for subsequent land use, subdivisions, and development approvals for the Sandstone lands.
- Promote development that is economically, socially, and ecologically sustainable; and
- Provide for design innovation and creativity to enable a broad and flexible zoning for an exciting new economic and employment hub, neighbourhood centre and residential neighbourhoods in south Nanaimo.

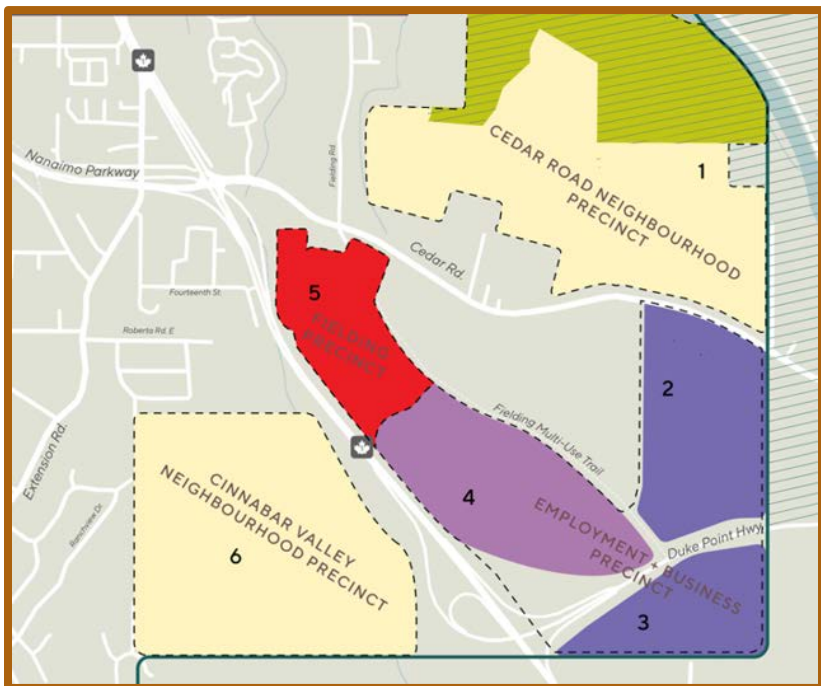
Vision

Sandstone is intended to be a comprehensively planned yet diverse community that offers a wide range of land uses in four precincts, with:

- A strong economic and business focus, with a major aspect of the community providing substantial new industrial uses and opportunity. Additionally, new retail, several types and forms of commercial and an integration of business and technology areas will generate new skilled jobs and employment opportunities;
- A neighbourhood centre that will provide a more urban experience, offering a mix of multi-family residential and commercial/retail opportunities; and
- Two residential neighbourhoods, with one being located on the west side of the Island Highway and the second on the lands between Cedar Road and the Nanaimo River.



Sandstone



The SMP2021 policies also address the creation of a healthy and environmentally conscious community that is sensitive to environmental, social, and economic sustainability. The Sandstone lands are currently recognized in the OCP as a major Urban Node for South Nanaimo. The OCP does, however, continue to recognize the primacy of maintaining a strong and vibrant downtown, and states that the Downtown Urban Node is the focal point of Nanaimo, and supports the continued development of Downtown Nanaimo as the heart of the city.

As such, Sandstone is viewed as a southern gateway that will help support and strengthen the surrounding community by delivering economic growth through substantial new industrial land use opportunities, along with providing other commercial and residential opportunities for south Nanaimo residents. While the SMP2021 provides for a diverse range of land uses in four distinct ‘precincts’, it recognizes the role of sound urban design that is appropriate and contextual for each. The Fielding Precinct will evolve into a livable, mixed-use neighbourhood centre, with a unique and modern character for the south Nanaimo region. Complementary to the Fielding Precinct will be the Employment & Business Precinct (the “EB Precinct”) that will comprise industrial lands supported by the Duke Point Highway, the Trans-Canada Highway, and Cedar Road. From a residential perspective, two new neighbourhoods will be provided, being the Cinnabar Valley Neighbourhood Precinct (the “CVN Precinct”) located on the west side of the Island Highway, and the Cedar Road Neighbourhood Precinct (the “CRN Precinct”) located on the lands between Cedar Road and the Nanaimo River. These two residential precincts envision a mix of detached, semi-detached and townhome forms of development, designed to complement the existing surrounding communities. Parks and open spaces are another key aspect, with up to half of the lands in both the CVN and CRN Precincts planned for park dedication over time.

Development will be phased and occur over a number of years, with the coordinated delivery of a parks and open space network, infrastructure, transportation and mobility network. The community amenities and phasing of servicing will be determined through a Development Agreement at time of rezoning. The exact timeline and phasing of the development will be influenced by a number of factors including but not limited to market demand, site constraints, infrastructure capacity, and the proposed form and character of each individual land use.

ECONOMIC BENEFITS

Sandstone is expected to contribute to the diversification of the City of Nanaimo’s property tax base with varied land uses across the development lands with a focus on industrial land uses. The development of the Sandstone lands is expected to generate approximately 1200 jobs per year from construction activities and support thousands of jobs at once built out.

The buildout of the Sandstone development will take up to 20 years to complete and will include:

- A new employment and economic hub.
- New retail, services, commercial/office spaces and amenities.
- A range of housing options
- A series of parks and open spaces providing opportunity for recreation and enjoyment of nature.

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1. Introduction

The original Sandstone Master Plan was adopted in 2009 and incorporated into the OCP. Since that time, a number of new policies, goals and objectives have evolved, as have the realities of existing land uses, development trends and future population change. These changes, along with the need to provide for increased diversity and flexibility for a successful long-term development requires that the 2009 Master Plan and accompanying OCP Land Use designations be updated.

The Sandstone development is a 294-hectare site located at the southern boundary of the City of Nanaimo. This location has been identified by the OCP as one of five nodes, each intended to become the focus of activity in its respective region of the Nanaimo. This guidance, in addition to a variety of other policy influences have formed the basis for the SMP2021.

Sandstone is envisioned as a comprehensively planned, diverse community comprised of a series of precincts. A major focus of Sandstone is to provide new economic and business opportunities, providing extensive industrial growth, along with retail, business and employment centre. Sandstone will also bring new housing choices and growth as well as open space and other amenities to serve south Nanaimo.



Figure 1 Sandstone Subject Lands

The SMP2021 is intended to be a flexible document that reflects the desires of the community and will set the framework for more detailed planning steps that will follow. The SMP2021 provides a long-range vision for the planning and development of the lands by describing key development components that includes guiding principles, major land uses, infrastructure, transportation, sustainability, parks and open space, and urban design intentions.

1.1 Proponent

In 2006, the property, originally referred to as the South Nanaimo Lands, and now known as Sandstone, was purchased by Northwest Properties and Snuneymuxw First Nation.



In November 2018, Seacliff Properties purchased the Sandstone lands. Since then, Seacliff has been working closely with the City of Nanaimo, the properties' neighbours, Snuneymuxw First Nation, the general community, and other key stakeholders to develop an updated Master Plan.

Seacliff Properties is a family-owned BC-based development company with numerous successful developments throughout the Lower Mainland and Vancouver Island. Seacliff prioritizes sound planning principles, and purchases, plans, and develops properties where there is potential for long-term community benefit and value.

1.2 Vision

The SMP2021 will shape future growth and manage change as the Sandstone lands develop over time. A vision establishes the goals and purpose of a project and provides a strategic understanding of what the project would like to achieve. The SMP2021 envisions Sandstone as a comprehensively planned yet diverse and unique development that provides for a wide range of land uses. Sandstone will become a gateway for the south side of Nanaimo in which there are significant opportunities for new economic and business growth through the creation of a substantial new industrial and employment node, while also offering additional commercial/retail and residential opportunities. The vision for Sandstone includes the following key elements:

- ✓ Become a major focus of employment and economic development opportunities in the southern Nanaimo area, with an emphasis on providing significant new industrial land use opportunities
- ✓ Create a comprehensively planned series of precincts that can accommodate a diverse offering of land uses ranging including industrial, commercial and residential. Sandstone will ensure the precincts are integrated with surrounding neighbourhoods.
- ✓ Develop four distinct precincts that each provide a unique character and offering to complement the surrounding neighbourhoods and the City of Nanaimo as a whole;
- ✓ Create a gateway to the mid-Island in the southern end of Nanaimo, which forges important links with the city, the region, Nanaimo's airport, and the Duke Point Ferry Terminal;
- ✓ Promote walkable residential neighbourhoods with a range of housing options, from single-family detached housing and low-density townhouses (CVN & CRN Precincts) to higher density townhouses and apartment housing (Fielding Precinct); and
- ✓ Encourage density forms, settlement patterns, and new infrastructure that will support enhanced public transportation as outlined in the Transit Future Plan.

1.3 Community Benefits

As an important centre and gateway for south Nanaimo, Sandstone will provide a number of benefits that will accrue to the surrounding community – many of which have been identified by the community, and are contained in the OCP, including:

- Creation of a comprehensively planned, diverse development
- Jobs and employment opportunities
- New industrial, retail, commercial, and office service-oriented development
- Compact land use patterns preventing regional sprawl
- Upgraded utility infrastructure network
- Significant improvements to the transportation network
- Transit-supportive land uses
- A range of housing options
- Potential new elementary school site
- Potential for community and recreational centre and/or space
- Preservation of environmentally sensitive lands; and
- Neighbourhood parks and high-quality public spaces, including trail systems and community and recreational spaces

1.4 Guiding Principles

1. Employment Focus

The development will provide substantial new industrial land capacity to the City of Nanaimo and a corresponding new employment hub with hundreds of short- and long-term jobs. The employment lands will create quality, sustainable jobs that encourage economic growth and improve quality of life while meeting the demand for industrial lands in Nanaimo and the mid-Island region.



2. Mix of Land Uses

Sandstone will provide for a diverse offering of land uses, including different forms of housing, shops and services, employment areas, parks, and transit, designed to complement the surrounding neighbourhoods and land uses.

3. Compact Development

Street and block patterns within the Fielding, CVN and CRN Precincts will be compact in order to preserve open space, create cohesive neighbourhoods, and enable walking, biking, and public transit as convenient travel modes for living and working.

4. Housing Choice & Affordability

A wide range of home typologies will be offered, including small lot development townhomes, and apartments that may stand alone or be located above a commercial base.

5. Diverse & Connected Public Realm

Outdoor public spaces in the form of active parks, plazas/sidewalks, and natural areas will be provided as important community amenities and gathering spaces.

6. Sustainable Development

The development of the Sandstone lands is wrapped in layers of social, economic and ecological sustainability principles. Not only will the buildings and developments within Sandstone strive for a high level of sustainability and resilience, but the makeup of land uses and opportunities created will help Sandstone contribute to the health, empowerment and connectivity of Nanaimo as a whole.



1.5 Sustainability

Sustainability is a key component of the SMP 2021. This future development of Sandstone is envisioned through the ReImagine Nanaimo Doughnut Economics lens which is an approach intended to balance meeting key social needs, while ensuring we do not exceed the ecological limits of Earth's life-supporting systems. More specifically, four core strategic themes that come from the Doughnut Economic

framework are focused on: healthy (environment), enabled (economic health), connected (liveability) and empowered (governance). The components that make up each of these foundations are outlined below and will continue to guide and inform Sandstone into the future with the creation of a sustainability framework and plan.

The SMP2021 is guided by six principles, outlined below, that contribute to the long-term environmental, social, and economic sustainability of the community.

1. Care

- Sandstone has compact, human-oriented development patterns that use land efficiently.
- Sandstone will provide high quality infrastructure and other assets to the City of Nanaimo to assure good, long-term asset management and resilience.

2. Work

- Sandstone provides a broad range of employment opportunities for the City and the region providing workers with income to financially support themselves and their families.
- Sandstone is an employment and business hub providing much needed industrial development lands for the region and Vancouver Island.

3. Live

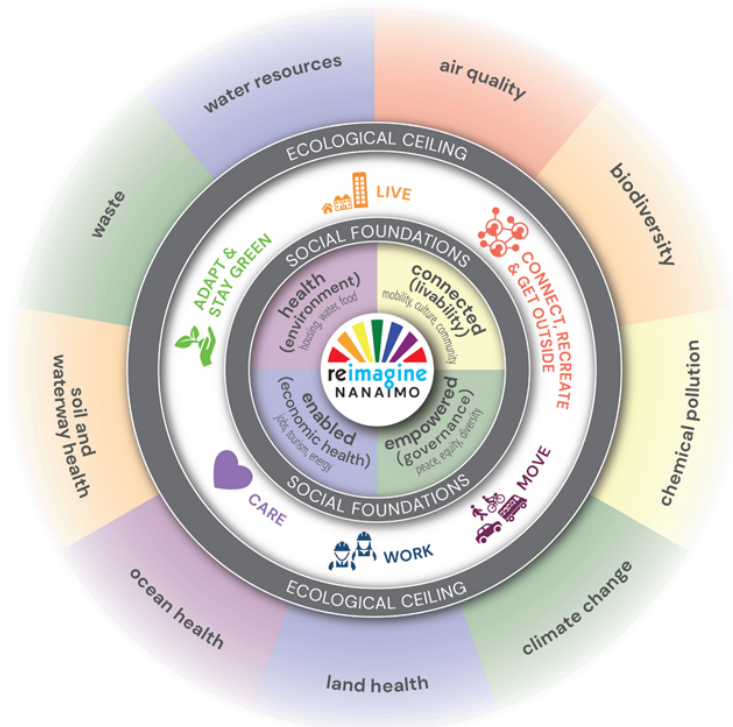
- Sandstone will offer a wide range of housing types and give residents choices. All residents will have access to appropriate, secure and attainable housing. Sandstone residents have diverse opportunities for social, cultural and community interaction.

4. Move

- Sandstone residents will move efficiently via a safe and convenient network of public transit, bike routes and inviting public realm. Sandstone is an active development where everyone enjoys convenient access to parks and open spaces close to home.

5. Adapt & Stay Green

- Sandstone will use durable and sustainable building materials, including those that are local, green and resilient. Buildings and their component systems are energy efficient and have good air quality for occupants. The minimum building energy standard will be a step above the required



BC Energy Step Code standard or meet the required BC Energy Step Code standard plus the City's Greenhouse Gas emission reduction standard.

- Stormwater within Sandstone is carefully managed with collection, diversion and re-use practices that moderate runoff volumes and maximize water quality. The use of green infrastructure (i.e. bioswales and use of existing wetlands) within Sandstone will be tailored to the community context, landscape characteristics, existing infrastructure and future vision.

6. Connect, Recreate & Get Outside

- Improve and enhance the access to, visibility of and connectivity of existing trails and parks.
- Create a fine-grained network of greenways, nature viewing and outdoor recreation opportunities throughout the Sandstone lands.
- Explore the creation of a fitness/wellness loop within the Fielding Precinct streetscapes and public spaces.
- Enhance and protect the wetlands and other key natural areas within Sandstone.

1.5.1 Sustainable Assets & Asset Management

Appropriately locating urban settlement patterns is a crucial first step for developments, and ultimately municipalities not only to prevent sprawl but for best asset management practices. In order to provide its citizens with sustainable service in a socially, economically and environmentally responsible manner Sandstone will provide the City of Nanaimo sustainable assets that integrate into the City's long term financial planning and are implemented incrementally as required. The OCP outlines this with the Guiding Principles around sustainability including managing urban growth and building a more sustainable community by creating urban nodes and centres that support higher densities and a wider range of amenities and services than found in the surrounding residential neighbourhoods. The core of Sandstone will be the Fielding Precinct, a neighbourhood centre providing a highly liveable urban area with surrounding employment and business lands to support a thriving and resilient community. Nearby will be two new residential areas which will further support the Fielding Precinct and complete the sustainable development. As a city with a linear settlement pattern, the development of a neighbourhood centre will encourage and enable residents in south Nanaimo to stay close to home for services, recreation, amenities and employment.

The SMP2021, will provide future asset management that is based on sound utility and infrastructure planning, feasible, cost effective, manages risks and supports long-term service delivery by the City of Nanaimo. Proactive asset management practices and good communication and planning will yield fewer service disruptions, more predictable results and lower total lifecycle costs than a reactive, uninformed approach.

Sandstone will be a thriving community with high ecological integrity, an excellent quality of life and will demonstrate economic vitality and community resiliency in the face of the challenges to society and the planet today and for generations to come.

1.5.2 Economic Impacts & Employment Creation

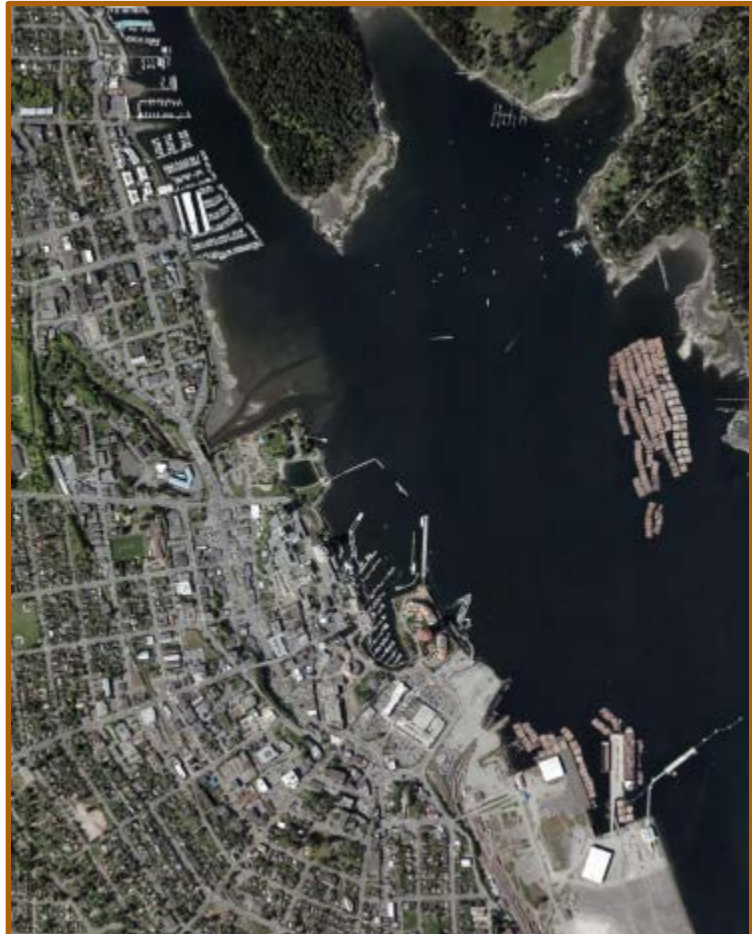
Consideration for creating future job and employment opportunities for the Nanaimo region has taken on a greater emphasis in the SMP2021. As one of the most significant undeveloped parcels of land in Nanaimo, the development of the Sandstone property stands poised to generate significant fiscal and economic benefits as well as contribute to the overall social and ecological prosperity through sustainable development and building for the City of Nanaimo and the region as a whole.

Based on preliminary development program estimates, the Sandstone property will, at build-out, host approximately 4,560 on-site jobs (2,900 industrial, 860 commercial/retail, and 800 office-based). Sandstone's strategic location at the junction of the Duke Point and Island Highways paired with a linear 20-year build-out will generate approximately 1,200 jobs per year from construction activities: 380 direct construction jobs, 335 supplier jobs, and 425 induced jobs (employment supported by the income from direct and supplier jobs, as well as additional public sector employment supported by associated new tax revenues).

The strength of Nanaimo as the Island-wide transportation and distribution hub has been significantly enhanced as a result of the expansion of the Port of Nanaimo's international marine freight centre at Duke Point, and the growth in marine services provided by Seaspans and BC Ferries. Marine transportation

infrastructure is a major influencer and game changer and has set the stage for a greater focus on business and employment opportunities. The confluence of marine and highway transportation modes, as well as proximity to the expanding Nanaimo Airport, creates the opportunity for Sandstone to become a major employment anchor for the region. The ability to create a significant employment hub, founded on multi-modal linkages to move goods and services, is something that could not have been envisioned even a decade ago. It is a dynamic and evolving opportunity that will add to the overall resilience and economic stability of the City.

Both the report by Urbanics Consultants Ltd. for the SMP2021 update and the City of Nanaimo *Land Inventory and Capacity Analysis Report* by Colliers International Consulting confirmed that Nanaimo is underserved for light industrial lands. The City is potentially missing out on employment, business opportunities and an opportunity to facilitate the expansion of the Port of Nanaimo with the Sandstone lands remaining undeveloped.



Aerial photo of the Port of Nanaimo.

Colliers International Consulting was retained by the City of Nanaimo to conduct a land inventory and capacity analysis in 2020, in order to provide the City with a better understanding of growth trends affecting land use patterns, the result of these trends on demand for developable land, and the capacity



of the developable land to meet projected demand while ensuring alignment with conservation and sustainability objectives.

Residential, commercial, industrial and institutional land uses were assessed. Of note was usable vacant industrially zoned land within the City's Urban Containment Boundary was found to be insufficient to satisfy demand projections even under the status quo scenario, with recommendations provided that it's imperative the City examine potential solutions to create new industrial supply. Sandstone is envisioned to provide approximately 90 hectares of new industrial opportunities within the City including industrial uses.

1.6 Public Consultation

Seacliff Properties and the entire Sandstone team recognizes the importance of meaningful consultation with neighbors, stakeholders and members of the general public. The Sandstone team has continued with the original project's emphasis on engagement, including continuing discussions and engagement with a number of stakeholder groups and organizations, including but not limited to:

- Snuneymuxw First Nation
- Chase River Community Association
- YES Nanaimo Committee
- BC Transit
- Ministry of Transportation and Infrastructure (MOTI)
- Regional District of Nanaimo
- School District #68 (Nanaimo-Ladysmith)
- Port of Nanaimo
- Vancouver Island Economic Alliance

Additionally, Seacliff has engaged in one-on-one discussions with neighbours and members of the public and held community open houses since 2019 to receive input and feedback on some of its proposed Plan updates. In May 2021 an online neighborhood meeting was conducted by the Chase River Neighbourhood Association (CRNA) where City staff and the Sandstone Team were invited to present and discuss the project.



2. Plan Context

There are a number of factors influencing the development vision for Sandstone, including the character of the surrounding community and infrastructure, the site's environmental conditions and unique qualities, and the City's current goals and policies.

2.1 Existing Development

The site's unique qualities influence the location and character of development, and are defined by its access, visibility, size, diverse development opportunities and natural features.

2.1.1 Sandstone Context

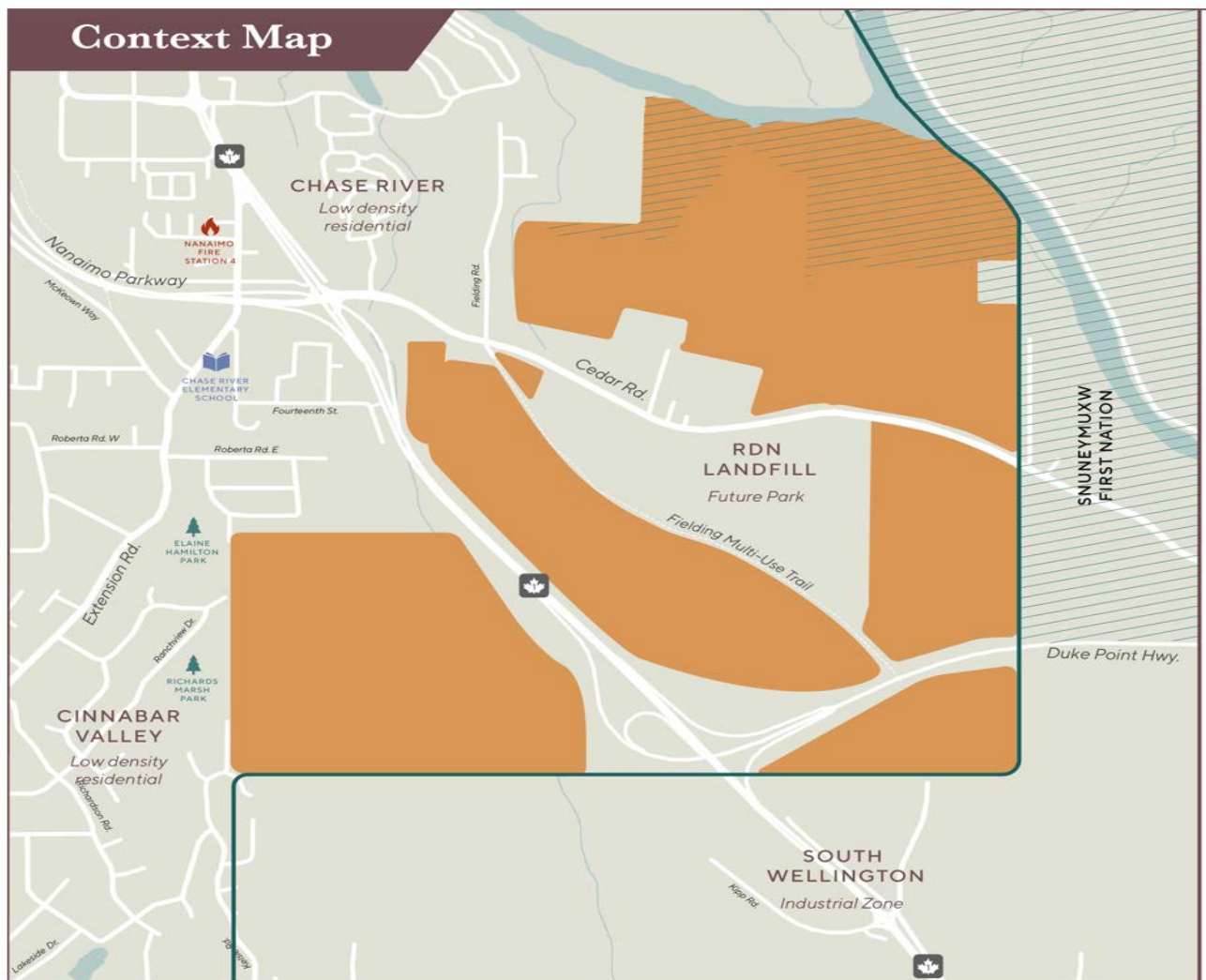


Figure 2 Sandstone context and surrounding areas

The Cinnabar Valley lies to the west and is characterized by lower-density single family lots and some attached family housing. This neighbourhood contains Chase River and Cinnabar Elementary Schools, and Elaine Hamilton Park. To the north is the Chase River neighbourhood bounded by the Nanaimo River. Snuneymuxw First Nation lands are located immediately east of the property, and north of the Island Highway.

The Regional District of Nanaimo’s landfill lies in the centre of the Sandstone lands. It is understood that this facility will continue to operate in some capacity for at least the next 40 years. The ultimate plan is for the entire landfill to be capped and transformed into a regional park. There are opportunities to phase in the park on the western end where landfill activities are complete. Provisions for pathway connections between Sandstone and the park are encouraged.

Key influencers for the future use of the lands are the Island Highway, Duke Point Highway, and Cedar Road, which acts as a major throughfare. These existing regional highway and road networks play a significant role in determining planning and long-term use of the Sandstone lands, particularly on the west side of the Island Highway.

2.1.2 Existing Infrastructure

The Sandstone Development is located at the south end of existing municipal services and is serviced by existing large scale municipal infrastructure. Water mains currently service the Cinnabar Valley and the western section of Cedar Road. Water supply to the Duke Point industrial area is provided by a trunk main that crosses Sandstone from west to east. This line has capacity to supply a portion of the Sandstone development’s demand for municipal water. The Regional District of Nanaimo (RDN) trunk sewer system extends as far south as the Chase River Pump Station. Planned expansion of the RDN system will provide sufficient capacity to serve the proposed development.

A hydro power servicing assessment has been completed and concluded there is adequate hydro capacity in the region. Feeders connecting to the Duke Point Highway, Trans-Canada Highway, and Extension Road trunks have sufficient capacity to service the proposed Sandstone development.

2.1.3 Access & Visibility

Due to the direct highway access and visibility to the Duke Point Ferry Terminal, Fielding Precinct and EB Precinct, these sites are ideal for commercial and industrial enterprise uses. The Regional District of Nanaimo’s landfill lies to the north of the Sandstone lands. Existing off-site roads influence the location of access points to the site. Logical access points to eastern parcels are via the Island and Duke Point Highways, and along Cedar and Fielding Roads. The CVN Precinct is best accessed by various local roads, and a Traffic Impact Assessment, at the time of rezoning, will also consider access and egress in the Cinnabar Valley. The CRN Precinct will receive direct access from Cedar Road.



2.2 Environmental Conditions

The site is largely undeveloped, with the exception of several logging roads and unofficial recreational trails. Except for creek channels, timber was harvested from almost all areas in the late 1980s. Pioneer species vegetation are now emerging and range from five to ten metres in height. Most of the land is rolling, with many areas of exposed sandstone rock. The topographic, geotechnical, riparian, and habitat assessments define the environmental conditions. In the CVN and CRN Precincts, up to 50% of the land, including riparian and steep slope areas will be retained as open space or parkland with numerous opportunities for protecting sensitive ecosystems. A substantial amount of land along the Nanaimo River Estuary in the CRN Precinct will be held in reserve without development for future ownership by Snuneymuxw First Nation.

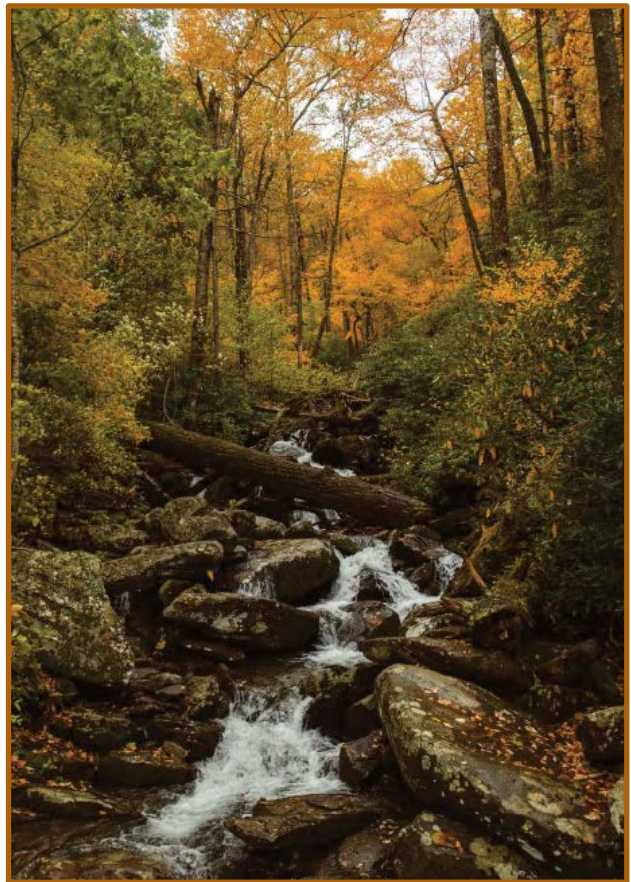
2.2.1 Topography

Elevations range from a low point along Cedar Road to a high of 115 metres above sea level within the Cinnabar Valley. Slope gradients were analyzed to inform development decisions with the objective of avoiding steep slopes, and particularly sustained gradients, as outlined on the riparian areas and constraints map. There are generally moderate slopes – under 20% – with the exception of some steep stream banks, and the high point in the CVN Precinct where some slopes range upwards of 40%. Development will generally be planned for lands with slopes 20% and under and in accordance with the City of Nanaimo's Steep Slope Development Permit Area Guidelines.

2.2.2 Riparian & Ecological Assessment

Madrone Environmental Services completed a review of the entire Sandstone site in 2008. In the Spring 2019, an updated Riparian Area Assessment was completed by Cascadia Consulting Group and in Winter 2020/Spring 2021 further assessments were completed by EDI Environmental Dynamics Inc. (EDI). EDI was retained to review the existing information, collect additional field information and provide environmental services to the project team during the SMP2021 update.

As identified by the various environmental assessment undertakings conducted since 2008, most of the areas have been previously logged, cleared or otherwise disturbed. As such, ecological values often associated with older forests and undeveloped areas are generally lower. The primary environmental sensitivities within the properties are associated with streams, wetlands and riparian ecosystems, some of which are identified as sensitive ecosystems by the provincial Sensitive Ecosystem Inventory (SEI) program. Watercourses and riparian areas also represent the most significant regulatory constraints across the properties as most riparian areas require protection under provincial laws and municipal bylaws.



The development layout will be developed with the goal of avoiding riparian areas while addressing topographic and other important layout constraints and requirements. At the time of Development Permit or subdivision applications, more detailed assessments will be undertaken by a Qualified Environmental Professional along with preparation of detailed designs to confirm required setbacks and surveyed locations. Protection of important riparian areas is required, as it maintains the biological functions of vegetation for fish and aquatic habitat, including provision of shade, delivery of nutrients, introduction of terrestrial insects, bank stability, and provision of large woody debris for channel maintenance and habitat diversity. Furthermore, watercourses and riparian areas provide important habitats, functions and corridors for a wide variety of terrestrial and aquatic species and these attributes can support biodiversity.

Any planned works within wetlands and their riparian areas will be in accordance with all municipal, provincial and federal permitting requirements. The intent of any such planned development will be to minimize and avoid impacts to sensitive and important species and habitats and to mitigate or compensate for unavoidable impacts where this is necessary and warranted. Where any planned works that may affect wetlands or their riparian areas are proposed, detailed, site-specific environmental assessment(s) will be required to support the permitting and development processes. These planned works may include, but are not limited to:

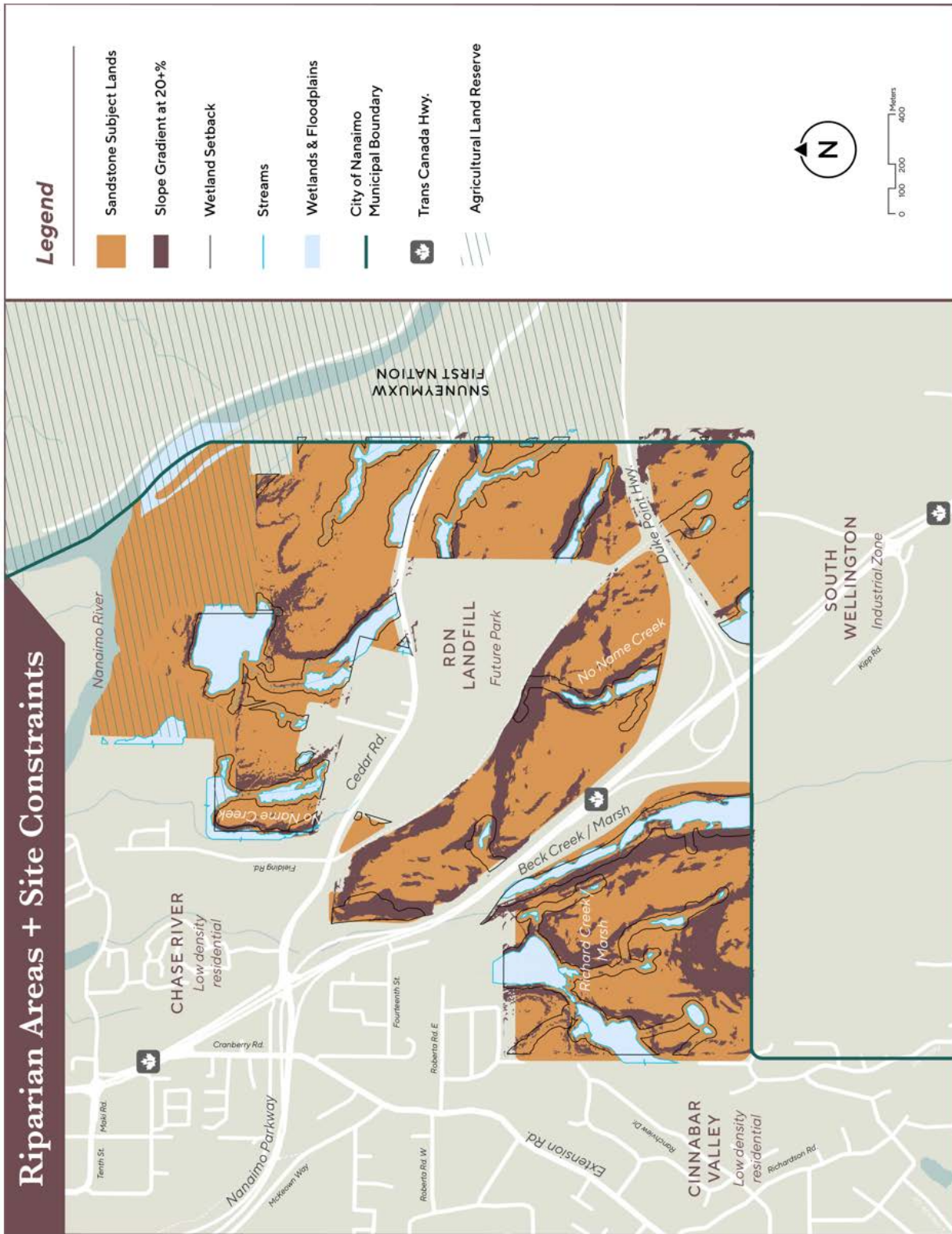
- Road crossing and approaches
- Service crossings (water, sanitary)
- Danger tree removal
- Stormwater infrastructure
- Invasive species removal
- Water level gauges
- Beaver dam removal (if/where necessary to address problematic flooding or damage to property/infrastructure)
- Relocation and enhancement of historically ditched streams
- Riparian and/or aquatic restoration/enhancement

2.2.2.1 Managing Invasive Species

Invasive plants are sporadic throughout the project area and individual patches of concern have not been mapped. Removal, monitoring and restoration plans with specific recommendations will be developed through future subdivision and development approvals. These recommendations will be provided to minimize the spread of invasive species. Recommendations by Qualified Environmental Professionals will be developed in accordance with applicable City of Nanaimo policies and bylaws and adhered to at the detailed design phase of a given area and prior to commencement of clearing activities.



2.3 Riparian Areas and Constraints Map



3. Policy Framework

3.1 Policy Context

Since the original Master Plan for Sandstone was first adopted as a schedule of the OCP in 2009, a number of policy frameworks have evolved and developed, including but not limited to:

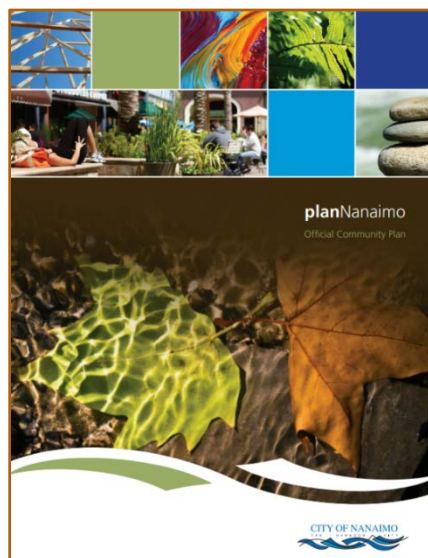
- ReImagine Nanaimo Update (in process)
- planNanaimo Official Community Plan (2008)
- The RDN's Regional Growth Strategy (2011)
- Climate Change Resilience Strategy (2020)
- Parks, Recreation and Cultural Master Plan (2005)
- Transportation Master Plan (2014)
- Affordable Housing Strategy (2018)
- Chase River Neighbourhood Plan (1999)

These updated policies, goals and objectives have informed the basis for the SMP2021, which is intended as an area-specific refinement of the OCP vision for south Nanaimo. Detailed zoning and compliance with other City plans, policies, and guidelines will proceed based on the vision articulated in the SMP2021. A brief overview highlighting key components of some of the influential policy documents are outlined below, and more information and detail on each can be found in the referenced policy documents.

3.1.1 Official Community Plan

The OCP sets the overall framework for the City's approach to land use and community development, setting broad, long-term objectives and policies for future land use and servicing. The OCP outlines seven key goals for planning and development throughout the City of Nanaimo which have influenced the development of the SMP2021 as detailed below. In addition to this, an update to the OCP is well underway through the ReImagine Nanaimo process, which will:

- 1) Update the OCP to include the significant policy documents created since 2008
- 2) Fill information gaps
- 3) Evaluate existing policies and practices
- 4) Include new priorities into the City's strategic policy fabric; and
- 5) Implement and monitor process towards the new and updated policy objectives.



Together, these critical long-term policy documents shaped the vision for the SMP2021. Each of the OCP's goals are summarized and followed by a short description of how Sandstone will address these goals.

1. Manage urban growth: means focusing urban development within a defined Urban Containment Boundary, thereby reducing urban sprawl and helping manage urban growth. Sandstone is envisioned as a comprehensively planned development, offering a diverse range of land uses including industrial, commercial/retail and residential. Compact development, with a range of affordable housing choices, jobs, and amenities will reduce urban sprawl, and create a gateway corridor in the south of Nanaimo.



2. Build a more sustainable community: means creating urban and employment nodes that support business and industrial park development, higher residential densities where appropriate, and a wider range of amenities and services than found in the surrounding neighbourhoods. The SMP2021 incorporates sustainable strategies and standards, including job creation, housing diversity, compact development, healthy buildings, preservation of natural ecosystems, and integrated storm water management.

3. Promote a thriving economy: means making efforts to grow and diversify the local economy, and affording new opportunities for residents and businesses, while staying within the capacity of the natural environment. Sandstone is a landmark project that will establish jobs, commercial services, and amenities in the south of Nanaimo.

4. Encourage social enrichment: means nurturing a caring, healthy, inclusive, and safe environment in which all citizens can live, work, and play in their own neighbourhoods. The first guiding principle of the SMP2021 is to create opportunities for economic and business growth and development, combined with a commercial centre that will bring new amenities and services to south Nanaimo.

5. Protect and enhance our environment: means looking after Nanaimo's natural diversity. The SMP2021 respects and protects ecologically sensitive lands, wetlands, and stream areas; it also provides active and passive spaces, both in an urban living context, and in a lower density family residential neighbourhood.

6. Improve mobility and servicing efficiency: means creating greater accessibility and opportunity for safe and convenient movement around the City by transit, cycle, and on foot; it also means maintaining an effective road network for moving goods and people by vehicle, while working to reduce reliance on the automobile over time. Improving servicing efficiency means making more effective use of existing road, sewer, water, storm, and other municipal services to control both municipal costs and environmental impacts. A mix of land uses, transit-supportive densities, compact development, and an extensive transportation and mobility network (including streets, sidewalks, urban and natural trails) will reduce travel distances and promote walking and biking in Sandstone.



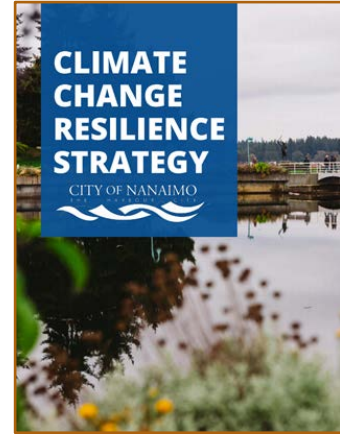
7. Work towards a sustainable Nanaimo: means moving from planning to action by defining implementation measures, and monitoring opportunities to ensure consistency in future decision-making and policies. Sandstone is a comprehensively planned development that will help move Nanaimo towards sustainability by providing a major employment hub and commercial centre to serve city residents, reducing cross-town vehicle trips, and providing new housing choices.

3.1.2 Climate Change Resilience Strategy

The City of Nanaimo's Climate Change Resilience Strategy (2020) was developed to help the community prepare for and respond to climate change's adverse effects and take advantage of opportunities.

The following Climate Change Mitigation strategies, as described in the Climate Change Resilience Strategy, will be utilized for planning and developing Sandstone as a sustainable new community, including but not limited to:

- Encouraging compact growth in new neighbourhoods
- Fostering transit, walking, and rolling with transportation improvements and transportation demand management projects
- Requiring higher levels of energy efficiency for new buildings to be secured through a development agreement.

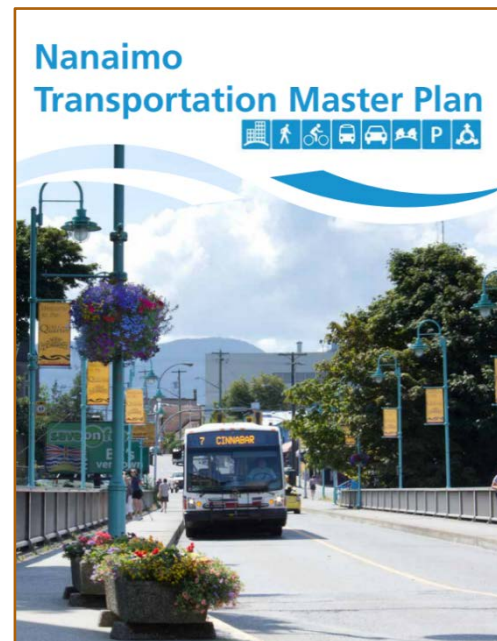


3.1.3 Transportation Master Plan

Work on the Nanaimo Transportation Master Plan (The Plan) began in 2012 to support the City's aspirations for sustainable growth patterns. The Plan provides long-term direction that will guide transportation policies, priorities, and investments, providing the foundation needed to expand travel choices within the City. The Plan highlights the Sandstone lands as an important area in Nanaimo's Transportation Network.

The Plan outlines a vision for attractive transportation choices. As outlined in Nanaimo's Transportation Master Plan, Sandstone will encourage transportation choices that will, among others, be:

- Be safe and comfortable in order to encourage people of all ages and abilities to walk and cycle
- Increase the quality, convenience and accessibility of transit for trips within the City and region
- Provide major road improvements that create streets that are comfortable for all road users, make best use of the existing infrastructure and plan for an effective future road network, while seeking to reduce the use of cars
- Be sustainable by creating more compact, dense land use patterns supported by active transportation solutions that will serve to reduce GHG emissions and ultimately enhance overall community health and wellbeing.



3.1.4 Chase River Neighbourhood Plan

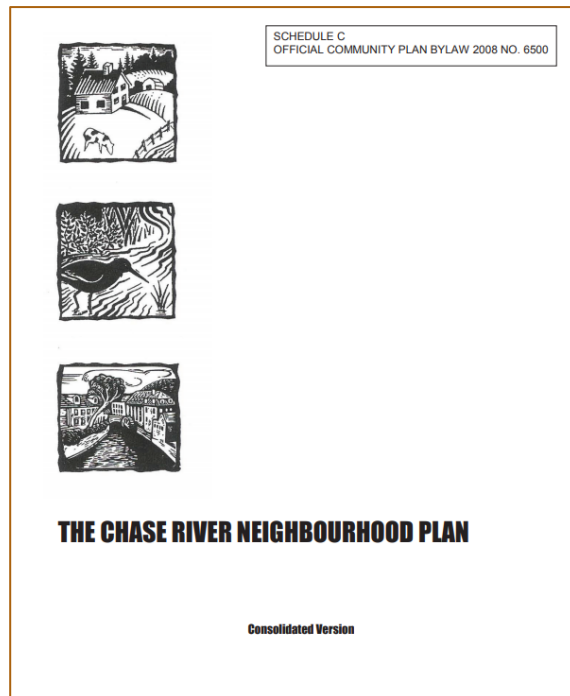
The Chase River Neighbourhood Plan (CRNP) was adopted in May of 1999 and included several key issues and recommendations, a few of which are briefly discussed below:

Local Service Centres: The SMP2021 aligns with the CRNP, including the provision for small commercial development in residential areas. The CRNP identifies that the 'Local Service Centres' can build out over time based on market demand. As such, the SMP2021 speaks to these centres for the Cinnabar Valley and Cedar Road precincts.

Industrial Lands: The CRNP has two policies related to Industrial Lands encouraging industrial developments to mitigate odours, pollutants, acoustic and visual impacts on adjacent non-industrial lands. The industrial lands within Sandstone will include buffers and other mitigation measures and are not adjacent to the residential development areas.

Landfill and Solid Waste Management: The CRNP has a policy that encourages the Regional District of Nanaimo develop a multi-use trail around the perimeter of the landfill, while still an active landfill. The Sandstone project sees the development of the Fielding Multi-Use Trail which immediately abuts the rear of the active landfill site. The corridor is an amenity that helps to mitigate some of the negative impacts of the landfill by providing needed recreational opportunities and connecting the Sandstone lands via an active transportation route.

Trails, Parks and Recreation Opportunities: Several multi-use trails and active and passive recreation opportunities were identified in the CRNP by area residents as amenities they would like to see developed in their neighbourhood. The SMP2021 aims to formalize the multi-use trail network and provide a mix of nature, community, and city parks throughout the Sandstone lands.



4. Land Use & Precincts

4.1 Sandstone Precincts

The Sandstone lands are grouped into sub-areas, called precincts, which have similar uses and overall form and character. These precincts have been envisioned to respond to current site conditions, proposed uses, transportation network connectivity, parks and open space opportunities and urban design influences. Development will be subject to and based on further evaluation of site constraints, infrastructure capacity and proposed land uses of the individual precincts.

There are four precincts total, some of which are made up of several smaller pieces of land called development areas. The development areas also correspond to the individual land uses described in further detail in section 4.2 below. The precincts, and the development areas included within each precinct are outlined in Map 4.2:

1. Fielding Precinct (Development Area 5)
2. Employment & Business Precinct (Development Areas 2, 3 & 4)
3. Cinnabar Valley Neighbourhood Precinct (Development Area 6)
4. Cedar Road Neighbourhood Precinct (Development Area 1)

4.2 Land Use Designations

The vision for the lands is to provide a new comprehensively planned, economically focused, diverse development with a significant new employment and business node, along with a small mixed-use hub, housing choices and parks and open spaces. Sandstone will be comprised of a mix of the land use designations as listed below and outlined on the Land Use Designations Map:

Neighbourhood: Mix of housing types including single family homes and ground-oriented multiple family units. Development Areas 1 and 6 will have this designation.

Industrial: Range of industrial and ancillary commercial uses within industrial parks. Development Areas 2 and 3 will have this designation.

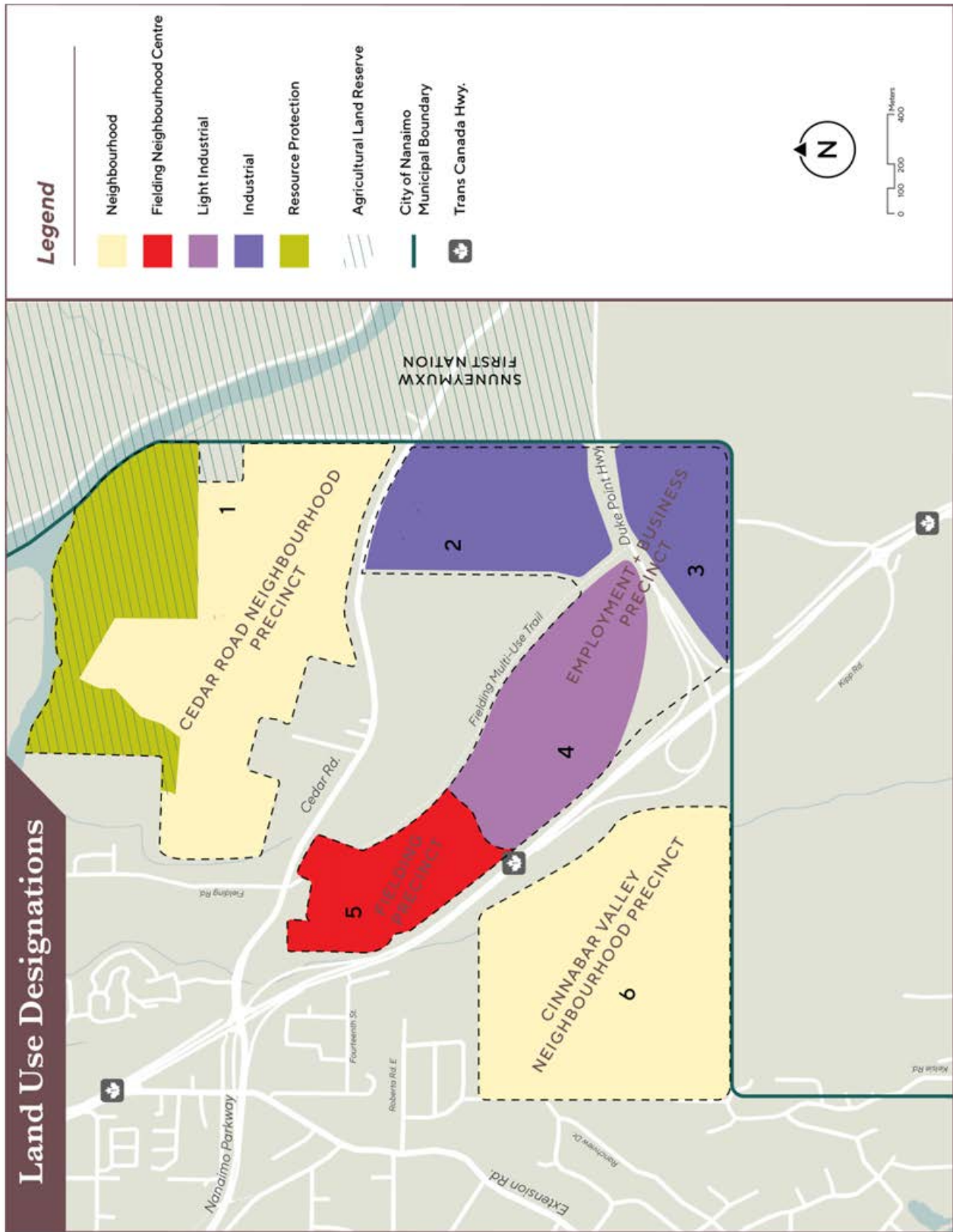
Light Industrial: Mix of technology business park, research and development, warehousing and distribution and ancillary commercial uses in Development Area 4.

Fielding Neighbourhood Centre: A smaller mixed-use area with commercial, multi-unit residential and public amenities concentrated on the new Sandstone Boulevard within Development Area 5. This concentration will act as a neighbourhood centre providing the Sandstone development with services for residents, visitors and employees to meet day-to-day needs like gathering spaces, daycare, cafes and more.

Parks & Open Space: Including a range of park sizes, will apply to all lands within Sandstone that will serve as parks, plazas, open spaces and recreation areas as outlined in Section 5 of the SMP2021 within the Parks & Open Spaces Map.

Resource Protection: The open space lands included in the Provincial Agricultural Land Reserve (ALR) adjacent to the Nanaimo River Estuary in Development Area 1.

4.2 Land Use Designations Map



4.2.1 Fielding Precinct

The Fielding Precinct is comprised of Development Area 5 with a land use designation of Fielding Neighbourhood Centre. At about 21 hectares in size, this precinct is situated on the eastern side of the Island Highway and on the northern portion of the gateway. The precinct is a local hub of activity including a mixed-use main street with a pedestrian-scale public realm containing retail and services, office and community facilities, as well as consideration for a future community centre and transit area. Approximately 16,500m² of commercial and institutional building floor area is contemplated for this precinct (subject to further analysis of capacity and limitations), in a mix of uses supported by a variety of multi-family housing typologies in a convenient, walkable environment.



Public plaza in Victoria, BC.

Additionally, up to 1000 medium density multi-family dwelling units are contemplated for this precinct, along with a concentration of commercial and institutional uses. Approximately 2400m² of building floor area is earmarked for possible community centre or other institutional uses. The Fielding Precinct will become a new Neighborhood Centre in the heart of the Sandstone lands and act as a transition between the Chase River Centre and the industrial lands within the Employment & Business Precinct. This Neighbourhood Centre will develop a concentration of uses to support public transportation and provide varied employment opportunities for residents of Sandstone and the adjacent South Nanaimo neighbourhoods.

Within the Fielding Precinct the following policies are proposed to guide the development:

1. Lands within the Fielding Precinct are designed to accommodate a commercial high street which includes lifestyle uses, such as retail, restaurant, entertainment, and other day to day services and amenities.
2. Commercial uses are generally developed along public streets.
3. Buildings generally form a continuous street frontage along the main street, with retail stores and residential lobbies oriented to the street.
4. The sidewalks and plaza areas of the high street, and the pedestrian corridors that connect parking areas should contain high quality landscaping and pedestrian-scale lighting.
5. Innovative on-site stormwater management systems, such as minimal impervious surfaces and/or green roofs will be incorporated into site design.



6. Buildings will be up to six storeys in height.
7. Hard landscapes (such as plazas), that encourage pedestrian circulation and create social gathering spaces at the heart of the precinct.
8. A variety of housing types, such as multi-level apartments, condominiums, and townhouses should generally be provided within mixed use buildings.
9. A variety of affordable housing options are encouraged in order to include a range of unit sizes, uses, and types. Adaptable housing will accommodate aging-in-place.



Public plaza and pedestrian corridor in Nanaimo, BC.

10. Multi-use paths or sidewalks should connect residential areas to commercial services, other residential areas, and the greater open space network of Sandstone, specifically the Fielding Multi-Use Trail.
11. Public art, wayfinding elements, unique architecture or other special elements like unique surface materials should be used to make street corners and plazas more memorable and identifiable throughout the Fielding Precinct.
12. Underground and under building parking will be incorporated into developments.
13. Individual retail units should be encouraged to customize facades to reveal goods and services and contribute to an animated frontage along the high street (e.g. streetside café seating).
14. Signage and wayfinding should be vibrant and located at a height appropriate for pedestrians.

4.2.2 Employment & Business Precinct (EB Precinct)

The EB Precinct, comprised of Development Areas 2, 3 & 4 with both Light Industrial (Development Area 4) and Industrial (Development Areas 2 & 3) land use designations and about 90 hectares in size. It straddles both sides of the Duke Point Highway, capitalizing on its southern gateway location with links to the main transportation infrastructure in the region (land, water and air) to aid in growing and diversifying Nanaimo's economy and accommodate industrial growth.



An industrial building with a green roof.

The EB Precinct is envisioned as the economic and employment hub and will allow a wide range of employment activities ranging from up to 168,000m² mix of industrial building floor area in Development Areas 2 & 3 and up to 140,000m² of light industrial and business park building floor area in Development Area 4, subject to further analysis of capacity and limitations. In addition to the industrial focus this precinct also has an integrated parks and open spaces system, connected to the Fielding Precinct via the Fielding Multi-Use Trail.

The Duke Point Highway and the Regional District of Nanaimo's Landfill separate the EB Precinct into three light industrial or industrial development areas. The Duke Point Highway provides a natural transition between the mixed-use and light industrial uses of Development Parcels 4 and 5 and the industrial uses of Development Area 3. The Fielding Multi-Use Trail and site topography act as a transition between the light industrial uses in Development Area 4 and the industrial uses of Development Area 2. Finally, Cedar Road acts as a natural boundary north of Development Area 2 and acts as a transition to the residential uses of Development Area 1.

Within the EB Precinct the following policies will be considered for the development:

1. An innovative mix of industrial uses that consider compatibility with surrounding uses. When industrial uses are adjacent to Agricultural Land Reserve (ALR) a 15-meter, partially vegetated buffer will reduce potential impacts on the neighbouring lands.
2. Ancillary commercial and residential uses that support and complement other industrial uses in the EB Precinct are supported.
3. Buildings are designed to incorporate resilient, high-quality materials and site design best practices that maximize energy and water efficiency and reduce GHG emissions. Building design should reflect the City's sustainability objectives and include end of trip facilities to encourage alternative modes of transportation.
4. Techniques for reducing stormwater runoff will be implemented such as the use of bioswales and stormwater detention ponds.
5. Industrial businesses should apply best practices using available technology to reduce/eliminate noise, odours, and other emissions.
6. Light Industrial, technology and business park buildings should convey a clean, contemporary feel consistent with their uses. Different building functions (i.e. pedestrian entrances and loading areas) should be clearly articulated and separated.
7. Office and public entrances should be highlighted with higher quality finishes, lighting, weather protection and significant glazing.
8. Incorporate green roofs and/or rooftop screening into building design where appropriate.
9. Pedestrian routes to building entrances should be clearly marked and separated from vehicle traffic with landscaping.



An artist's rendering of an industrial building.

10. Building entrances should be articulated and accentuated with special paving and plantings.
11. All parking and loading areas should be screened from the street by landscaping.
12. In order to modulate the visual impact of long facades, a combination of the following strategies should be considered:
 - a. Vary heights at the roof line;
 - b. Add architectural and focal elements using form, materials and/or colour.

4.2.3 Cinnabar Valley Neighbourhood Precinct (CVN Precinct) and Cedar Road Neighbourhood Precinct (CRN Precinct)

The CVN Precinct is located on the west side of Highway 1 within the Chase River neighbourhood and is currently undeveloped. The precinct includes steep slope topography and Richards Marsh. Future access to the property will occur via a new connection to Extension Road (Potential Mitigation “G”, Section 7.3 Transportation Map) and the extension of existing roads at both the northern and southern boundaries.

The CRN Precinct is located on the north side of Cedar Road, with the Nanaimo River located at its northerly boundary. Within the CRN Precinct, the Resource Protection lands designated as ALR adjacent to the Nanaimo River Estuary are being explored for potential transfer to the Snuneymuxw First Nation in the future. The CRN Precinct is also bounded by lower density residential development to the west, and Agricultural Land Reserve/Snuneymuxw First Nation reserve land to the east, currently comprised of low-density residential development.

The CVN Precinct, comprised of Development Area 6 and the CRN Precinct, comprised of Development Area 1 are envisioned as attractive, walkable residential neighbourhoods with a diversity of housing forms, ample parks and open spaces and a new school site, that both respects and enhances existing settlement patterns. Housing forms will predominantly consist of single-family lots and small lot detached housing, as well as potential for duplex housing and ground oriented attached housing. A modest range of densities and built form will provide greater housing choices, protect environmentally sensitive areas and help to support transit service to the neighborhood areas. These precincts are estimated to allow up to 600 residential units each, with up to 50% of the Neighbourhood designated lands reserved for new parks and open spaces in each precinct.



Single-family housing.

The two precincts will become residential bookends to the Fielding Precinct and Employment and Business Precinct. Current and future residents will have ample opportunities to live, work and recreate within South Nanaimo.

Within the CVN Precinct and the Neighbourhood lands of the CRN Precinct the following policies will be considered for the development:

1. Residential areas will have a density of up to 50 uph and consist of both clustered attached and ground-oriented detached housing types. Clustering will allow for convenient walkable access to open space areas and local amenities and protect environmentally sensitive areas, including steep slopes.
2. Locate residential development within a reasonable walking distance of transit stops.
3. For lands adjacent to Agricultural Land Reserve include a 30-meter setback, with a 15-meter vegetated buffer for residential buildings. Local Service Centre uses should have a minimum setback of 15 meters.
4. Buildings may be up to three storeys in height.
5. Residential buildings will incorporate site design and building strategies that maximize energy and water efficiency, wherever possible.
6. Alternative housing options should be provided, including a range of home sizes and types, such as:
 - a. Adaptable housing to accommodate families and aging-in-place; and
 - b. Lock-off/secondary suites that create options for rental opportunities.
7. Local Service Centres are supported.
8. Clustered forms of housing are encouraged to help preserve environmentally sensitive areas, including steep slopes greater than 20%.
9. Multi-family residential parcels should provide landscaping that enhances the public realm and contributes to the character of the neighbourhood.
10. Native and non-invasive plant species that are well-suited to the local climate and conditions should be used for boulevard plantings.
11. Innovative stormwater management systems, including minimized impervious surfaces, are encouraged.
12. A significant amount of land will be preserved as part of a substantial new parkland and open space system that threads through the respective precincts. The new park systems will integrate with the existing parks and open spaces in the surrounding communities and does not include ALR lands.
13. A variety of rooflines are encouraged to add diversity to the built form.
14. Front entrances should be emphasized and include roof overhangs for weather protection.
15. Exteriors should consist of a variety of materials and should incorporate changes in materials or colours to highlight entryways, dormers and other architectural features.
16. Where lanes are provided on lots, locate garages at the rear of the property with driveway access from the rear lane.



An example of neighbourhood scale stormwater management.

5. Parks and Open Spaces

Nanaimo has over 1200 hectares of parkland that provide recreation opportunities and connection to nature for residents, habitat for wildlife and ecosystem services for all. The parks and open spaces at Sandstone will provide the City of Nanaimo with over 121 hectares of nature, community and city parks of varying sizes with a range of programming, including but not limited to playgrounds, public art, outdoor fitness, community gardens and dog park(s), as well as a comprehensive trail network. Public access to the specific park areas will be determined at the detailed design stage and will depend on the program defined for a space. For example, an environmentally sensitive area may require limiting public access to protect habitat areas.

A feature element of the SMP2021 will be the Fielding Multi-Use Trail, which will connect the Fielding Precinct and EB Precinct from Cedar Road to Duke Point Highway. The former vehicle road will be transformed into a multi-use park corridor that will allow for both active and passive space for walking, cycling, sitting, and passive recreation.



Figure 3 A rendering of Fielding Multi-Use Trail

The parks and open spaces will be provided and phased in accordance with the terms negotiated in a *Development Agreement* with the City of Nanaimo, and at the time of development pursuant to the applicable policies and bylaws. The classification of each park will also be determined at this stage in accordance with the definitions of nature, community and city park in *Zoning Bylaw No. 4500*. This investment in parks is especially important in this climate change era as parks and open spaces play an increasingly important role in managing wildfire and flood risk. These spaces also provide opportunities for biodiversity conservation and support alternative and active transportation lifestyles while protecting the environment and socially/culturally significant areas.

The Sandstone Parks and Open Space plan was guided by the following principles:

1. **Make it home:** Create a sense of identity from the landscape. Provide opportunities for people to connect outside. Give people an enduring attachment to the neighbourhood.
2. **Create a Centre:** Concentrate uses in strategic locations. Have a trail network hub, use a neighbourhood public open space to provide a venue for the community to come together, a place to congregate outside, creative and enduring wayfinding.
3. **Amplify site features:** Use the site to its full advantage. Reveal and capitalize on natural features for views, etc. Inform the built landscapes with reference ecosystems.
4. **Follow the flows:** Link elements that connect people, places, water and wildlife together.
5. **Layer Systems:** Build many functions into each element in the plan.
6. **Build Resilience:** Design an adaptable parks and open space network, anticipate and account for climate change.

The text below outlines the objectives to be employed within parks and open spaces to ensure that the Sandstone development can thrive:

1. **Carbon Sequestration:** The large areas of parks and open spaces can enable for biomass accumulation and carbon sequestration.
2. **Water Provision:** Plan the Sandstone neighbourhoods and parks and open spaces for drought tolerance and to minimize pesticide and fertilizer use.
3. **Biodiversity Support:** Connect forest and wetland habitats, wildlife reserve areas and overhead canopy cover throughout the development.
4. **Erosion Protection:** Have the large tracts of retained forests, including areas of steep slopes, boulevards and multi-family residential landscaping designed after local ecosystems to protect native soils.

The SMP021 incorporates strategies to improve local air quality, regulate temperature, harvest renewable energy, support biodiversity, protect against soil erosion, sequester carbon and protect against water pollution and overconsumption.

5.1 Parks and Open Spaces Policies

1. Parks and open spaces should generally comprise a diversity of elements, ranging in size and character. The location and design of the specific spaces should relate to the pattern and type of adjacent development.
2. Collaborate with the City of Nanaimo to potentially locate a recreation facility within the Sandstone development.
3. Where possible, provide public gathering spaces such as urban plazas and community parks or access to nature within 400 meters or a five-minute walk of each residence or employment centre in the community.



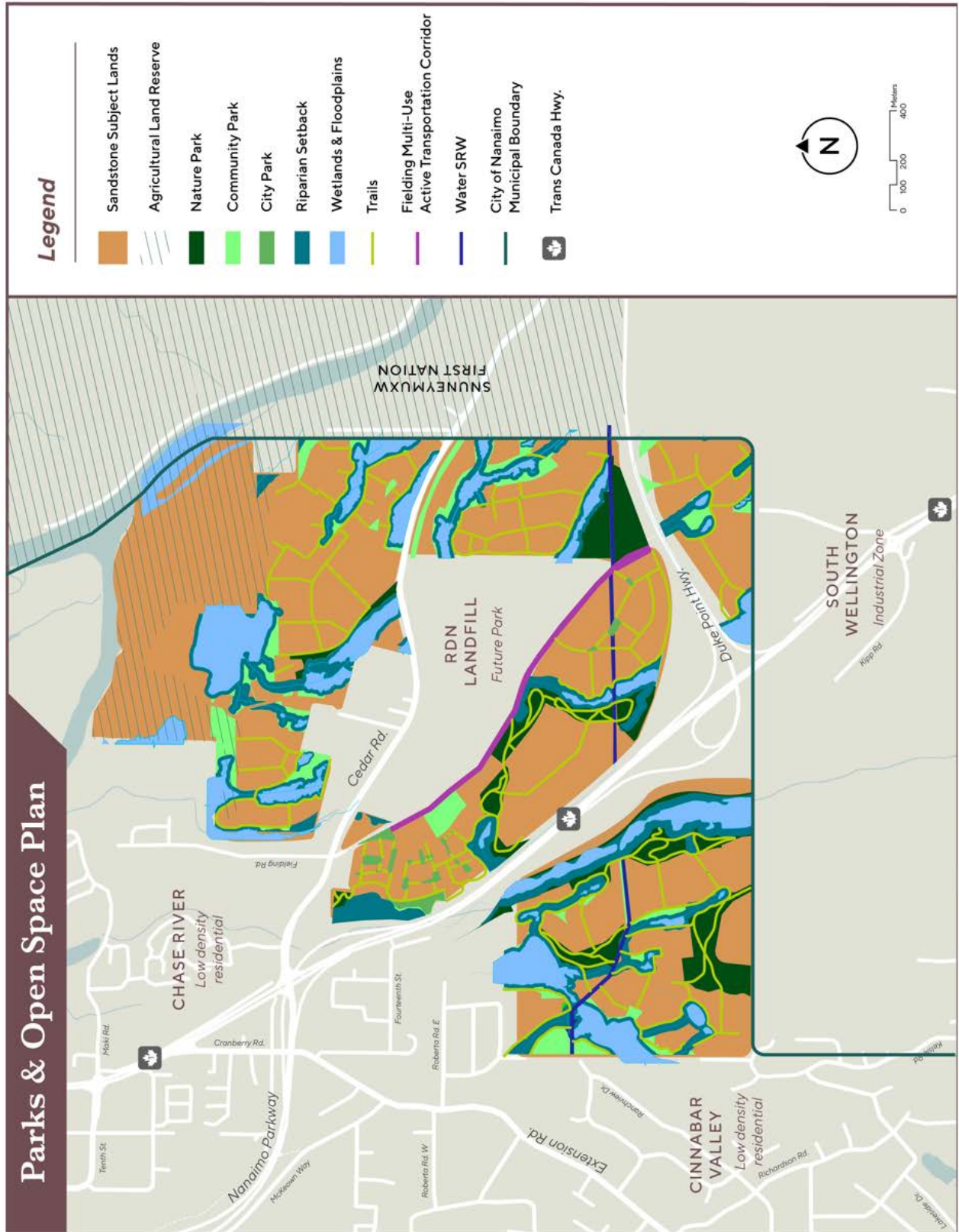
Oliver Woods Community Centre, Nanaimo BC

4. Native species and materials should form the basis for landscaping to reflect the natural heritage and ecology of the Sandstone area.
5. Link the parks and open spaces at Sandstone to the greater regional network through greenways, multi-use trails via cross-jurisdictional planning efforts. The character of the trails should vary to suit their location and be informed by the City of Nanaimo's trail standards as described in the Trail Implementation Plan and the Manual of Engineering Standards and Specifications.
6. Consider trail networking that will allow trail connections to a future RDN landfill park.
7. Incorporate existing natural features such as tree stands into parks and open spaces.
8. Support habitat protection and protect environmentally sensitive areas.



A wetland located in Nanaimo, BC.

5.2 Parks and Open Spaces Map



6. Infrastructure and Utilities

A significant investment has been made to study the servicing requirements for the buildout of a development of Sandstone's precincts. Infrastructure in Sandstone will aim to be cost effective, adhere to resilience and asset management best practices and respect the natural environment. To date, some detailed design works for points in the transportation network and several infrastructure studies have been completed. These documents will be used to guide the future development of the Sandstone lands during subsequent municipal and provincial approvals.



6.1 Infrastructure and Utilities Policies

Sandstone will be serviced by connections to existing municipal infrastructure located to the north and the west. Water supply will be provided by extension of existing City of Nanaimo mains, and by direct connection to the Duke Point Water Supply Main. Water storage requirements will be met by construction of a new reservoir proposed west of the site. Sanitary sewage disposal will be provided by upgrades to existing City of Nanaimo mains and connection to the Regional District of Nanaimo Trunk sewer system. Hydro, telephone and cable television service will be via extension of existing private utility lines. Infrastructure will be provided and staged in accordance with the terms negotiated in the *Development Agreement*, and at the time of development pursuant to the City of Nanaimo policies and bylaws.

All infrastructure and utilities will be guided by the following policies:

1. Water, Sanitary Sewer and Stormwater Management shall be designed in accordance with the City of Nanaimo and Regional District of Nanaimo bylaws and development regulations.
2. At the time of subdivision each development parcel's sanitary sewer and water distribution capacity will be confirmed.
3. Peak stormwater flows and quality will be limited to the pre-development levels and be consistent with all City of Nanaimo bylaws and stormwater management policies.
4. Encourage the use of best practices in green landscape management including efficient irrigation systems and drought tolerant plantings.
5. Employ localized flow attenuation to reduce erosion and limit infiltration using bioswales, waterways and greenways.
6. Utilize green infrastructure such as bioswales for stormwater management.



7. Transportation

Sandstone will provide a diverse mix of different land uses resulting in an increase in people and goods moving through the area; however, this growth will be supported by an improved transportation and trail network featuring, among other things the new Sandstone Boulevard and Fielding Multi-Use Trail. The SMP2021 recognizes the importance of network redundancy and integrated multimodal connections. The internal road networks of the four precincts will be tailored to respond to each precinct's unique mix of land uses and constraints and will connect each precinct to the existing Ministry of Transportation and Infrastructure (MOTI) and City of Nanaimo transportation networks.

The individual precincts will provide safe, sustainable, and desirable mobility through the application of the City's road standards, where the focus is on people and placemaking, not just the movement of cars; however, due to location and site conditions vehicle use will continue to be the dominant mode of transportation. When connecting to the existing transportation networks a number of transportation improvements and mitigation measures will be incorporated, to both accommodate and manage the growth from Sandstone and improve circulation, redundancy and connectivity to and from the area.

A variety of different improvements, connections and mitigations, outlined in Table 1 are considered for Sandstone to manage the additional traffic generated by each precinct's land use. The potential mitigations' locations are shown in the Sandstone Transportation Map, however not all mitigation strategies have been fully evaluated and other solutions may be proposed in the future. A detailed Transportation Impact Assessment will be required as part of the future rezoning to confirm the final transportation network and improvements, including consideration for vehicular movement, transit and multi-modal travel. Development of the Sandstone lands will also require coordination and approval of MOTI and the City of Nanaimo to facilitate vehicular and multi-modal movement to and from the planning area.

7.1 Transportation Policies

1. Develop a diversity of housing types, services and employment within Sandstone to support residents and workers to meet their daily needs.
2. Design transportation networks that support walking, biking and transit.
 - a. Create a high-quality public realm along Sandstone Boulevard using greenways, multi-use trail connections, street trees, street furniture and pedestrian-scale lighting.
 - b. Provide a connected active transportation network within the various Sandstone precincts and where possible connect to adjacent lands and existing transportation networks.
 - c. Incorporate permeable block layouts and barrier free access for sidewalks and parking facilities throughout the development. In residential and commercial areas, foster an attractive, convenient, and comfortable street environment that pedestrians and cyclists are more willing to travel further and longer on.
 - d. Sidewalks, the Fielding Multi-Use Trail and other trails should be part of an interconnected system to foster convenient, safe, efficient, and comfortable pedestrian

travel within and between the Employment and Business Precinct and the Fielding Precinct.

3. Manage the impacts of vehicle transportation by improving the operation of the existing transportation networks and developing Complete Streets within the precincts to support and encourage all modes of transportation.
 - a. Incorporate improvements to existing transportation networks to improve safety and operations. Final improvements will not result in traffic operations at a lower level of service than either the City or MOTI allow respectively and determined by a detailed Transportation Impact Assessment at time of zoning.
 - b. Encourage and promote Transportation Demand Management infrastructure to foster multi-modal transportation to connect Sandstone precincts and the surrounding transportation networks.

7.2 Transit Policies

In keeping with the sustainable objectives of the SMP2021 and the Nanaimo Transportation Master Plan, land uses and roadway systems will be designed to promote transit usage, with arterial and collector roadways designed to accommodate efficient and convenient routing of buses. Additionally, in accordance with the RDN's Transit Future Plan, space for future transit infrastructure is proposed within the Fielding Precinct. This could set Sandstone Boulevard as a major public transit route, serving the Sandstone community and beyond.

1. Collaborate with BC Transit and the Regional District of Nanaimo to connect Sandstone to the regional transit network.
2. Develop transit stops within a reasonable walking distance from sidewalks, lanes, trails and open spaces within employment, mixed-use and residential areas.
3. Transit infrastructure in the Fielding Precinct should be located in a convenient and accessible location informed by BC Transit, the Regional District of Nanaimo and the City of Nanaimo.

7.3 Transportation Network Map

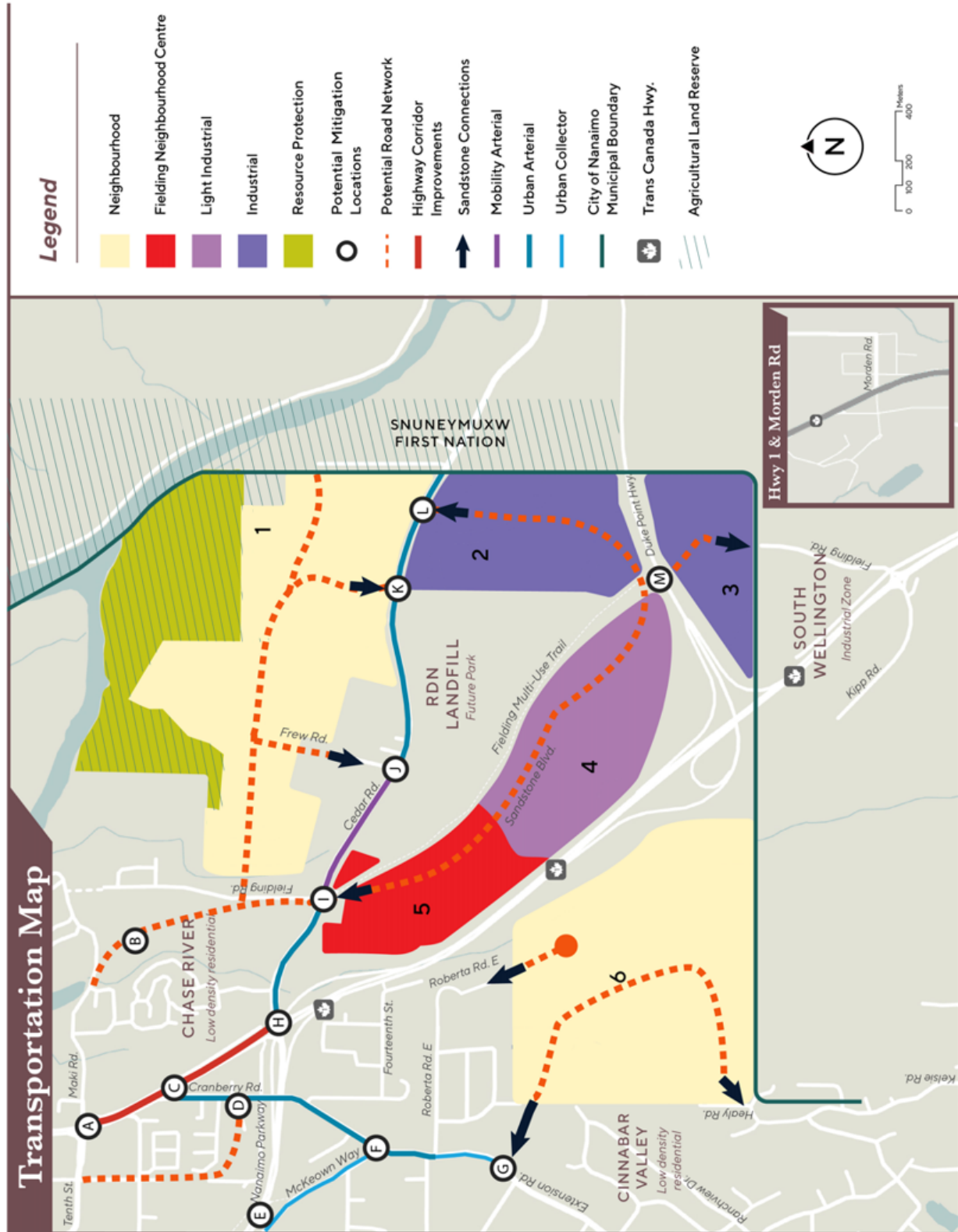


Table 1 - Proposed Mitigations					
Location	Description of Potential Mitigation	Key Drivers	Benefits	Challenges	
A	Highway 1 / Tenth / Maki	<ul style="list-style-type: none"> • Intersection upgrade 	Capacity	<ul style="list-style-type: none"> • Adds capacity 	<ul style="list-style-type: none"> • Limited ROW on Tenth • Proximity to Railway Overpass • Limited ROW under Railway Overpass • Varying ROW considerations on Highway • Proximity to Cranberry Road
B	Maki-Fielding Connector	<ul style="list-style-type: none"> • Connect Fielding Road to Maki Road 	Capacity Network Completion	<ul style="list-style-type: none"> • Alternative access to Cedar Road • Reduces volumes on Highway 1 corridor 	<ul style="list-style-type: none"> • Environmental considerations • No existing ROW • Capacity of Left Turns
C	Highway 1 / Cranberry	<ul style="list-style-type: none"> • Intersection upgrade 	Capacity	<ul style="list-style-type: none"> • Turning movements more protected • Adds capacity • Adds vehicle storage 	<ul style="list-style-type: none"> • Proximity to Cedar Road and Tenth/Maki • Additional ROW required for Frontage Road properties
D	Cranberry Connector	<ul style="list-style-type: none"> • Connect Cranberry Connector to Wexford / Lawlor 	Capacity Network Completion Multi-Modal	<ul style="list-style-type: none"> • Convenient secondary route to north • Reduces volumes on Highway 1 corridor • Improved access to Chase River commercial • Reduces turn volumes on / off Highway • Multi-modal opportunity to connect to Tenth 	<ul style="list-style-type: none"> • Lack of ROW (between Cranberry Connector and Twelfth) • Environmental • Utilities
E	McKeown Connection to Hwy 19	<ul style="list-style-type: none"> • Connect McKeown to Highway 19 	Capacity Network Completion	<ul style="list-style-type: none"> • Provides secondary route for Cinnibar Valley 	<ul style="list-style-type: none"> • Challenging geometrics • Weaving
F	Extension Road / McKeown Rd	<ul style="list-style-type: none"> • Re-grade • Laning • Traffic Control 	Capacity Multi-Modal	<ul style="list-style-type: none"> • Reduces road grade • Adds multi-modal facilities • Controlled pedestrian / bicycle crossings at intersection 	<ul style="list-style-type: none"> • Topography challenges • Driveway connections • Proximity to railway crossing • ROW • Environmental

				<ul style="list-style-type: none"> Improved railway crossing Upgraded railway infrastructure
G	Extension Road / Development Area 6	<ul style="list-style-type: none"> Access to Development Area 6 Traffic Control 	Development Multi-Modal	<ul style="list-style-type: none"> Reduces impacts to existing neighbourhood roads Adds multi-modal facilities on Extension Road and into Development Area 6 Separation of left and through vehicles improves safety on Extension Road
H	Highway 1 / Cedar Road	<ul style="list-style-type: none"> Intersection Upgrade 	Capacity	<ul style="list-style-type: none"> Adds capacity Existing overpass pier locations Proximity to Cranberry
I	Sandstone Boulevard / Cedar Road	<ul style="list-style-type: none"> New controlled intersection 	Development Multi-Modal	<ul style="list-style-type: none"> Main access to Development Area 5 Secondary access for Development Area 4 Controlled pedestrian / bicycle crossings at intersection Multi-modal facilities on Cedar Road and Sandstone Boulevard
J	Cedar Road / Frew Road	<ul style="list-style-type: none"> Intersection Upgrade 	Development	<ul style="list-style-type: none"> Provides access to Development Area 1
K	Cedar Road / Development Area 1	<ul style="list-style-type: none"> New intersection 	Development	<ul style="list-style-type: none"> Provides access to Development Area 1 Secondary access route
L	Cedar Road / Development Area 2	<ul style="list-style-type: none"> New controlled intersection 	Development	<ul style="list-style-type: none"> Provides access to Development Area 2 Secondary access for Development Area 4/5

M	Duke Point Highway / Fielding / Sandstone Boulevard	<ul style="list-style-type: none"> • Access to Development Area 2, 3, 4 & 5 	Development	<ul style="list-style-type: none"> • Main industrial access (Development Areas 2, 3, and 4) • Access to / from Duke Point Industrial area • Access to Highway 1 / 19 	<ul style="list-style-type: none"> • Topography • Proximity to Duke Point Interchange • Environmental
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Key Project Drivers (based on Nanaimo Transportation Master Plan definitions)

Capacity/Congestion: Current or projected traffic conditions will create significant delays. The project will seek to reduce delays and congestion by expanding road network capacity.

Network Completion/Redundancy: The current network is missing links (or restricts turns) that will be completed through this project.

Multi-Modal Transportation / Complete Streets: Improvements develop a key link within a multi-modal transportation network or sustainable transportation issues form a major component of the project rationale. Improvements support better integration between the street and surrounding land uses.

Development: The project would be constructed by or support future development. The project would likely not proceed without future development.