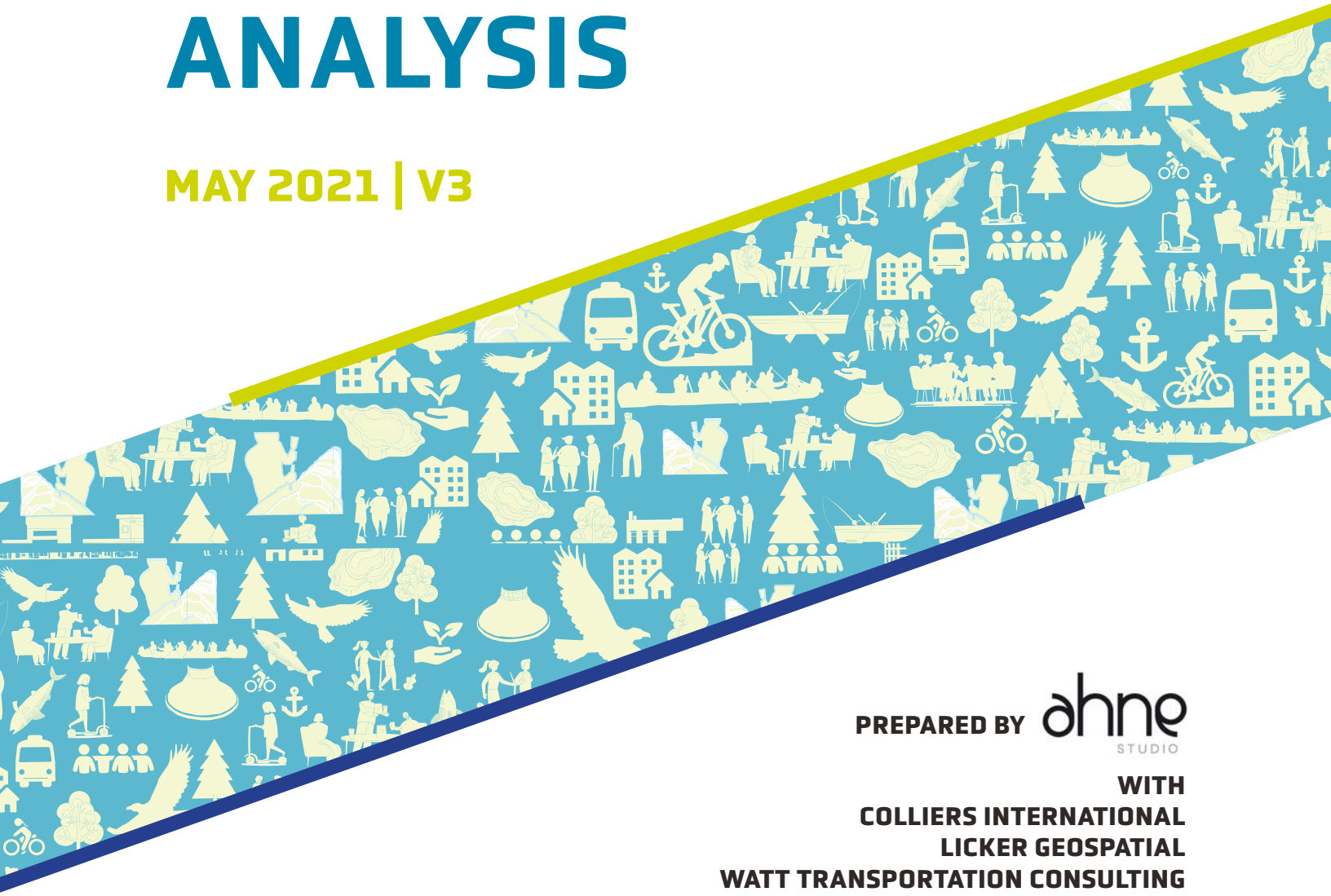
LADYSMITH UNPARALLELED 2049

OFFICIAL COMMUNITY PLAN

BACKGROUND RESEARCH AND ANALYSIS

MAY 2021 | V3



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MATTHEW THOMSON DESIGN
SUSTAINABLE SOLUTIONS GROUP
DIALOG


LADYSMITH UNPARALLELED
2049
OUR VISION. OUR PLAN.

CONTENTS

EXECUTIVE SUMMARY

This document offers a snapshot of existing conditions in Ladysmith, while recognizing that so much more will be learned through the community engagement process. At the same time, the information in this report will help inform community dialogue, and will also provide a baseline against which growth scenarios will be explored and OCP policies will eventually be developed.

Part 1 offers historic context, beginning with Stz'uminus presence since Time Immemorial. It offers context for the climate emergency, as well as regional considerations.

Part 2 describes existing and projected population, housing, and employment.

Part 3 describes existing inventory and projections for housing, retail, and office uses.

Part 4 explores the importance of land use mix, and how access to important amenities and services vary across Ladysmith. It also presents the distribution of population, residential, and employment densities.

Part 5 is an extension of Part 4, focusing specifically on urban form. It looks at streetscape composition and quality, pedestrian network connectivity, and heritage elements that are visible and add to Ladysmith's character and identity.

Part 6 describes parks and natural features, ranging from the waterfront and trails, to formal green spaces and topography. It also gives special attention to water systems and ecological health.

Part 7 outlines existing transportation conditions, including modes of travel, and networks for walking, cycling, transit, and vehicles. It also discusses trails and emerging trends in transportation that are relevant to this OCP.

This report concludes with the recognition that there is inherent wisdom within communities, and that what is shared during the community dialogue for this project will also give shape to Ladysmith's new, unparalleled Official Community Plan.

PART 1
SETTING CONTEXT

1.1 TIME IMMEMORIAL

The Stz'uminus First Nation people are Hul 'qumi 'num speaking people, descendants of the f irst inhabitants of the lands and waters that encompass Ladysmith. For thousands of years, the Stz'uminus harvested from the harbour, creeks and rivers, surrounding watersheds and forests, the Salish Sea, the Fraser River valley, and beyond.

The Stz'uminus lived in three permanent winter villages in the northern Hul'qumi'num coastal territory, in areas known by the settler names of Sibell Bay, Kulleet Bay, and in the Coffin Point area.

Despite their continuing and irrevovable presence since Time Immemorial, the Stz'uminus people became increasingly alientated from the management of their lands for harvesting, cultural, spiritual, and economic use. This was a result of settlers and colonial processes that divided and sold the land without the input of its original owners, and imposed an oppressive reservation and forced residential school system. Ladysmith sits on unceded lands.

Today Stz'uminus is a rapidly growing Nation, with 1300 members. They are partners with the Town of Ladysmith, and are working collaboratively to restore cultural values, improve ecological health, and create economic opportunity.

(Text adapted from the Ladysmith Waterfront Plan and the Stz'uminus First Nation website).

Canoe Race, 1905 (Ladysmith Archives)

1.2 HISTORY

HUL'QUMI'NUM TERRITORY

The following excerpts are taken from the CVRD State of the Environment Report (2010), which draws from the Cowichan Tribes website and Hul'qumi'num Treaty Group document "The Great Land Grab in Hul'qumi'num Territory":

"The area's rivers, tributaries and estuaries provided ready access to a plentiful supply of food: the rivers supported abundant salmon and trout populations, the sea was rich in shellfish, marine plants and marine mammals, and the land supported healthy wildlife populations and a variety of edible and medicinal plants and construction materials such as western red-cedar. Garry oak meadows were once very common in this area, and were important food-gathering sites (e.g., for camas bulbs).

This abundance was accessed carefully. First Nations made only minor adjustments to the landscape (e.g., temporary fish weirs, camas "farms", or controlled burns), in recognition of the connectedness to all things and their role as caretakers of the land, animals and resources – and in order to ensure a sustainable supply of these resources for their people.

'Our ancestors touched the lands, rivers, and oceans in our territory lightly and with respect. We used only what nature provided, and only what we needed.' (Cowichan Tribes website)."

EUROPEAN SETTLEMENT IN THE REGION

"In the 1800s, European settlers arrived, bringing a different view of the region's landscape. Europeans imported the notion of private ownership and control ("taming of the wild"), and perceived apparently 'unused' land as land simply waiting to be made useful. Oliver Wells, the first non-[Indigenous] person to conduct a detailed land survey of the Cowichan Valley (in 1859) described the landscape as: '45,000 acres of superior agricultural land that could be parceled into farms for 500 to 600 settler families.'

During a period of roughly 30 years, beginning in the 1860s, virtually all land previously occupied by First Nations peoples came under the control of the region's new European settlers. In the 1860s and 1870s, about 60,000 ha of Hul'qumi'num land on Vancouver Island and the Gulf Islands were claimed and occupied by these settlers, including prime oceanfront and riverfront lands, and areas of the Cowichan and Chemainus valleys. The newcomers were settled among the long-established Hul'qumi'num villages, occupying and inhabiting many of the domestic and resource places previously occupied by Hul'qumi'num peoples."

"In the 1880s, the bulk of Hul'qumi'num land was given to politician and businessman Robert Dunsmuir, in exchange for Dunsmuir's promise to build a railroad between Esquimalt and Nanaimo (the E&N railroad). For the Hul'qumi'num peoples, this deal represented a loss of almost 85% of their traditional land and resources, and an almost complete erosion of their way of life."

TOWN OF LADYSMITH

Established on the 49th Parallel, Ladysmith housed miners who worked at the Extension collieries. By 1911, the population was nearly 3300 residents, and the Town's commercial area – focused along 1st Avenue and Esplanade – was the commercial heart, including hotels and businesses. Industrial activities took place at the waterfront, where coal was stored and shipped. Ladysmith's population declined after the coal boom in the 1930s, but regenerated again once the community became a major logging centre in the 1940s.

In later decades, the resource-based economy became more mixed, characterized by retail, services, light manufacturing, and forestry. During this time, larger lots and curvilinear streets become more common in Ladysmith, and commercial development emerged along the highway.

Many of the commercial and residential buildings remain from these early years, which today create a historic character and distinct identity, strong sense of pride among residents, and a compelling draw for tourists and other visitors (Ladysmith Heritage Strategic Plan, 2008).

1.3 PLANETARY PERSPECTIVE

THE GLOBAL CLIMATE CHANGE ACTION IMPERATIVE

The Intergovernmental Panel on Climate Change (IPCC) estimates that average global surface temperature will increase by 1.8 (best case scenario) to 4.0°C (worst case scenario) toward 2050, a substantial increase over the rate of warming (0.6°C), recorded for the last century. In 2018, a special report from the IPCC concluded that warming would reach 1.5°C sometime between 2030 and 2052 in the absence of serious mitigation actions. The IPCC further estimated that a 1.5°C increase is likely to be the point at which some human populations and ecosystems reach their maximum capacity to adapt and survive.

Recent analysis shows that current government emissions reduction pledges are insufficient to meet the Paris Agreement goal, and the emissions trajectory of current policies misses the goal by a large margin. Limiting warming to 1.5°C implies reaching net zero carbon dioxide (CO2) emissions globally around 2050 and concurrent deep reductions in other emissions types, particularly methane.

CO2 is the principal anthropogenic greenhouse gas emission (GHG) that affects the Earth's radiative balance, and is therefore a reference gas against with other GHGs are measured.

LADYSMITH'S GREENHOUSE GAS EMISSIONS

Ladysmith's most recent GHG inventory was undertaken by the Province of BC using 2010 Community Energy and Emissions data, looking at buildings, on-road transportation, and solid waste. While this inventory is outdated and inprecise, it nonetheless points to areas in which Ladysmith can address climate action:

- **55%** of Ladysmith's GHGs are attributed to **on-road transportation**
- **45%** of Ladysmith's GHGs are attributed to **buildings**
- A marginal amount (**less than 1%**) of Ladysmith's GHGs are attributed to **solid waste**

A detailed GHG inventory, projections, and modelling exercise will be undertaken as part of this OCP process.

LOCAL CLIMATE IMPACTS

The anticipated climate change impacts in Ladysmith and the Cowichan Valley include:

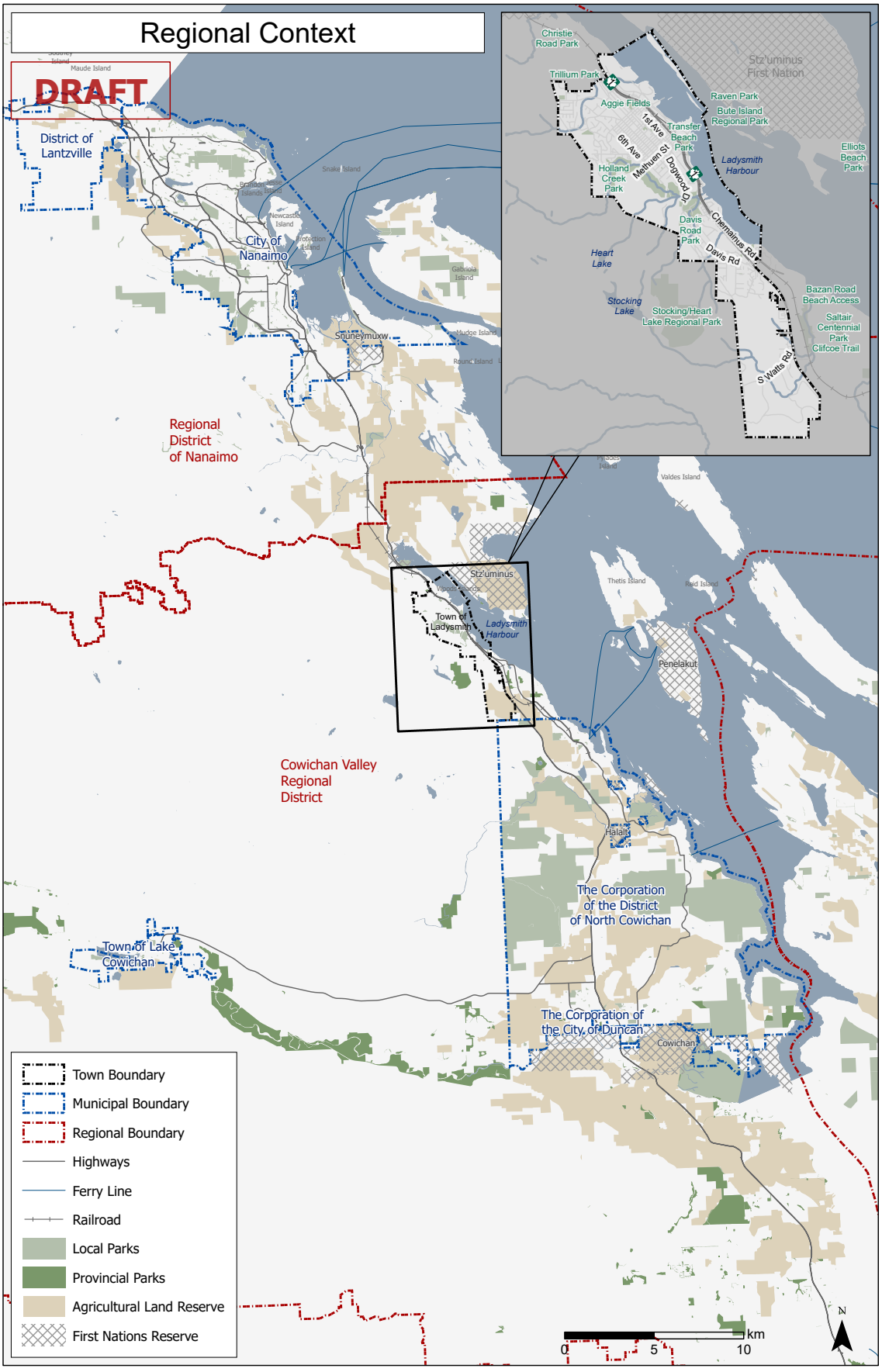
- Increased drought will increase wildfire risk and wildfire smoke presence and airborne particulate pollutants;
- Warmer temperatures and more humid air from increased rainfall in the winter and spring months will result in greater air front variances, resulting in more frequent and intense storms;
- Wetter winters and springs will increase flood risk frequency and severity as well as landslide risk;
- Decreased snowpack will mean less water for the summer months, increasing drought risk;
- Expected sea level rise will increase coastal erosion rates and seawater ingress to low-lying areas, with a risk of salinating agricultural soils and impacting crop production;
- Expected sea level rise will result in higher storm surges;
- Fewer winter heating degree days will decrease heating demand in winter months, while hotter summers will increase cooling demand in summer months;
- Increased growing degree days and fewer frost days will result in longer growing seasons;
- Hotter springs and summers may allow traditionally more southern crops to be grown in the region; and
- Warmer annual mean temperatures will result in flora and fauna species migration, with some currently local species moving north and species currently south of the bioclimatic region moving into the Cowichan Valley.

1.4 REGIONAL CONTEXT

Situated on the Salish Sea, Ladysmith is one of four incorporated municipalities in the Cowichan Valley Regional District (CVRD), which is 3473 square kilometers in size and is bordered by the Regional District of Nanaimo and Alberni-Clayoquot Regional District to the north and northwest, and by the Capital Regional District to the south and east. The other incorporated municipalities are the City of Duncan, Town of Lake Cowichan, and District of North Cowichan. There are also nine electoral areas. The CVRD does not currently have a regional growth strategy in place.

The CVRD is part of the traditional unceded territories of many First Nations, including the Cowichan Tribes, Stz'uminus, Penelakut, Lyackson, Halalt, Malahat, Pauquachin, Lake Cowichan, and Ditidaht First Nations. There are 34 First Nations Reservations within the boundaries of the Cowichan Valley Regional District.

The CVRD provides regional services including solid waste management, emergency services, regional parks, watershed protection, environmental services, and more. Its vision for the region is to be "a diverse collection of vibrant, livable, healthy communities, balanced in its pursuit of economic, social, and environmental opportunities" (CVRD Strategic Plan, 2020-2022).

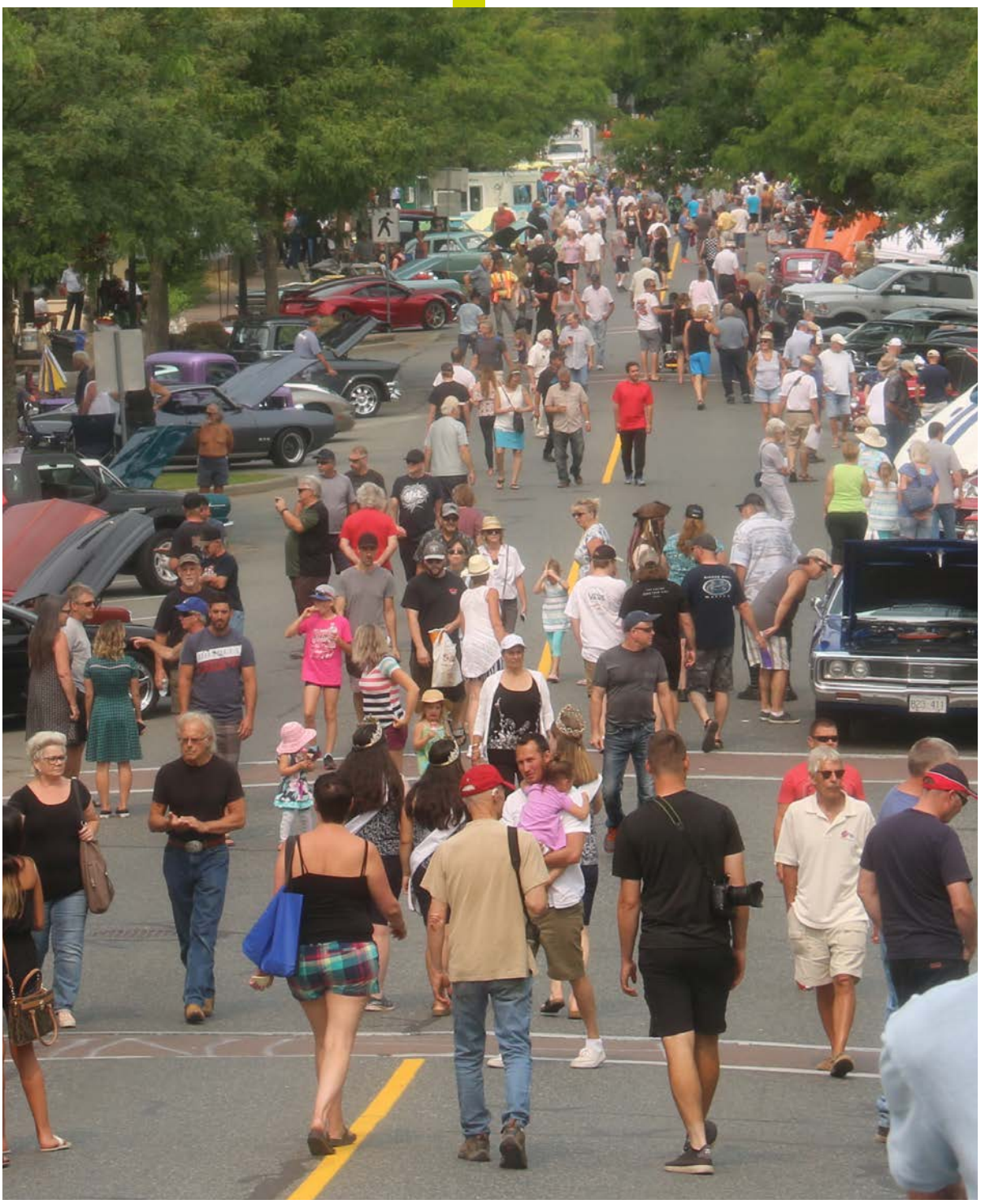

Regional Context
DRAFT
District of Lantzville
City of Nanaimo
Regional District of Nanaimo
Cowichan Valley Regional District
Town of Ladysmith
Stz'uminus
Stz'uminus First Nation
Snuneymuxw
Penelakut
Halalt
The Corporation of the District of North Cowichan
Town of Lake Cowichan
The Corporation of the City of Duncan
Cowichan
Ladysmith Harbour
Heart Lake
Stocking Lake
Stocking/Heart Lake Regional Park
Holland Creek Park
Davis Road Park
Transfer Beach Park
Aggie Fields
Trillium Park
Christie Road Park
Raven Park
Bute Island Regional Park
Elliots Beach Park
Bazan Road Beach Access
Saltair Centennial Park
Clifcoe Trail
Chemainus Rd
Davis Rd
S Watts Rd
Dogwood Dr
Methuen St
1st Ave
6th Ave
Town Boundary
Municipal Boundary
Regional Boundary
Highways
Ferry Line
Railroad
Local Parks
Provincial Parks
Agricultural Land Reserve
First Nations Reserve
0
5
10
km
N

PART 2
PEOPLE, HOUSING, AND EMPLOYMENT

2.1 POPULATION

Ladysmith had an estimated population of 8,537 people as of the most recent (2016) Statistics Canada Census with an average age of 45.3.

Between now and 2050, the population is expected to grow at an estimated annual rate of 1.2% to reach a total of 10,125 people by 2030, 11,345 by 2040, and 12,712 people by 2050.

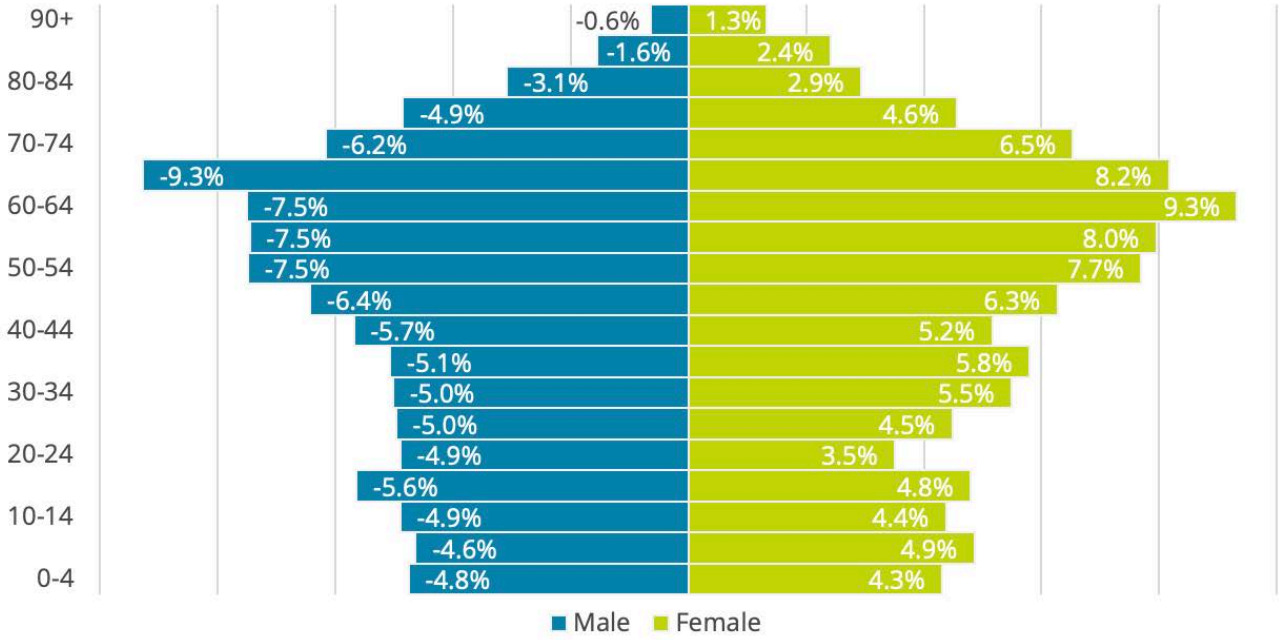


2.2 POPULATION PROJECTIONS

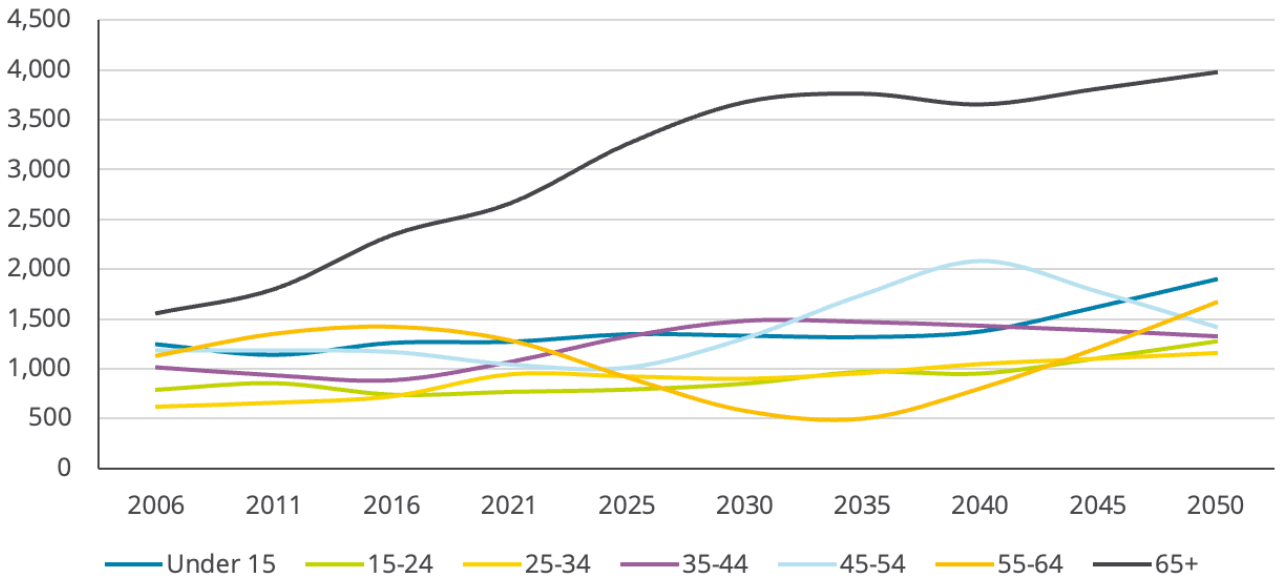
As displayed below, the population is expected to continue aging, with the fastest growth among those aged over 65. Although the entire provincial population is expected to age during the projection period, it is expected that Ladysmith will continue to have a slightly older average age and decreasing working age population ratio when compared to larger urban centres on Vancouver Island which consistently attract younger demographics due to more employment and education opportunities.

TOWN OF LADYSMITH POPULATION PROJECTIONS (2006 – 2050)							
Age	**2006**	**2011**	**2016**	**2030**	**2040**	**2050**	**Annual Δ**
Under 15	1,245	1,140	1,260	1,332	1,374	1,893	1.2%
	16.5%	14.4%	14.8%	13.2%	12.1%	14.9%	
15 to 24	790	855	740	851	952	1,272	1.6%
	10.5%	10.8%	8.7%	8.4%	8.4%	10.0%	
25 to 34	620	660	725	901	1,050	1,161	1.4%
	8.2%	8.3%	8.5%	8.9%	9.3%	9.1%	
35 to 44	1,010	930	880	1,483	1,433	1,326	1.2%
	13.4%	11.7%	10.3%	14.6%	12.6%	10.4%	
45 to 54	1,185	1,185	1,170	1,310	2,085	1,424	0.6%
	15.7%	15.0%	13.7%	12.9%	18.4%	11.2%	
55 to 64	1,130	1,350	1,420	573	800	1,663	0.5%
	15.0%	17.0%	16.6%	5.7%	7.1%	13.1%	
65+	1,558	1,801	2,342	3,676	3,651	3,973	1.6%
	20.7%	22.7%	27.4%	36.3%	32.2%	31.3%	
Total	**7,538**	**7,921**	**8,537**	**10,125**	**11,345**	**12,712**	**1.2%**

TOWN OF LADYSMITH POPULATION BY AGE COHORT (2016 CENSUS)



TOWN OF LADYSMITH POPULATION PROJECTIONS
BY AGE COHORT (2006 - 2050)



2.3 HOUSEHOLD & INCOME STRUCTURE

The average household size of Ladysmith is estimated at 2.3 people which is slightly lower than the provincial average of 2.4 people. Approximately 70.5% of total households have either one or two residents, a trend which is expected to continue due to the projected aging of the population. This is also reflected when assessing the total number of families along with family sizes, which is currently less than the provincial average of 2.8 people per family.

TOWN OF LADYSMITH HOUSING STRUCTURE (2016 CENSUS)		
Statistic	**Total**	**%**
Total Number of Households	3,710	
One Person Households	1,030	27.8%
2 Person Households	1,585	42.7%
3 Person Households	490	13.2%
4 Person Households	400	10.8%
5 or More	200	5.4%
Average Household Size	2.3	
Total Number of Families	2,640	
2 Person Families	1,660	62.9%
3 Person Families	465	17.6%
4 Person Families	370	22.2%
5 or More	140	5.3%
Average Family Size	2.6	

TOWN OF LADYSMITH HOUSEHOLDS BY # OF BEDROOMS (2016 CENSUS)		
Studio	15	0.4%
1 Bedroom	195	5.2%
2 Bedrooms	965	26.0%
3 Bedrooms	1,525	41.1%
4 or More Bedrooms	1,010	27.2%

The median household income within Ladysmith was $67,674 as of the 2016 Census. The average total income of one-person households was $42,821, whereas the average total income of two or more person households was $93,090. These figures are lower than respective provincial averages of $46,696 and $108,010. Ladysmith has a relatively even distribution of incomes, with 51.5% of households earning between $20,000 and $80,000 per year. There is also a notable amount of relatively higher income households, with 29.6% earning more than $100,000 per year.

TOWN OF LADYSMITH HOUSEHOLDS BY INCOME BRACKET (2016 CENSUS)		
Income Bracket	**Households**	**%**
Under $20,000	275	7.4%
$20,000 to $40,000	650	17.6%
$40,000 to $60,000	695	18.8%
$60,000 to $80,000	560	15.1%
$80,000 to $100,000	425	11.5%
Over $100,000	1,095	29.6%
Average Household Income	$79,184	
Median Household Income	$67,674	

2.4 HOUSING NEEDS

The 2021 CVRD Regional Housing Assessment notes the following themes for the state of housing and housing needs in the region:

- A majority of housing sizes are unsuitable for resident needs, with many households possessing more bedrooms than they need. At the same time, young families raised concerns about housing large families in small dwellings. Ladysmith has a lower share of single-detached houses in the region, and a higher share of multi-unit homes (e.g. townhouses, single-detached homes). Ladysmith has a lower share of one-bedroom units, and a higher share of three-bedroom units.
- With the aging population, the region will be home to more seniors and those living on income assistance, making these groups especially vulnerable to unstable housing conditions.
- The cost of living and stagnant wages are barriers for young people entering the housing market, with housing costs being misaligned with regional wages. The share of households falling below the affordability standard (i.e. housing expenses equal to 30% of household income) in Ladysmith is 18%.
- These is an acute shortage of rental housing, including purpose-built rental for young families, youth, Indigenous people, those with mental health challenges, singles, and seniors. In 2019, 35% of Ladysmith's renter households were in core housing need (i.e. housing is inadequate, unaffordable, and/or unsuitable, in which a household spends 30% or more of its total before-tax income to pay rent), and 11% were in extreme housing need (i.e. housing is inadequate, unaffordable, and/or unsuitable, in which a household spend 50% or more of its total before-tax income to pay rent).
- In Ladysmith, renters with an income up to $22,902 are spending 42% of their income on rent and utilities for a one-bedroom, and 80% of thier income for a two-bedroom. Cited barriers to rental options include rental restrictions, previous homelessness, owning pets, and having young children. Households in Ladysmith with incomes below approximately $59,000 will not be able to afford renting new homes.

- Current housing options are not adequately sized or culturally appropriate for First Nations, with First Nations housing staff speaking to the need for larger single-detached homes to house large, multi-generational families. Other families also indicated a need for more space for children.
- There is a need for more non-market housing, including supportive and emergency housing options. In Ladysmith, there are 116 households subsidized by BC Housing.
- Homelessness is a critical issue, with neigbouring municipalities of Duncan and North Cowichan overwhelmed by the demand incurred by out-of-area residents seeking shelter. In Ladysmith, at the time of the 2017 Point-in-Time Homeless Count and Homeless Needs Survey Community Report, five people were counted as absolutely homeless, one as hidden homeless (e.g. staying with family or friends), and 11 as at-risk of being homeless.
- More supportive housing is needed for those with mental health conditions and cognitive or physical disabiltiies. This includes assisted living and transitional supportive housing.
- Affordable housing for familiies for rent or purchase is hard to find. Young families, low-income families, and lone-parent famlies in particular are at risk of housing instability.

Examples of non-market and emergency housing in Ladysmith range from a homeless shelter in the Island Hotel to new development projects being undertaken by the Ladysmith Resource Centre Association.

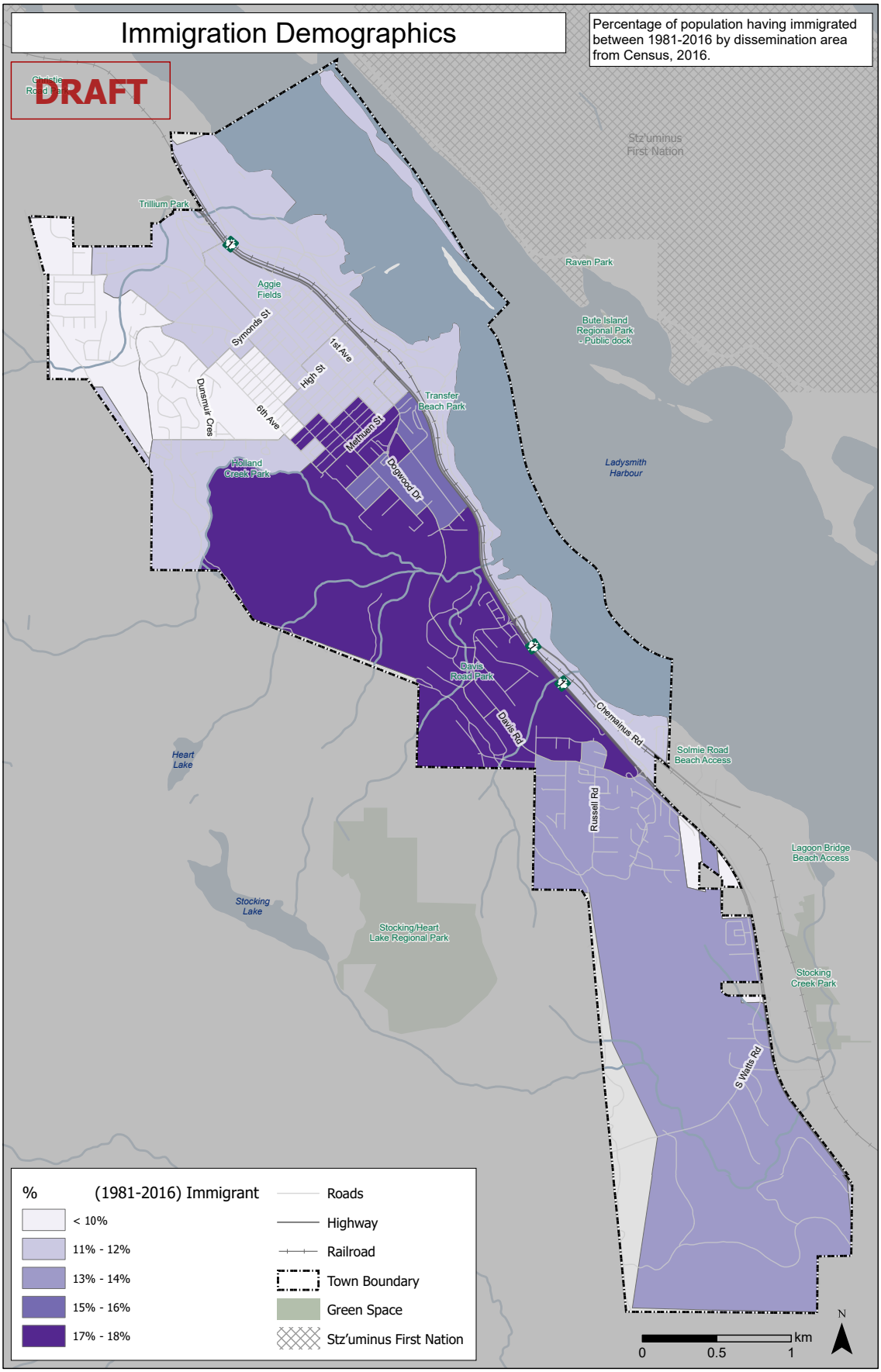
2.5 IN-MIGRATION & IMMIGRATION

Ladysmith is experiencing a slowly increasing reliance on in-migration, primarily from other areas of the Province, which mitigates declining fertility and increasing mortality rates. Total in-migration (i.e. all people moving to Ladysmith area) over the five years prior to the last Census was 2,020 people. Internal migrants – people moving from other parts of Canada – were 1,945, with 1,385 of those from within BC and 555 of those from other provinces.

Additionally, there has been a small amount of immigration – 75 people – from those born outside of Canada. As outlined below, approximately 12.4% of the population can be defined as immigrants, 9.0% of which are from Europe, 1.4% from the Americas, and 1.4% from Asia.

TOWN OF LADYSMITH IMMIGRANT COMPOSITION (2016 CENSUS)		
Immigrant Status	**Population**	**%**
Non-Immigrants	7,325	87.6%
Immigrants	1,035	12.4%
Americas	115	1.4%
Europe	755	9.0%
Africa	20	0.2%
Asia	120	1.4%
Oceania and Other	25	0.3%

The map on the following page shows that a higher proportion of immigrants reside in South Ladysmith, as well as the sourthern portion of North Ladysmith.


Immigration Demographics
Percentage of population having immigrated between 1981-2016 by dissemination area from Census, 2016.
DRAFT
Stz'uminus First Nation
Trillium Park
Raven Park
Aggie Fields
Symonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Transfer Beach Park
Bute Island Regional Park
Public dock
Methuen St
Dogwood Dr
Holland Creek Park
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
% (1981-2016) Immigrant
< 10%
11% - 12%
13% - 14%
15% - 16%
17% - 18%
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

2.6 EMPLOYMENT STRUCTURE & PROJECTIONS

Ladysmith is expected to continue being a tertiary employment market, primarily consisting of locally serving industries. This is evident from the high proportion of jobs in the retail trade (13.3%), healthcare and social assistance (12.3%), and public administration employment sectors (8.0%). As such, the expected growth of the working age population within Ladysmith is likely to mirror growth in demand for jobs and related office space within the town. The total working age population is expected to grow from 7,277 in 2016 to 8,794 by 2030, 9,972 by 2040, and 10,819 by 2050. Under the assumption that the participation rate and unemployment rate will remain relatively steady over the projection period, along with an analysis of the projections provided by Rennie Intelligence and the CVRD Housing Needs Assessment, this is expected to result in approximately 58 new jobs per year. It is estimated that approximately one third of these jobs could be retained within Ladysmith based on observed trends within Ladysmith and comparable Vancouver Island municipalities.

TOWN OF LADYSMITH EMPLOYMENT COMPOSITION AND PROJECTIONS (2016-2020)

Age	2016	2030	2040	2050	Annual Δ
Working Age Population	7,277	8,794	9,972	10,819	104
In the Labour Force	4,045	4,889	5,544	6,015	58
Employed	3,790	4,606	5,245	5,715	57
Unemployed	250	284	299	301	1
Participation Rate	57.0%	55.6%	55.6%	55.6%	
Employment Rate	93.7%	52.4%	52.6%	52.8%	
Unemployment Rate	6.2%	5.8%	5.4%	5.0%	

TOWN OF LADYSMITH EMPLOYMENT BY CATEGORY (2016 CENSUS)		
Industry	**Total**	**%**
Total Employed Population	3,790	
Estimated Jobs retained within Ladysmith	1,250	33.0%
1) Retail Trade	505	13.3%
2) Healthcare and Social Assistance	465	12.3%
3) Manufacturing	340	9.0%
4) Accommodation and Food Services	325	8.6%
5) Public Administration	305	8.0%
6) Construction	280	7.4%
7) Educational Services	265	7.0%
8) Transportation and Warehousing	235	6.2%
9) Finance, Insurance, and Real Estate	230	6.1%
10) Professional and Scientific	205	5.4%
Other	635	16.8%

PART 3
LAND USE INVENTORY & P ROIECTIONS

3.1 CONTEXT

Understanding how to manage growth in the future requires an understanding of future projections for different types of land uses, including residential, commercial, retail, and office. Part 3 provides an overview of existing inventory as well as forecasted future demand. This section also provides a snapshot of housing needs, based on the 2021 Regional Housing Needs Assessment.

At the same time, it is worth noting "land use" itself is a settler way of viewing the land. Indigenous scholars have pointed out that land is the source of all life, and should not be reduced to a type of human activity. Since "land use planning" is a central part of an Official Community Plan, there are opportunities in this project to explore ways to approach land in ways that are more holistic and culturally inclusive. For example, the term "land relationship" planning is an alternative term that helps imbue a sense of reciprocity and holism.

According to the Hul'qumi'num Member First Nations and Hul'qumi'num Treaty Group's "Consultation Policy":

'uwu ni'us 'uw tumuhw'ul nilh s'ul'e'tst (It is not just land — it is our life.)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3.2 HOUSING INVENTORY

As estimated by CMHC, the 2016 Census, the CVRD housing Needs Assessment, and Rennie Intelligence, there was a total of approximately 3,720 private dwelling units within Ladysmith, 2,985 (80.2%) of which were owned and 735 (19.8%) rented.

Of this total stock, 2,545 (68.4%) were single-family homes, 355 (9.5%) were low rise apartments, 265 (7.1%) were row houses, 215 (5.8%) were semi-detached houses, and 80 (2.2%) were duplexes. Based on these standard typology classifications, Statistics Canada includes secondary suites under the duplex category.

The average value of owned private dwellings ranges from $312,182 for duplexes up to $470,640 for single-detached homes. Over the past 10 years, the prices of single detached homes grew by approximately 49% compared to lesser growth among higher density dwelling formats such as apartments. Approximately 23.9% of the total housing stock was built since 2001, which is higher than the CRD at 17%. Conversely, although around 45% of the housing stock was built prior to 1980, the majority of supply is expected to be in relatively good condition with only 6.3% of residences needing major repairs.

Since the 2016 Statistics Canada Census, there has been additional residential development throughout Ladysmith. Based on an analysis of currently available data, along with an in-person assessment of the Ladysmith market to observe development trends and existing supply, there is an estimated 3,843 occupied dwelling units, indicating the development and occupation of approximately 123 units over the last few years.

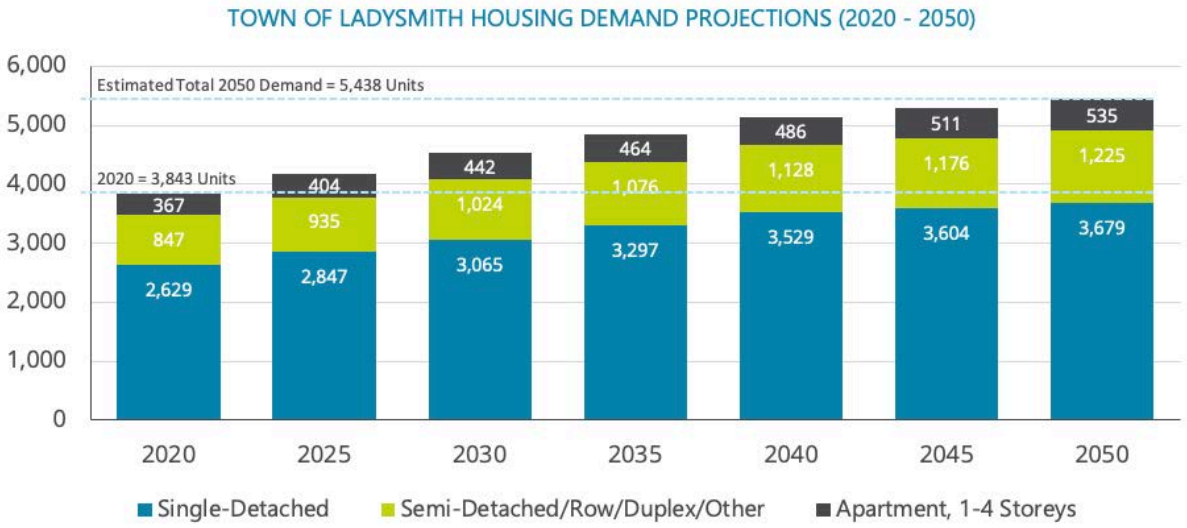
TOWN OF LADYSMITH HOUSING STATISTICS (2016 CENSUS)				
Structure Type	**Total**	**%**	**Owners**	**Renters**
Occupied Private Dwellings	3,720		2,985	735
Single-Detached House	2,545	68.4%	2,275	270
Semi-Detached House	215	5.8%	170	45
Row House	265	7.1%	145	120
Apartment, Duplex	80	2.2%	30	50
Apartment, 1-4 Storeys	355	9.5%	125	230
Period of Construction	**Total**	**%**		
1960 or Before	890	24.1%		
1961 to 1980	775	20.8%		
1981 to 1990	330	8.9%		
1991 to 2000	830	22.3%		
2001 to 2005	265	7.1%		
2006 to 2010	410	11.0%		
2011 to 2016	215	5.8%		
Needs Only Regular or Minor Maintenance	3,485	93.7%		
Needs Major Repairs	235	6.3%		

3.3 HOUSING PROJECTIONS

To project the future demand for housing units within Ladysmith, Colliers assessed the recent Housing Needs Assessment along with longer term age-specific demand projections by utilizing a household maintainer rate demand model. This industry standard methodology estimates future residential demand based on a variety of factors including age-specific population projections, housing preferences by age of primary maintainer, and market trends.

It should be noted that while this model is accurate in projecting the total demand for housing units, the mixture between demand for structure type is also slightly impacted by the availability of supply during any given year, along with the proposed density targets as guided by the Official Community Plan.

It is estimated that Ladysmith will experience demand **for approximately 1,600 additional dwelling units by 2050** to accommodate demand. On an annual basis, Ladysmith is expected to demand an average of 53 new residential units per year over the projection period. However it is worth noting that current approved development already accounts for much of this supply.

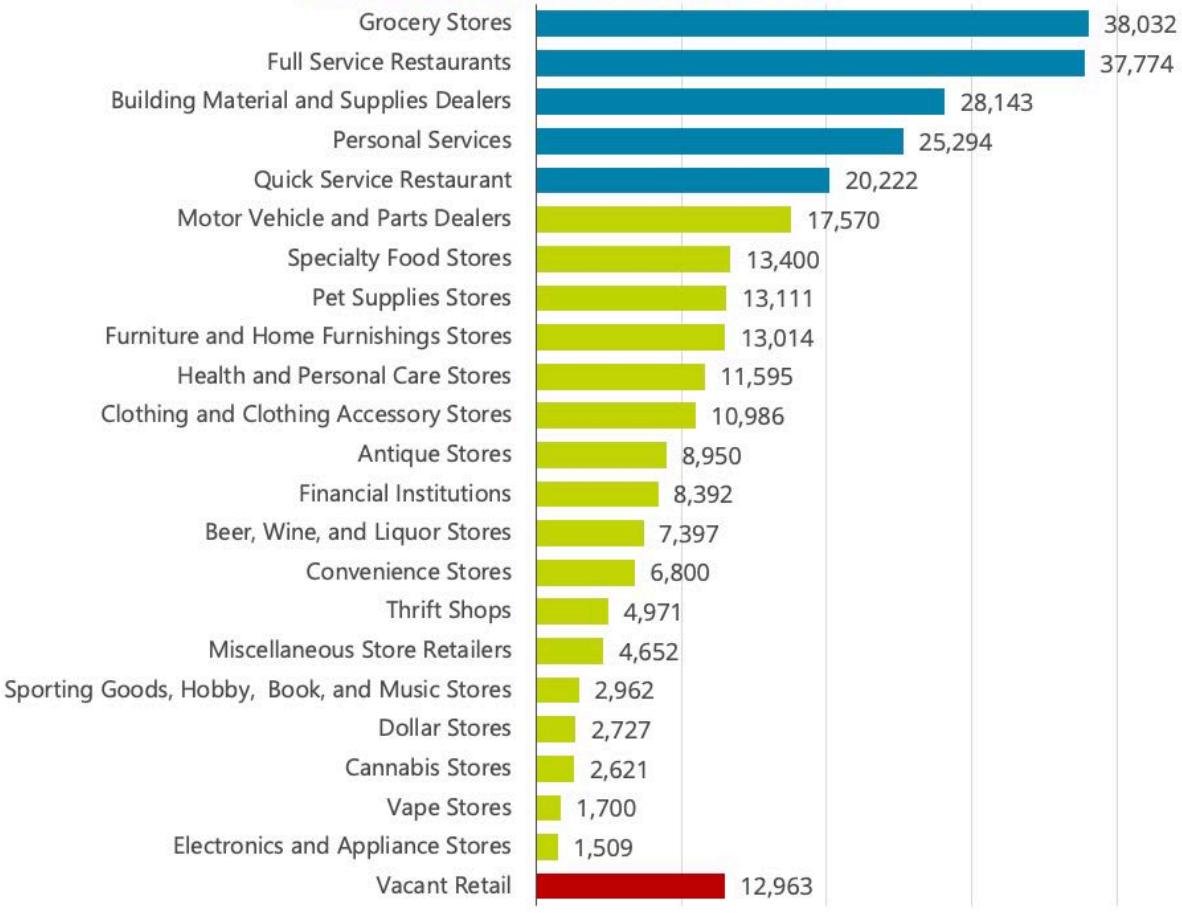


STRUCTURE TYPE	2030	2040	2050	TOTAL Δ	ANNUAL Δ
Single-Detached House	3,065	3,529	3,679	1,049	35
	67.7%	68.6%	67.6%	65.8%	
Semi-Detached House	263	295	321	99	3
	5.8%	5.7%	5.9%	6.2%	
Row House	351	388	397	124	3
	7.7%	7.6%	7.3%	7.7%	
Apartment, Duplex/Other	409	445	506	155	5
	9.0%	8.6%	9.3%	9.7%	
Apartment, 1-4 Storeys	442	486	535	168	6
	9.7%	9.4%	9.8%	10.6%	
Total	**4,530**	**5,143**	**5,438**	**1,595**	**53**

3.4 RETAIL INVENTORY

Ladysmith currently has an inventory of approximately 295,000 square feet of gross leasable retail floorspace with a vacancy rate of 4.4%, which indicates a relatively healthy market for a town the size of Ladysmith. The majority of this retail floorspace is located along 1st Avenue, along with additional supply within Coronation Mall and the Home Hardware Complex on Ludlow Road. The retail offerings within Ladysmith primarily serve the convenience and daily needs of local residents given the proximity to the larger retail markets of Nanaimo, and to a lesser extent, Duncan. As can be expected in such as market, the largest occupiers of retail floorspace include grocery stores (Save-On-Foods and 49th Parallel Grocery), food services (restaurants, cafés, and specialty food stores such as the Old Town Bakery), and personal services (hair salons,

Figure 13: TOWN OF LADYSMITH RETAIL INVENTORY (ESTIMATED TOTAL OF 295,000 SQUARE FEET)



Consumers looking for big box stores such as Costco, Walmart, and Best Buy, along with other comparison-shopping categories like mainstream clothing, are more likely to choose to travel to Nanaimo or Duncan for their shopping needs. Similarly, larger scale national tenants would be unlikely to desire retail units within Ladysmith due to the lack of a critical local population base and preference for larger markets such as Nanaimo. These retail patterns are expected to continue throughout the projection period.

Fig. 14: TOWN OF LADYSMITH RETAIL INVENTORY BY SUBCATEGORY

Retail Subcategory	GLA	%
Grocery Stores	38,032	12.9%
Full Service Restaurants	37,774	12.8%
Building Material and Supplies Dealers	28,143	9.5%
Personal Services	25,294	8.6%
Quick Service Restaurant	18,267	6.2%
Motor Vehicle and Parts Dealers	17,570	6.0%
Specialty Food Stores	13,400	4.5%
Pet Supplies Stores	13,111	4.4%
Furniture and Home Furnishings Stores	13,014	4.4%
Health and Personal Care Stores	11,595	3.9%
Clothing and Clothing Accessory Stores	10,986	3.7%
Antique Stores	8,950	3.0%
Financial Institutions	8,392	2.8%
Beer, Wine, and Liquor Stores	7,397	2.5%
Convenience Stores	6,800	2.3%
Thrift Shops	4,971	1.7%
Miscellaneous Store Retailers	4,652	1.6%
Sporting Goods, Hobbies, Books, and Music	2,962	1.0%
Dollar Stores	2,727	0.9%
Cannabis Stores	2,621	0.9%
Quick Service Restaurants	1,954	0.7%
Cannabis and Vape Stores	1,700	0.6%
Electronics and Appliance Stores	1,509	0.5%
Vacant Retail	12,963	4.4%
Grand Total	**294,783**	

3.5 RETAIL PROJECTIONS

Colliers assessed the demand for future retail floorspace within Ladysmith by first analysing the growth in total retail expenditure potential by subcategory generated by the population projections outlined herein as well as the surrounding trade area. Local retail market dynamics were then examined to estimate the proportion of the category-specific potential expenditures that could realistically be captured within Ladysmith. For example, it is unlikely that Ladysmith residents will begin completing the majority of their comparison and big box shopping purchases in Ladysmith over the next 20 years when there is substantial existing supply in nearby Nanaimo and Duncan. There is also major retail expansion planned at the Nanaimo Airport.

Conversely, it can be expected that most convenience-based expenditures (grocery, liquor, pharmacy, restaurants, etc.) will be made within Ladysmith if available.

Based on this analysis, Colliers estimates that Ladysmith could experience demand for an additional **12,000 square feet of retail floorspace by 2030, 48,000 square feet by 2040, and 112,000 square feet by 2050.** With an average floor area ratio of 0.5, this would result in demand for an additional 5.2 acres of land by 2050, which could include infill and/or newly developed land.

Town of Ladysmith Retail Demand Projections	Supply (sf)	Additional GLA Demand (sf)		
Major Retail Category	**2020**	**2030**	**2040**	**2050**
Motor vehicle and parts dealers and repairs	17,570	0	0	0
Building Material, Furniture, and Supplies	41,157	1,100	2,238	11,054
Electronics and appliance stores	1,509	501	878	1,389
Supermarkets and other grocery stores	38,032	0	2,968	11,171
Convenience stores	6,800	309	1,542	3,211
Specialty food stores	13,400	707	3,153	6,465
Beer, wine and liquor stores	7,397	341	1,683	3,499
Health and personal care stores	11,595	2,117	4,494	7,713
Clothing and clothing accessories stores	10,986	752	2,954	5,934
Sporting goods, hobby, book and music stores	2,962	613	1,283	2,191
Miscellaneous store retailers[1]	38,731	2,197	9,422	19,206
Net Warranted Retail Floor Area	**190,138**	**8,638**	**30,615**	**71,832**
Full-service restaurants[2]	37,774	2,000	5,964	14,771
Limited-service restaurants	20,222	991	4,696	9,714
Net Warranted Food & Beverage Floor Area	**57,996**	**2,991**	**10,660**	**24,486**
Service Commercial[3]	33,686	486	7,094	16,036
Total Floor Area	**294,783**	**12,115**	**48,369**	**112,354**
Additional Land Demand at 0.5 FAR (acres)		**0.6**	**2.2**	**5.2**

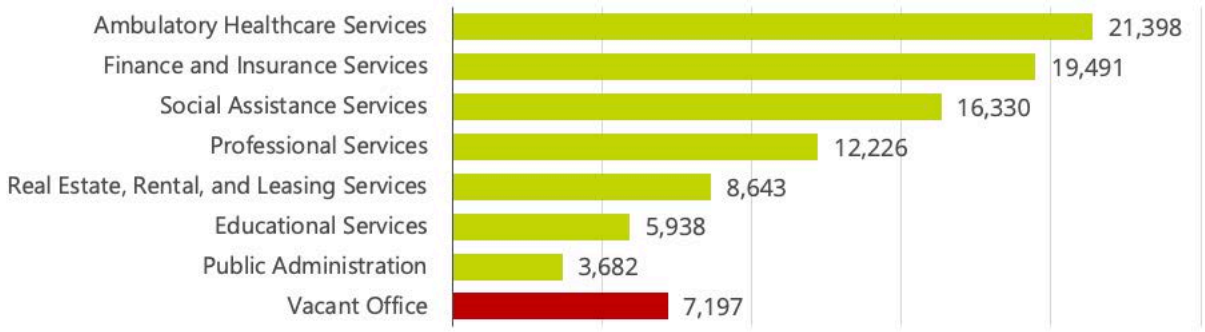
1) Includes dollar stores, cannabis stores, tour operators, pet supplies, antique stores, thrift stores, etc.
2) Includes drinking establishments
3) Includes banks, fitness, and professional services tenants such as doctors, dentists, and lawyers. Some of these tenants generally occupy either ground floor commercial units or above ground office space in mixed-use developments.

3.6 OFFICE INVENTORY

The Town of Ladysmith has an estimated inventory of approximately 95,000 square feet of office floorspace with a vacancy rate of 7.6%. The office market within Ladysmith is small and almost entirely focused on serving the local population.

As such, the largest occupiers of floorspace are ambulatory healthcare services (doctors, dentists, chiropractors, etc.), financial services, social assistance services, and professional services. Aside from the municipal hall and a few small buildings primarily with office-oriented tenants, a large portion of this floorspace is within developments that also have retail components. In towns such as Ladysmith, this form of office space is the most common, and is a likely trend to expect moving forward, particularly as the achievable office lease rates in the market are unlikely to warrant the feasible development of purpose-built, standalone office buildings.

TOWN OF LADYSMITH OFFICE INVENTORY
(ESTIMATED TOTAL OF 95,000 SQUARE FEET)



TOWN OF LADYSMITH OFFICE INVENTORY BY SUBCATEGORY		
Retail Subcategory	**GLA**	**%**
Ambulatory Healthcare Services	21,398	22.5%
Finance and Insurance Services	19,491	20.5%
Social Assistance Services	16,330	17.2%
Professional Services	12,226	12.9%
Real Estate, Rental, and Leasing Services	8,643	9.1%
Educational Services	5,938	6.3%
Public Administration	3,682	3.9%
Vacant Office	7,197	7.6%
Grand Total	**94,906**	

3.7 OFFICE PROJECTIONS

Based on the employment projections outlined in Part 2, Colliers has projected future demand for office space within Ladysmith. This demand model accounts for the fact that approximately 30% of employed Ladysmith residents currently have jobs within the Town and that this ratio could slowly grow to 38% by 2050 given the appropriate influx of supply. This analysis also assumes that approximately half of the currently vacant units will be absorbed by 2030, with the remaining half being persistently vacant due to factors such as age, quality, location, and the competitive impact of nearby markets and new supply.

Based on this analysis, Colliers estimates that Ladysmith could experience demand for an additional 32,100 square feet of office floorspace by 2030, 62,600 square feet by 2040, and 86,300 square feet by 2050. The majority/all of this floorspace is expected to be accommodated in mixed-use developments with retail uses on the ground floor, and potentially residential uses above.

TOWN OF LADYSMITH OFFICE DEMAND PROJECTIONS (2020 – 2050)				
Statistic	**2016**	**2030**	**2040**	**2050**
Total Working Age Population	7,277	8,794	9,972	10,819
In the Labour Force	4,045	4,889	5,544	6,015
Employed	3,790	4,606	5,245	5,715
Unemployed	250	284	299	301
Participation Rate	55.6%	55.6%	55.6%	55.6%
Employment Rate	52.1%	52.4%	52.6%	52.8%
Unemployment Rate	6.2%	5.8%	5.4%	5.0%
Office Employment Rate (%)	31.5%	31.5%	31.5%	31.5%
Office Employment Total[1]	359	493	595	684
Square Feet Per Office Employee	265	265	265	265
Projected Office Floorspace Requirements (sf)	95,000	130,714	157,612	181,270
Additional Office Floorspace Requirements (sf)	-	32,116	62,612	86,270
Vacant (sf)[2]	7,197	3,600	3,600	3,600
Estimated FAR			1.5 -2	
Estimated Additional Land Requirement (acres)[3]		0.37 – 0.49	0.72 – 0.96	1.00 – 1.32

1) Accounts for the fact that approximately 30% of workers are employed in the town growing to 38% by 2050.
2) Assumes half of the vacant units will be absorbed by 2030 and the remaining half will remain vacant due to factors such as age, poor quality, poor location, etc.
3) The majority/all this demand could be accommodated within mixed-use developments.

3.8 RECENT DEVELOPMENTS

The maps on the following three pages reveal where development and/or renovation investment is taking place in Ladysmith. They specifically show investments by project value and project type between 2014-2020, as well as new constructions by investment type in the same period.

3.9 INDUSTRIAL LAND

While industrial land inventory and projections were not a part of this report's scope, a 2019 Cowichan Industrial Land Use Strategy (Urban Systems) provides the following insights:

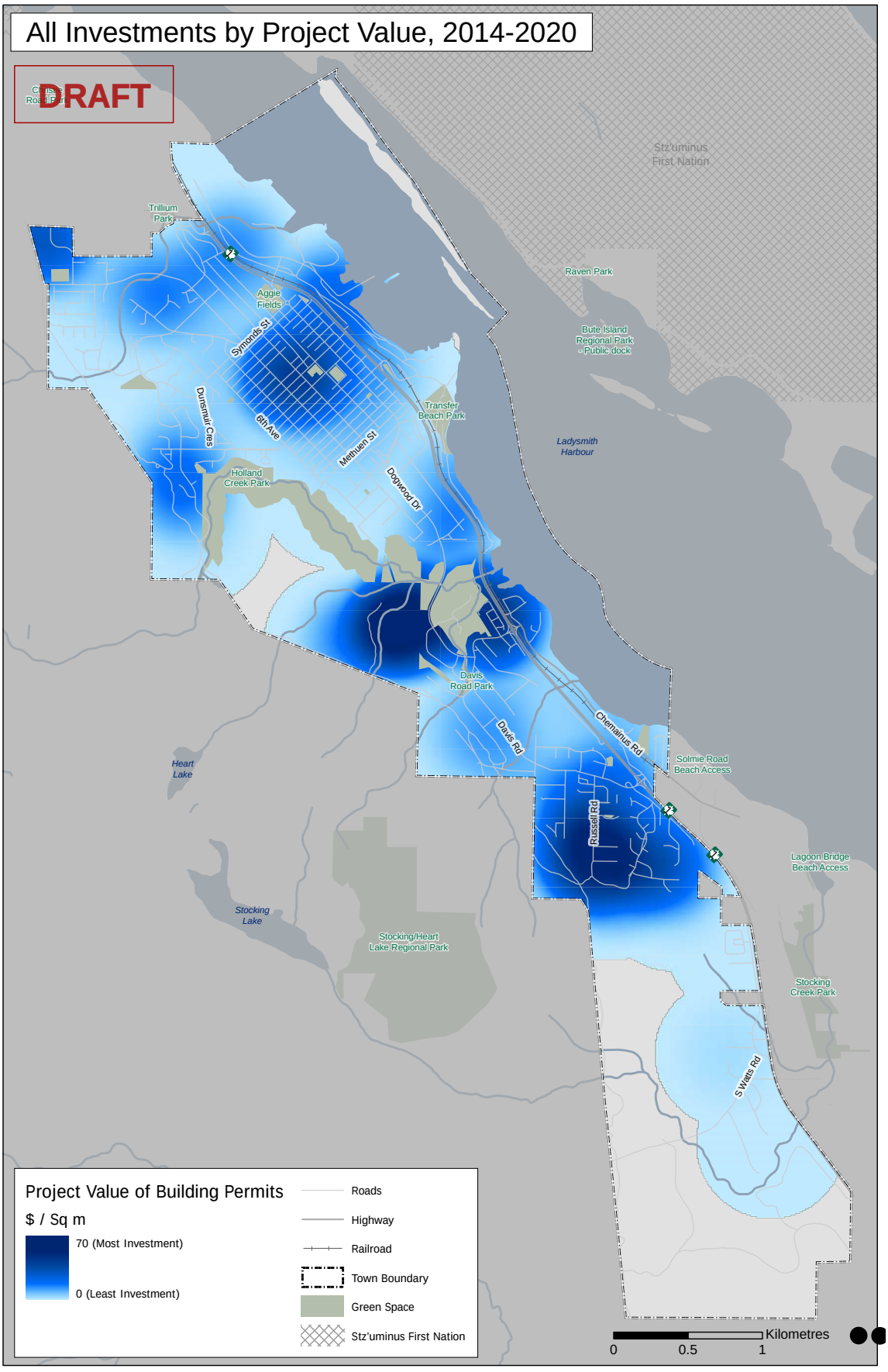
The Town of Ladysmith contains 214.2 ha of zoned, designated, and actual use industrial lands (including designated water lots), which represnt 9% of the region's total. Net of water lots, the Town of Ladysmith contains 159.6 ha of such industrial lands, which represent 6% of the region's total. Vacant industrial lands, net of riparian buffers, in the Town of Ladysmith comprise 66 ha, or 14% of the region's total.

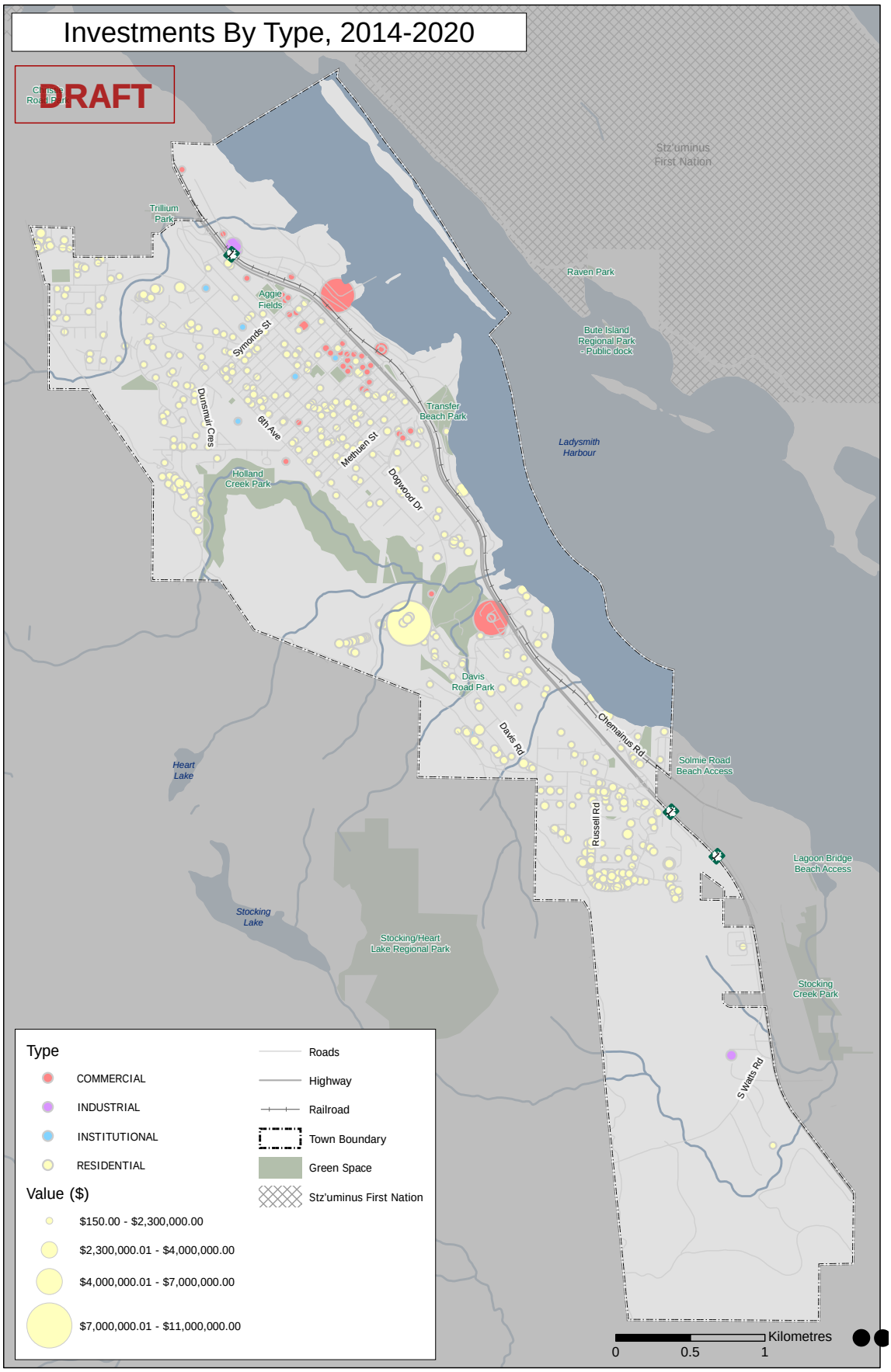
Within the South Area Ladysmith Plan area, vacant lands for potential industrial expansion is 36.9 ha. These lands are zoned for heavy industrial, light industrial, and business park. The average slope in this area is 8.6%, whereas a slope of 5% or less is seen as optimal.

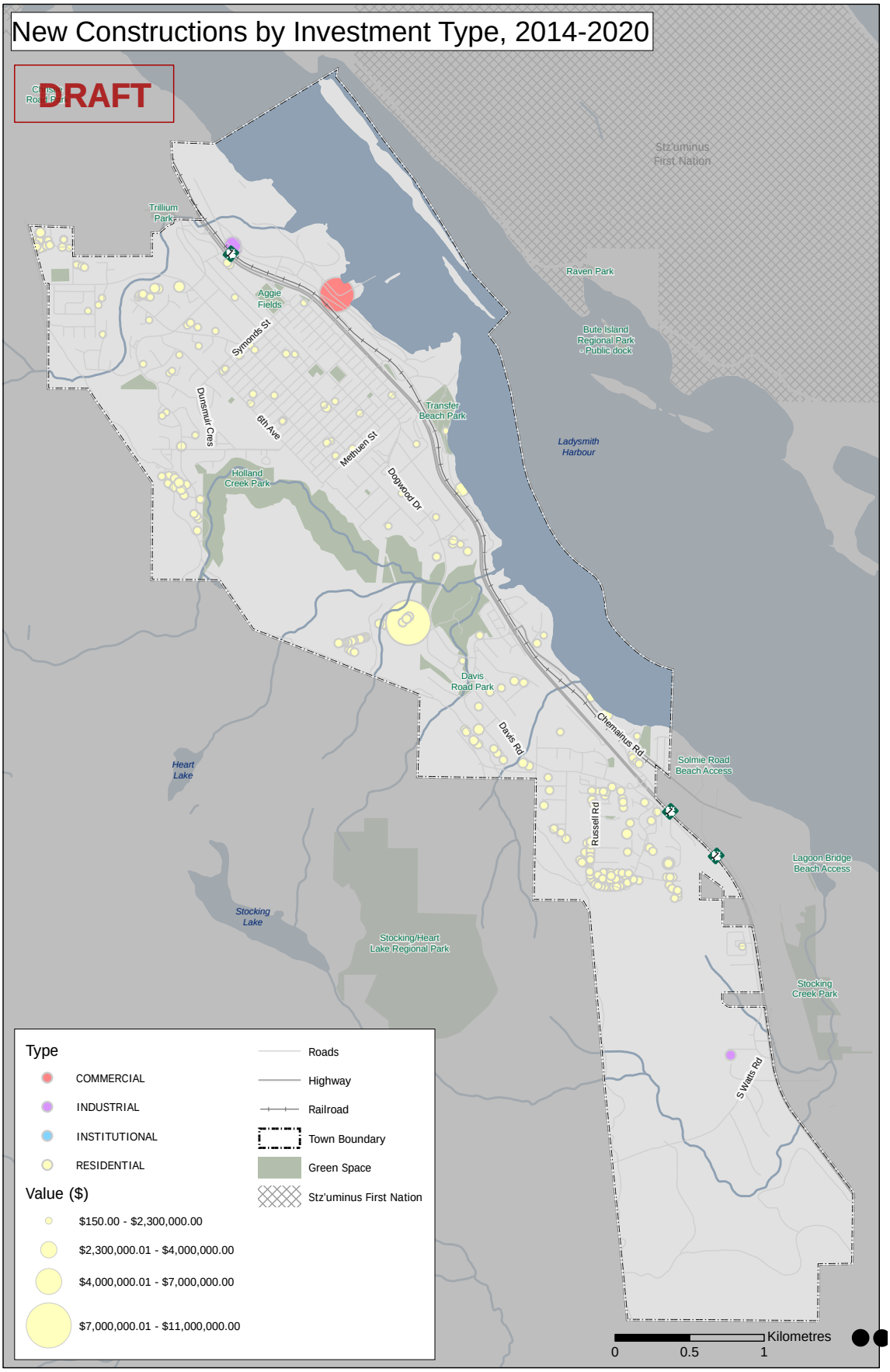
Regional trends include the tightening of industrial land availability in both Capital and Nanaimo Regional Districts, and the need for zoned and serviced land in desirable locations within the CVRD, specifically in the half acre to five-acre range that can support smaller to mid-sized business types that are vital to providing employment.

The strategy recommends the conservation of existing industrial lands and the development of new industrial lands across the region.

The full report can be accessed here: https://www.ecdevcowichan.com/wp-content/uploads/March-18-Final-Draft-Industrial-Land-Use-Strategy-Copy.pdf


All Investments by Project Value, 2014-2020
DRAFT
Stz'uminus First Nation
Trillium Park
Raven Park
Aggie Fields
Symonds St
Bute Island Regional Park - Public dock
Dunsmuir Cres
6th Ave
Transfer Beach Park
Ladysmith Harbour
Methuen St
Holland Creek Park
Dogwood Dr
Davis Road Park
Davis Rd
Chemainus Rd
Heart Lake
Solmie Road Beach Access
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
Swiatis Rd
Project Value of Building Permits
$ / Sq m
70 (Most Investment)
0 (Least Investment)
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
Kilometres
0
0.5
1


Investments By Type, 2014-2020
DRAFT
Stz'uminus First Nation
Trillium Park
Aggie Fields
Symonds St
Dunsmuir Cres
6th Ave
Methuen St
Dogwood Dr
Holland Creek Park
Transfer Beach Park
Raven Park
Bute Island Regional Park - Public dock
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Russell Rd
Lagoon Bridge Beach Access
Heart Lake
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S'watts Rd
Type
COMMERCIAL
INDUSTRIAL
INSTITUTIONAL
RESIDENTIAL
Value ($)
$150.00 - $2,300,000.00
$2,300,000.01 - $4,000,000.00
$4,000,000.01 - $7,000,000.00
$7,000,000.01 - $11,000,000.00
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
Kilometres
0
0.5
1


New Constructions by Investment Type, 2014-2020
DRAFT
Stz'uminus First Nation
Trillium Park
Aggie Fields
Symonds St
Dunsmuir Cres
6th Ave
Methuen St
Dogwood Dr
Holland Creek Park
Transfer Beach Park
Raven Park
Bute Island Regional Park - Public dock
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Wratis Rd
Type
COMMERCIAL
INDUSTRIAL
INSTITUTIONAL
RESIDENTIAL
Value ($)
$150.00 - $2,300,000.00
$2,300,000.01 - $4,000,000.00
$4,000,000.01 - $7,000,000.00
$7,000,000.01 - $11,000,000.00
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
Kilometres
0
0.5
1

PART 4
LAND USE MIX AND DENSITY

4.1 LAND USE MIX

Land use mix refers to the diversity of land uses (e.g. residential, commercial, industrial, institutional, agricultural, etc) within a given area. Higher degrees of land use mixes are associated with "complete communities", wherein residents have easy access to a variety of amenities and services within their neighbourhood. These include shops and restaurants, cultural and civic facilities (e.g. museums, libraries, galleries), employment opportunities, recreational destinations (e.g. parks, community centres), and more. This mix allows residents to live, work, shop, play, and learn close to home.

Land use mix is important for creating neighbourhoods that support businesses and offer housing and transportation choices. For example, with other variables such as residential density held as constants, the odds of a person walking are twice as high in areas with a high degree of mixed uses than in areas with a low degree of mixed uses. Residents living near multiple and diverse retail destinations also generally make more frequent and shorter shopping trips, and more by walking and cycling. A higher degree of land use mix also translates into a stronger sense of community, where residents are more likely to know their neighbours, participate politically, trust others, form community networks, and be socially engaged.

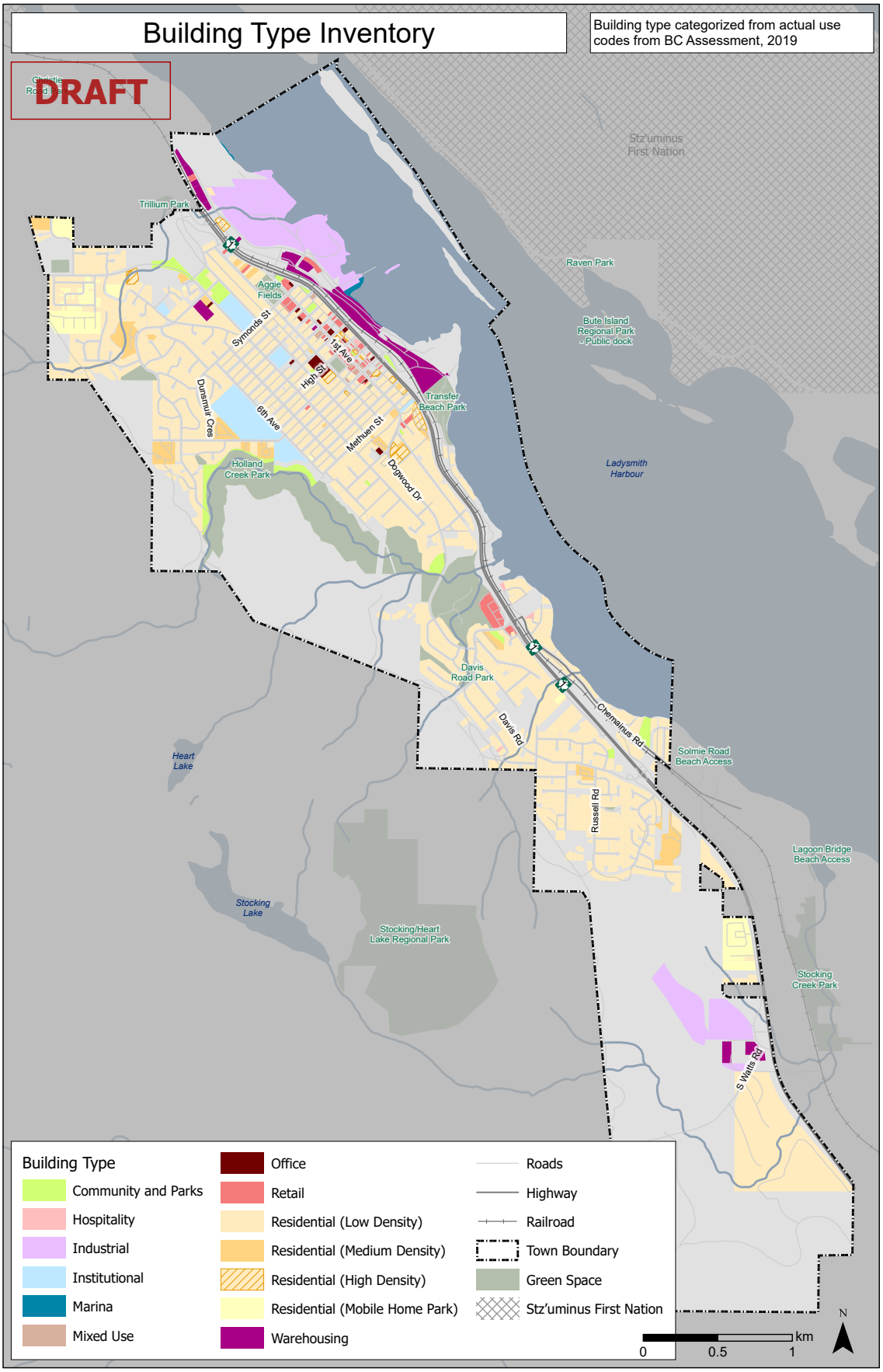

441
PLANTITUDE

The maps in this section illustrate access to important destinations within a typical walkshed. Studies have shown that people are much less likely to choose to walk as a mode of travel beyond a 5-10 minute walk, which is roughly 400-800 meters (and based on an average walking speed of 5 km per hour, though it is worth nothing that these speeds are also influenced by topography/slopes and infrastructure quality). All of the walking distances presented in the maps in this section are based on real travel distance through the transportation network (e.g. sidewalks, trails, etc), rather than distance "as the crow flies". This enables a more accurate assessment of the actual travel experience of people in Ladysmith.

BUILDING TYPES

The figure on the next page presents an inventory of existing building types/uses based on BC Assessment 2019 data. It reveals a few land use patterns:

- The large majority of Ladysmith's built physical footprint is comprised of low density residential uses. Pockets of medium density residential areas are scatted throughout, while general small higher density developments are situated in the northern half of Ladysmith. However it is important to note that these higher densities are relative to other densities in Ladysmith, and may in fact be low compared to other muncipalities' downtowns.
- Nearly all retail uses are located in the historic downtown or along Highway #1, including further south between Roland and Gill Roads. The downtown is also home to most of the hospitality uses and mixed use buildings.
- Industrial and warehousing lands are focused between Highway #1 and the waterfront, as well as in the southern area of Ladysmith.
- Institutional uses are focused in the northern area of Ladysmith, within walking distance of the downtown.


Building Type Inventory
Building type categorized from actual use codes from BC Assessment, 2019
DRAFT
Stz'uminus First Nation
Trillium Park
Raven Park
Aggie Fields
Symonds St
1st Ave
High St
Bute Island Regional Park
Public dock
Transfer Beach Park
Dunsmuir Cres
6th Ave
Methuen St
Dogwood Dr
Holland Creek Park
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Building Type
Community and Parks
Hospitality
Industrial
Institutional
Marina
Mixed Use
Office
Retail
Residential (Low Density)
Residential (Medium Density)
Residential (High Density)
Residential (Mobile Home Park)
Warehousing
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

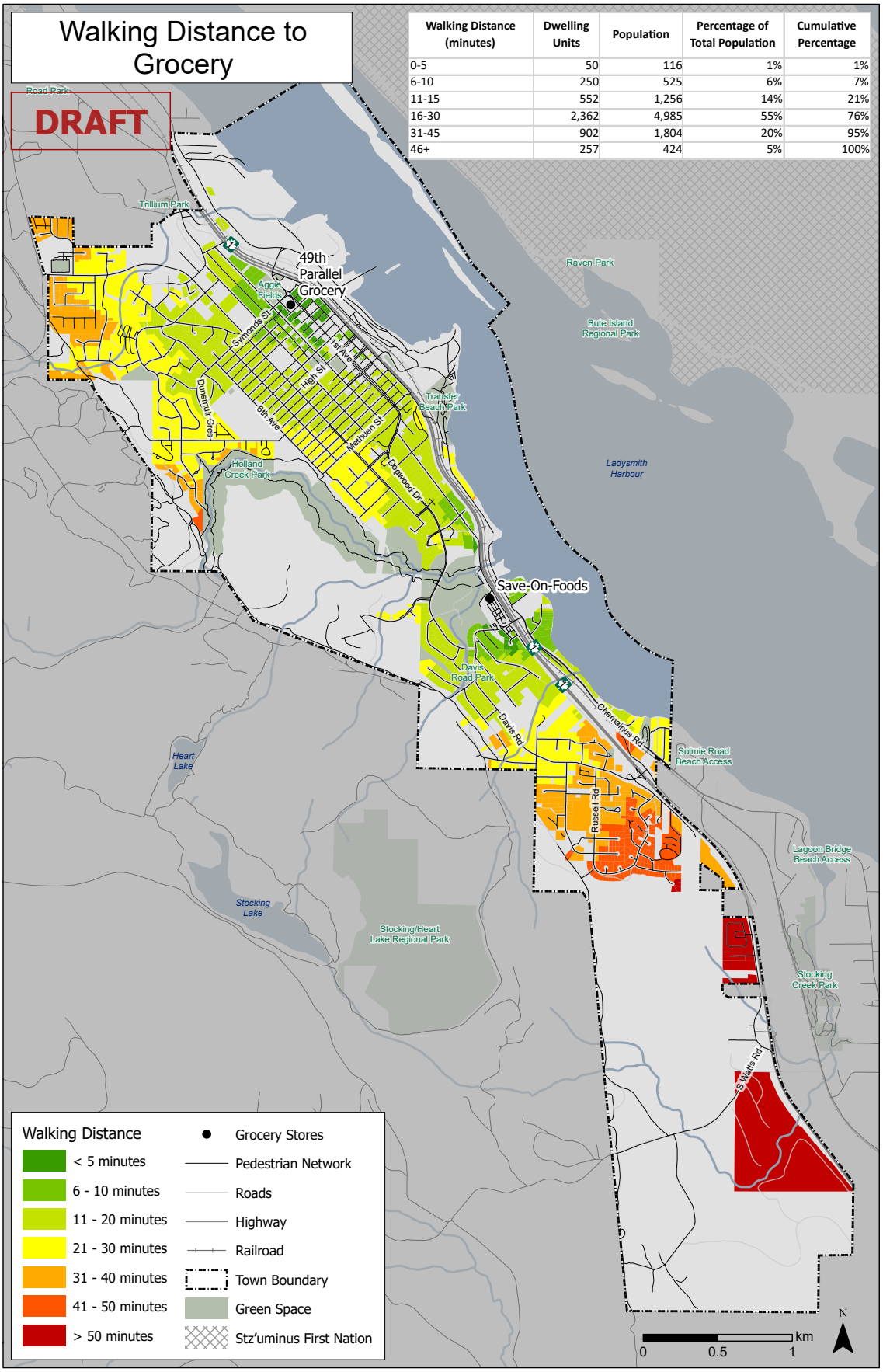
GROCERY STORES

Grocery stores are an important proxy for land use mix, as they are among the top trip generators outside of work and school. As shown in the map on the following page, just seven percent of Ladysmith residents are within a 10 minute walk of one of Ladysmith's two major grocery stores: 49th Parallel Grocery and Save-On Foods.

Walking Distance to Grocery

DRAFT

Walking Distance (minutes)	Dwelling Units	Population	Percentage of Total Population	Cumulative Percentage
0-5	50	116	1%	1%
6-10	250	525	6%	7%
11-15	552	1,256	14%	21%
16-30	2,362	4,985	55%	76%
31-45	902	1,804	20%	95%
46+	257	424	5%	100%



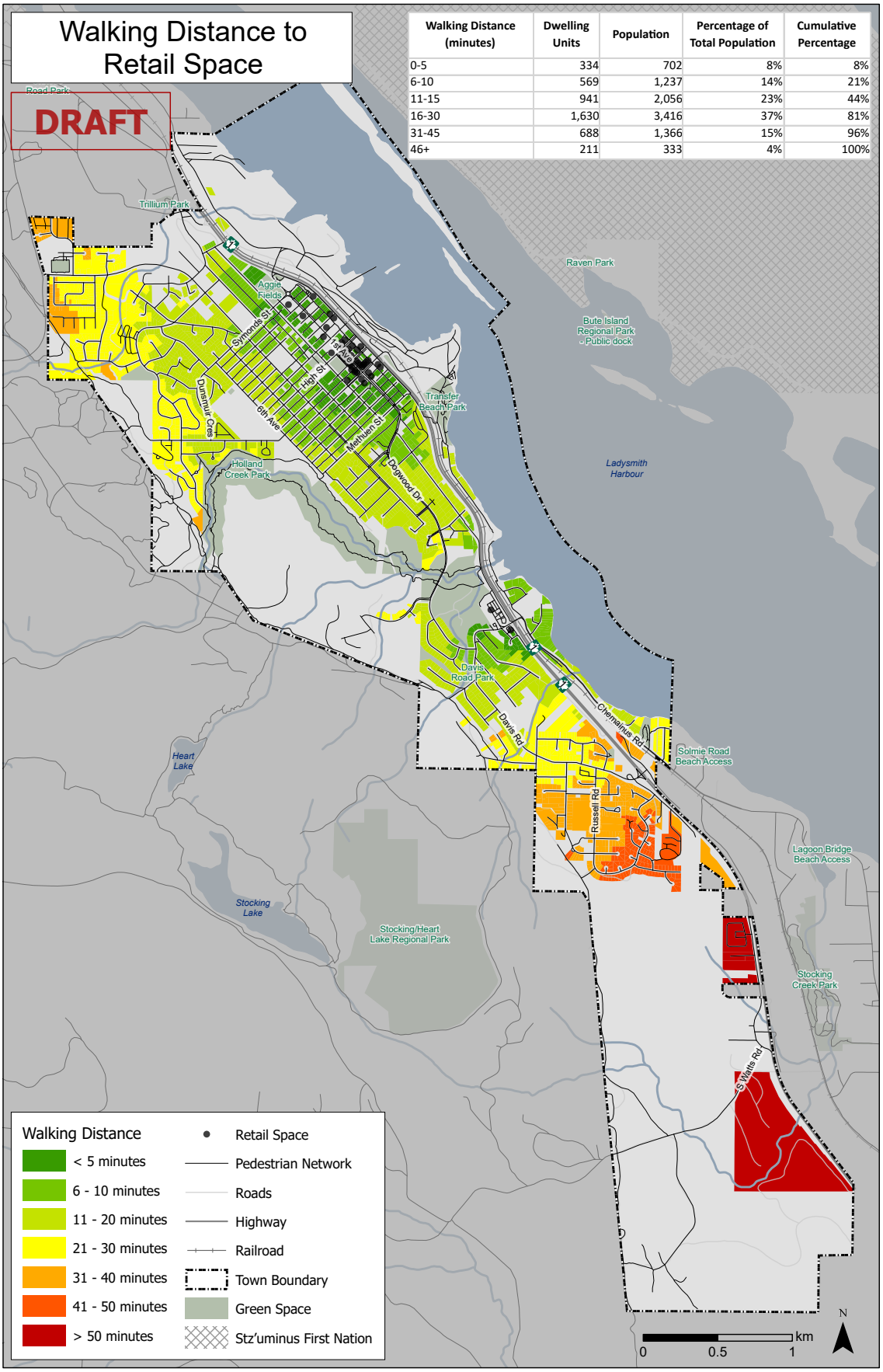
RETAIL

Residents' proximity to other daily commercial needs is presented in the map on the following page. It shows that 21% of residents live within a 10 minute walk of retail areas, while almost half live within a 15-minute walk. Older areas of Ladysmith generally perform better than newer suburban aras with respect to walkable access to daily needs.

Walking Distance to Retail Space

DRAFT

Walking Distance (minutes)	Dwelling Units	Population	Percentage of Total Population	Cumulative Percentage
0-5	334	702	8%	8%
6-10	569	1,237	14%	21%
11-15	941	2,056	23%	44%
16-30	1,630	3,416	37%	81%
31-45	688	1,366	15%	96%
46+	211	333	4%	100%



EMPLOYMENT

Jobs are also a top trip generator. The map on the following page nonetheless helps paint a picture of proximity to potential employment spaces. Employment spaces were identified using BC Assessment's Actual Use Codes.

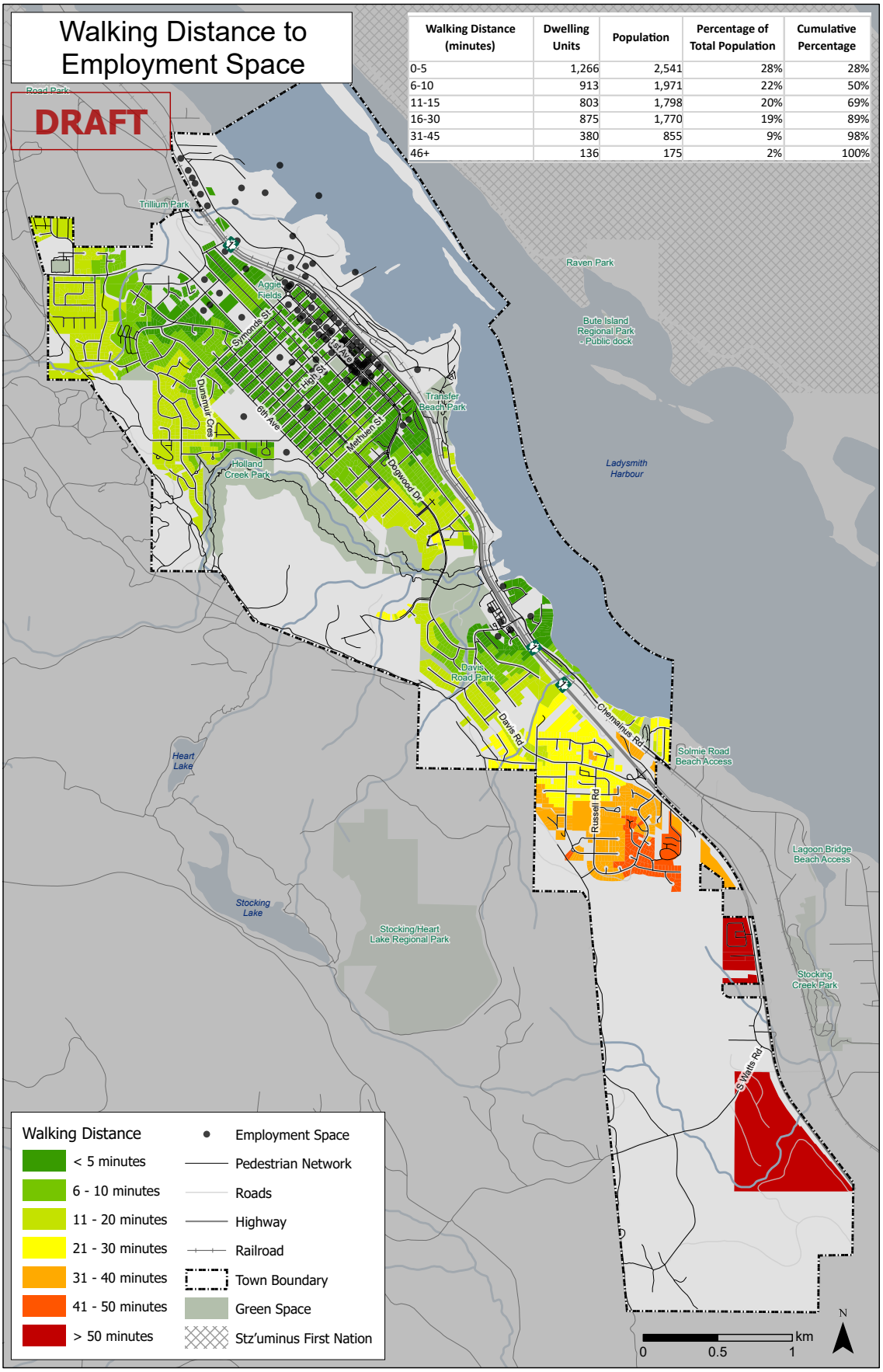
Half of residents live within a 10-minute walk of an employment space, and over two-thirds are within a 15 minute walk. These employment spaces are focused in the downtown area, in industrial areas (including along the waterfront and in South Ladysmith), and it other retail areas further south along Highway #1. Again, older neigbourhoods – which tend to have a greater mix of uses and are generally more compact – outperform newer neighbourhoods in this area.

However it should be noted that many residents in Ladysmith commute to Nanaimo or other centres for employment, as described in Part 7 (Transportation) of this report.

Walking Distance to Employment Space

DRAFT

Walking Distance (minutes)	Dwelling Units	Population	Percentage of Total Population	Cumulative Percentage
0-5	1,266	2,541	28%	28%
6-10	913	1,971	22%	50%
11-15	803	1,798	20%	69%
16-30	875	1,770	19%	89%
31-45	380	855	9%	98%
46+	136	175	2%	100%



SCHOOLS

Elementary and secondary schools are also top trip generators. The maps on the following pages present residential proximity to the Town's primary and intermediate schools (i.e. elementary schools), and the secondary school. Just over one third of residents live within a 15 minute walk of one of the two elementary schools, while fewer than one third of residents live within a 15 minute walk of Ladysmith Secondary School.

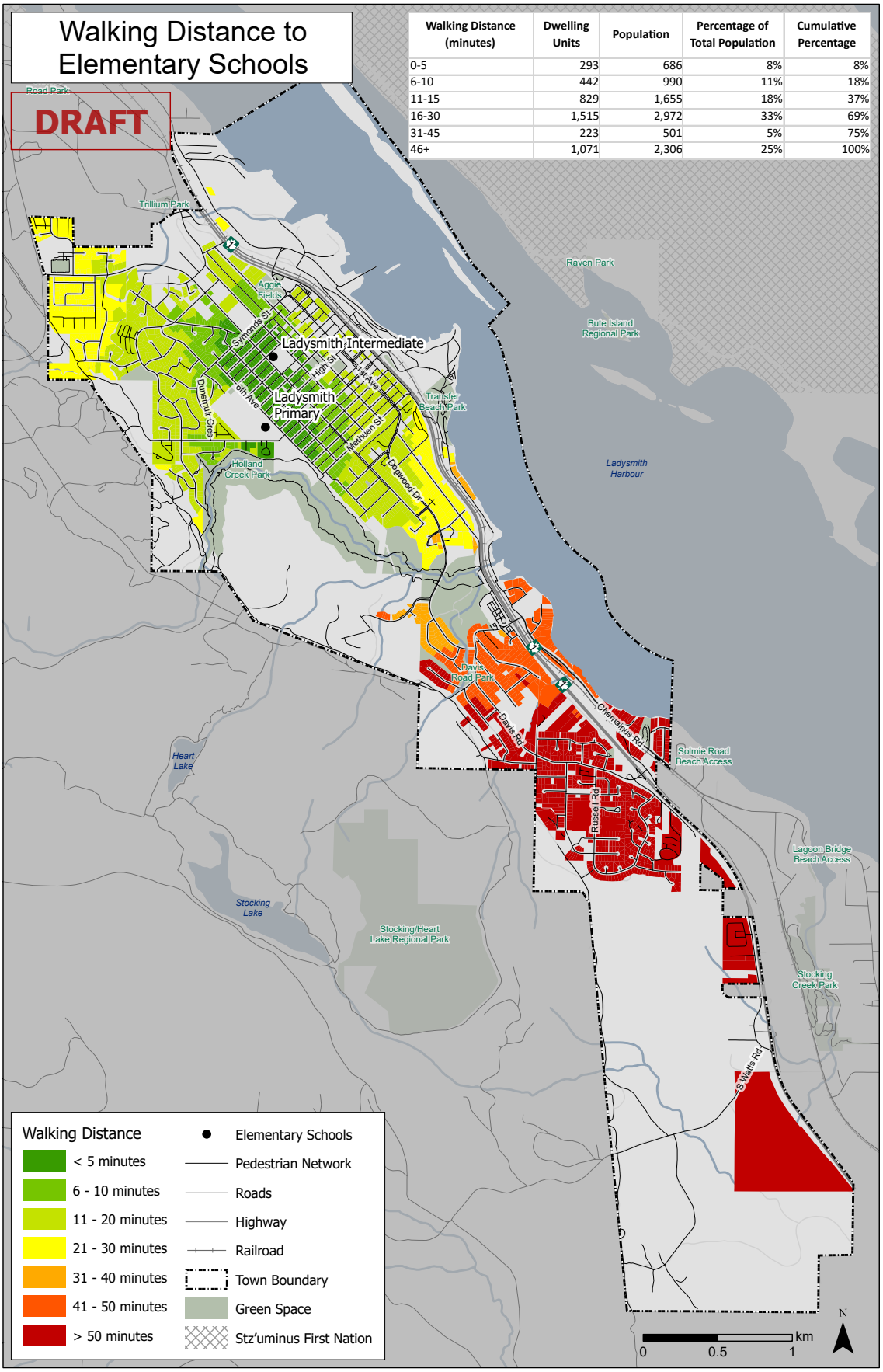
In both cases, North Ladysmith residents have significantly better access than do residents in South Ladysmith, where traveling to school by foot would be unlikely.

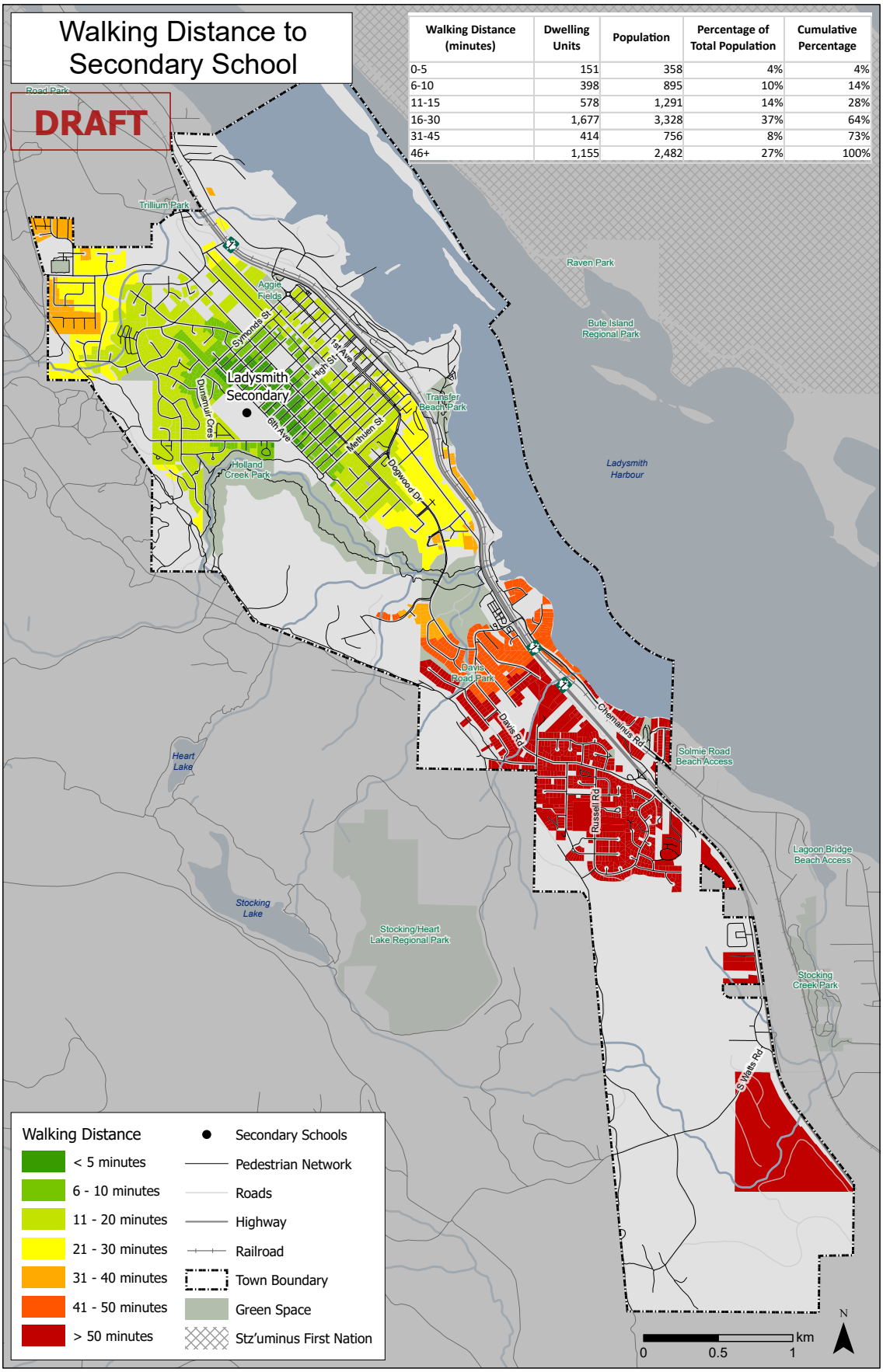
While schools fall outside the jurisdiction of local governments, their location are influenced by land use policy. Likewise, urban design – and specifically neighbourhood connectivity – have a major role to play in improving pedestrian access to schools. The concept of connectivity and its performance in Ladysmith is discussed in Part 5 (Urban Form) of this report.

Walking Distance to Elementary Schools

DRAFT

Walking Distance (minutes)	Dwelling Units	Population	Percentage of Total Population	Cumulative Percentage
0-5	293	686	8%	8%
6-10	442	990	11%	18%
11-15	829	1,655	18%	37%
16-30	1,515	2,972	33%	69%
31-45	223	501	5%	75%
46+	1,071	2,306	25%	100%





Walking Distance (minutes)	Dwelling Units	Population	Percentage of Total Population	Cumulative Percentage
0-5	151	358	4%	4%
6-10	398	895	10%	14%
11-15	578	1,291	14%	28%
16-30	1,677	3,328	37%	64%
31-45	414	756	8%	73%
46+	1,155	2,482	27%	100%

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CHILDCARE FACILITIES

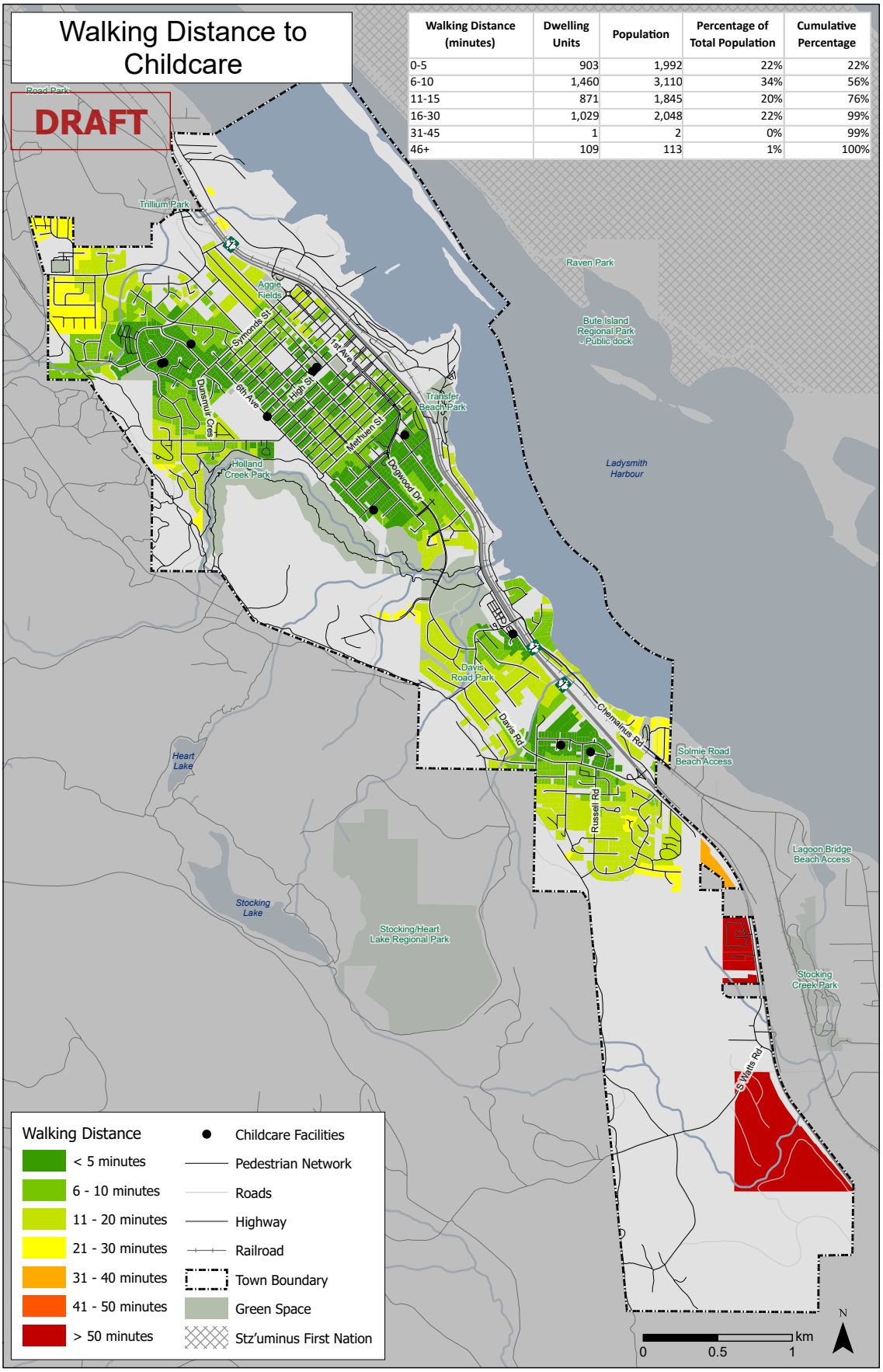
Inclusive and equitable communities have childcare spaces distributed throughout their neighbourhoods. Providing proximity to this important use is also important for encouraging walking at the earliest ages, building a culture of active, green travel. The map on the following pages shows that more than half of residents live within a 10-minute walk of a childcare space , and over three quarters live within a 15-minute walk. These are encouraging numbers and, unlike the school maps, show that residents in South Ladysmith also have physical access to childcare.

At the same time, it is worth noting that physical access to childcare is not synonomous with overall access. For example, high costs and long wait lists often make child care inaccessible to families. According to BC's Poverty Reduction Strategy (2019), a key social issue is the lack of appropriate child care, which prevents parents – particularly single mothers – from having the option of full time employment.

Walking Distance to Childcare

DRAFT

Walking Distance (minutes)	Dwelling Units	Population	Percentage of Total Population	Cumulative Percentage
0-5	903	1,992	22%	22%
6-10	1,460	3,110	34%	56%
11-15	871	1,845	20%	76%
16-30	1,029	2,048	22%	99%
31-45	1	2	0%	99%
46+	109	113	1%	100%



4.2 EQUITY AND ACCESS

While towns are home to people from all walks of life, often urban spaces have not been traditionally planned with the needs and experiences of all people in mind.

Equity refers to the ability of all people to prosper and reach their full potential (PolicyLink, 2018). There is growing awareness about how towns and cities can disproportionately benefit or harm entire groups of people due to their income, ethnicity, age, gender, sexual orientation, immigration status, religion, and/or (dis)abilities (American Planning Association, retrived from planning.org in 2021). Issues such as gentrification and lack of inclusivity in community engagement are the outcomes of inequitable planning practices.

This OCP process prioritizes equity in its engagement and planning. Understanding which different demographic groups live in Ladysmith is a starting point. For example, at the time of the last Census (2016), 8.0% of residents were Indigenous and 3.3% of residents were Black or People of Colour.

It is also important to understand some of the current spatial dimensions of equity. For example, the largest concentration of low income people in Ladysmith reside in the downtown and neighbouring areas. This means that these residents typically have better physical access to groceries, retail, schools, and more. While this is a positve trend in Ladysmith, it will also be an important consideration in the development of future land use and other policies (e.g. avoiding displacement through redevelopment).

It is also important to note that there are multiple intersecting layers to the spatial dimensions of equity. For example, low income people are more likely to be racialized, disabled, and/or female.

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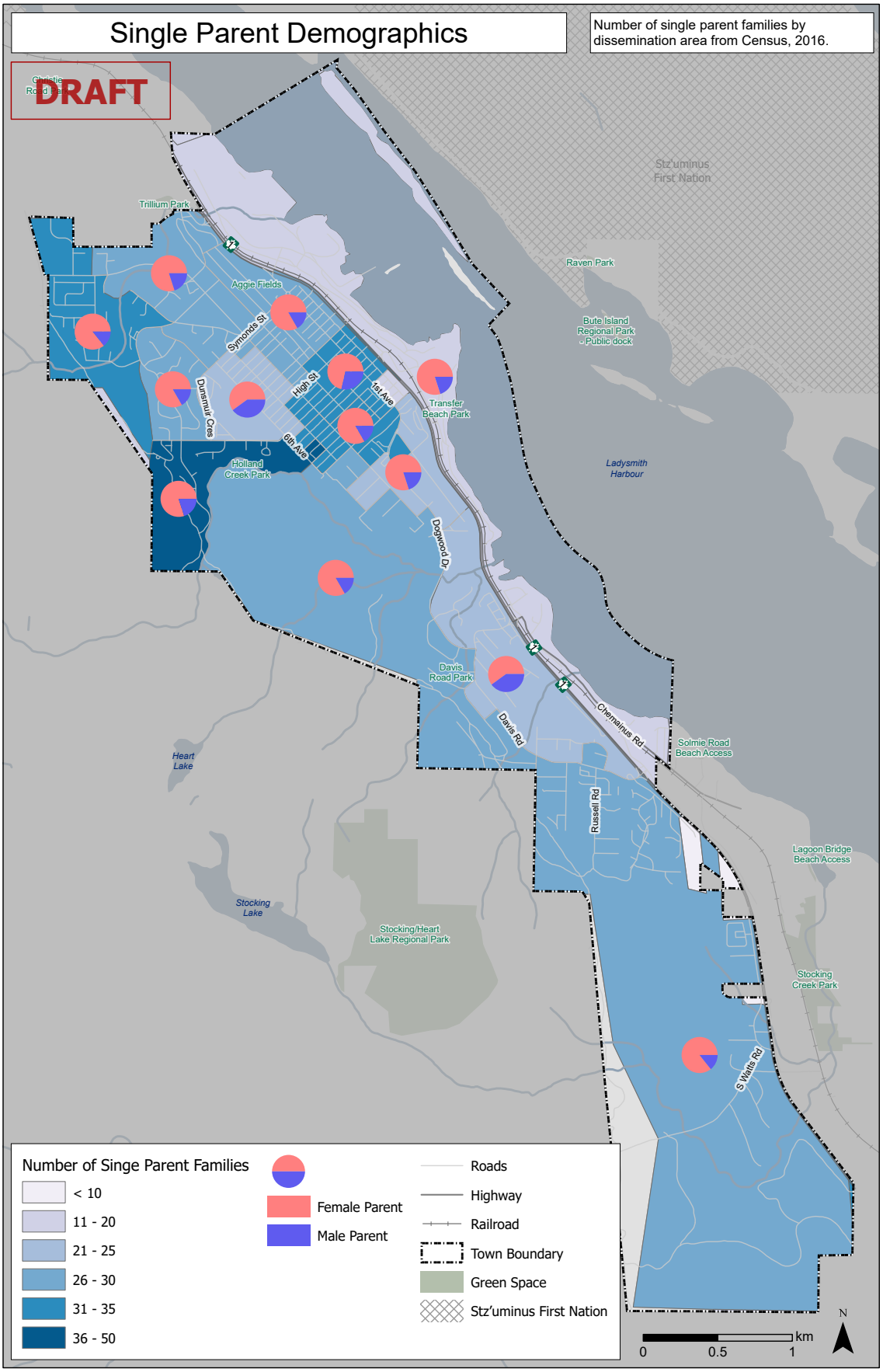
GENDER EQUITY

Another important dimension of spatial equity is gender. Women are more likely to experience urban poverty, head single parent households and care for relatives, absorb the bulk of childcare responsibilities, have more complex travel behaviour, report urban safety concerns and experience sexual harassment and assault in the public realm.

As the map on the following page reveals, the majority of single parent households in Ladysmith are headed by a female parent. The largest proportion of single parent households is in Northwest Ladysmith and in the Downtown. As is the case with low income residents, single parent households typically have better physical access to important services and destinations like grocery stores and schools. Likewise, understanding these spatial demographic realities will be important to crafting land use and other policies that are equitable.


Single Parent Demographics
Number of single parent families by dissemination area from Census, 2016.
DRAFT
Stz'uminus First Nation
Trillium Park
Aggie Fields
Raven Park
Bute Island Regional Park
Public dock
Symonds St
High St
1st Ave
6th Ave
Dunsmuir Cres
Transfer Beach Park
Holland Creek Park
Ladysmith Harbour
Dogwood Dr
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Number of Singe Parent Families
< 10
11 - 20
21 - 25
26 - 30
31 - 35
36 - 50
Female Parent
Male Parent
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

4.3 DENSITY

Density refers to the number of people, homes, or jobs within a certain area. Higher residential density, often in the form of multi-family housing, can result in: energy savings; lower per capita municipal infrastructure and service costs (e.g. roadways, water and sewer infrastructure, transit, municipal services like fire stations, recreation centres, and schools, etc); greater housing choices and affordability; more vibrant street life and public realm; a larger proportion of trips take by foot, bike, and transit; and, as a result, reduced greenhouse gas emissions.

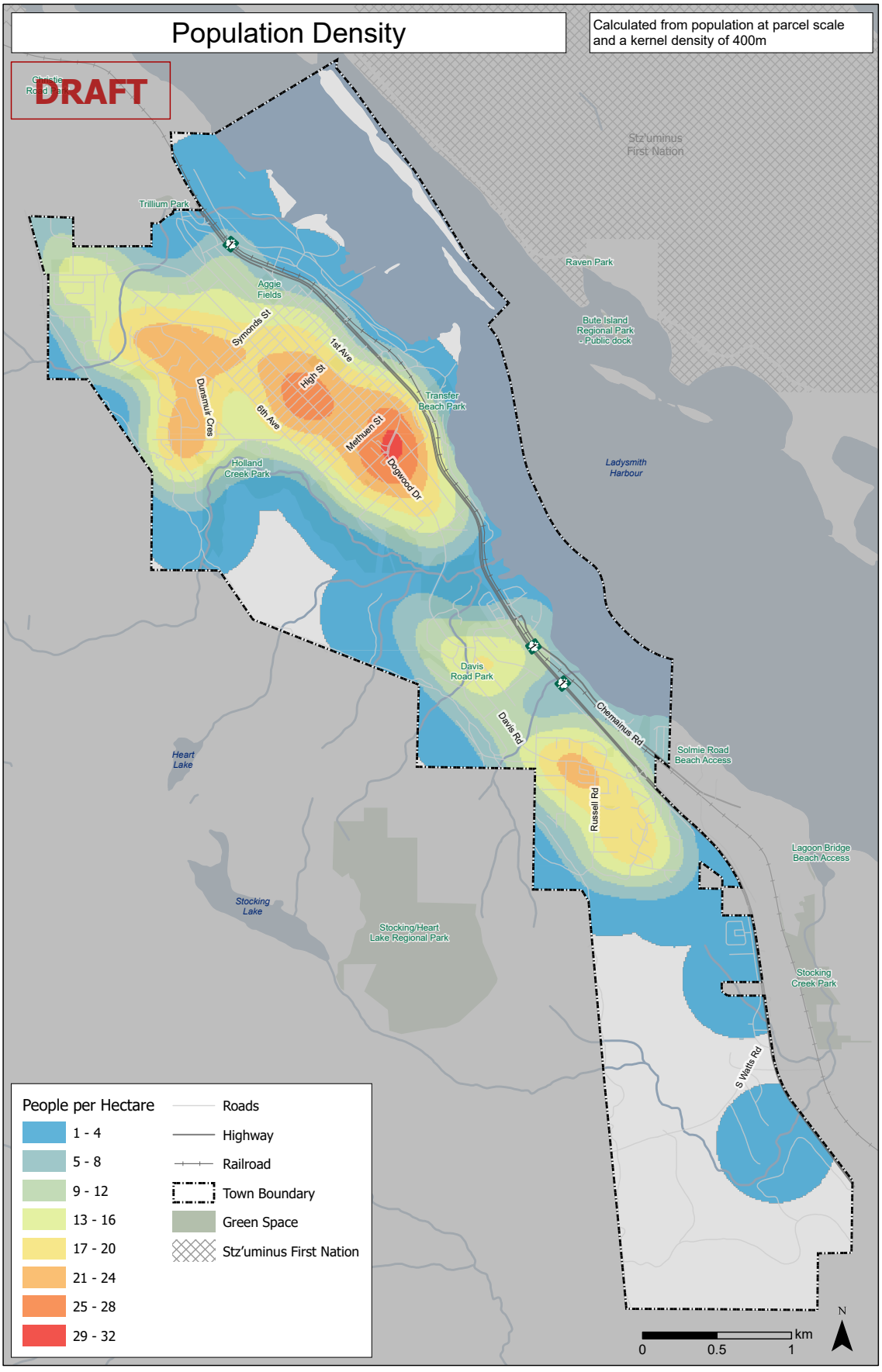
As such, densities are a vital part of the land use discussion and are paramount to meeting an array of community goals.

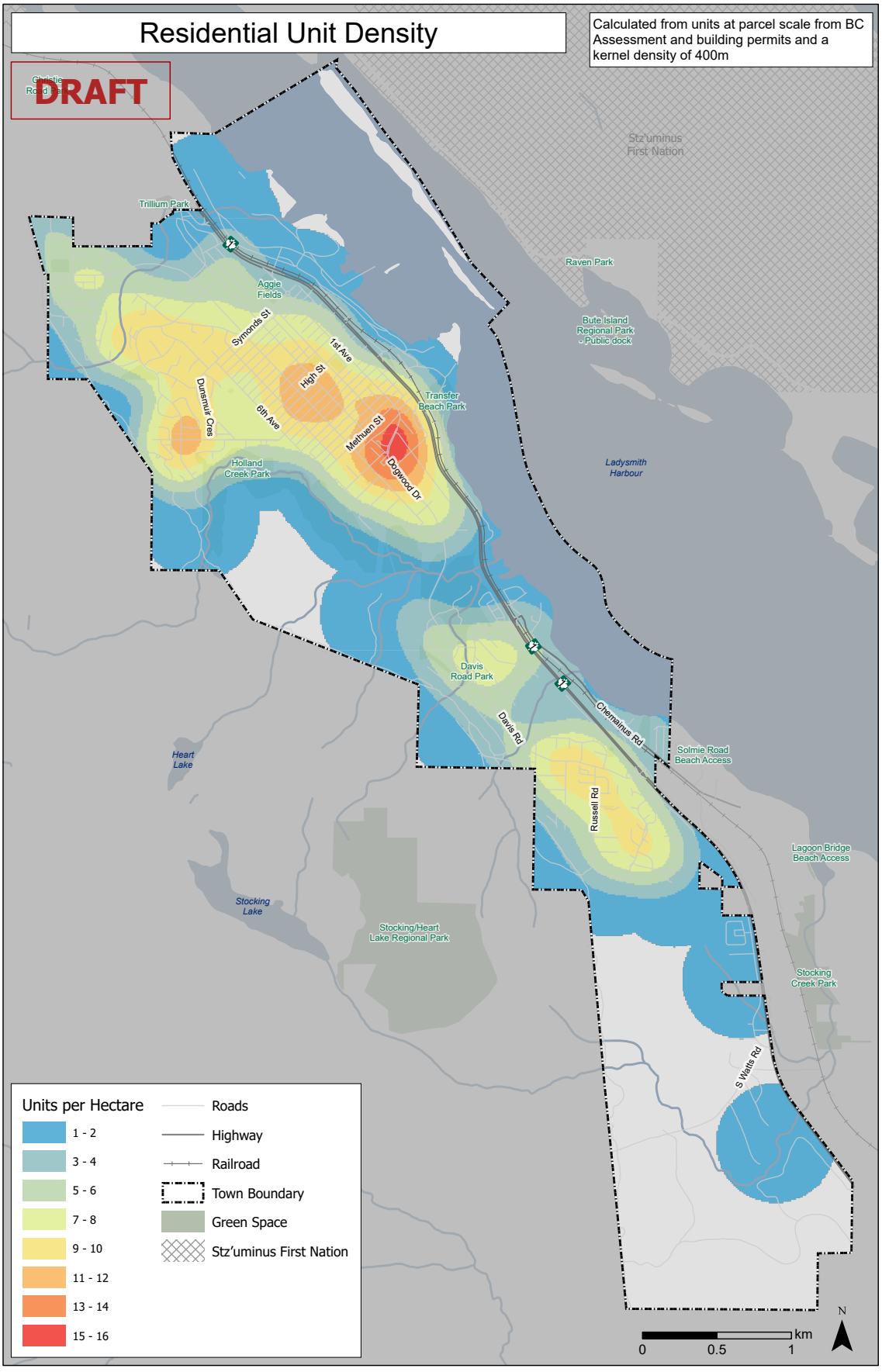
POPULATION DENSITY

Research shows that gross population densities need to exceed approximately 32 people per hectare before even a small shift away from predominant vehicle use is seen. In Ladysmith, areas that meet or are approaching this threshold are focused south and north of the Downtown. Most of the residential areas in Ladysmith have population densities in the area of 9 to 20 people per hectare, while most of the blue areas on the map (i.e. 1-4 people per hectare) are in undeveloped areas.

RESIDENTIAL DENSITY

Residential density is slightly different than population density in that it measures the intensity of residential units, rather than that of people. While population and residential densities are often quite similar, it can be helpful to compare them to identify differences. For example, the “Residential Unit Density” map shows relatively lower residential density in an area of higher population density in Northwest Ladysmith. This suggests that people living in that area reside in larger households, potentially because there are more families in this area, including those who may live in multi-generational households.

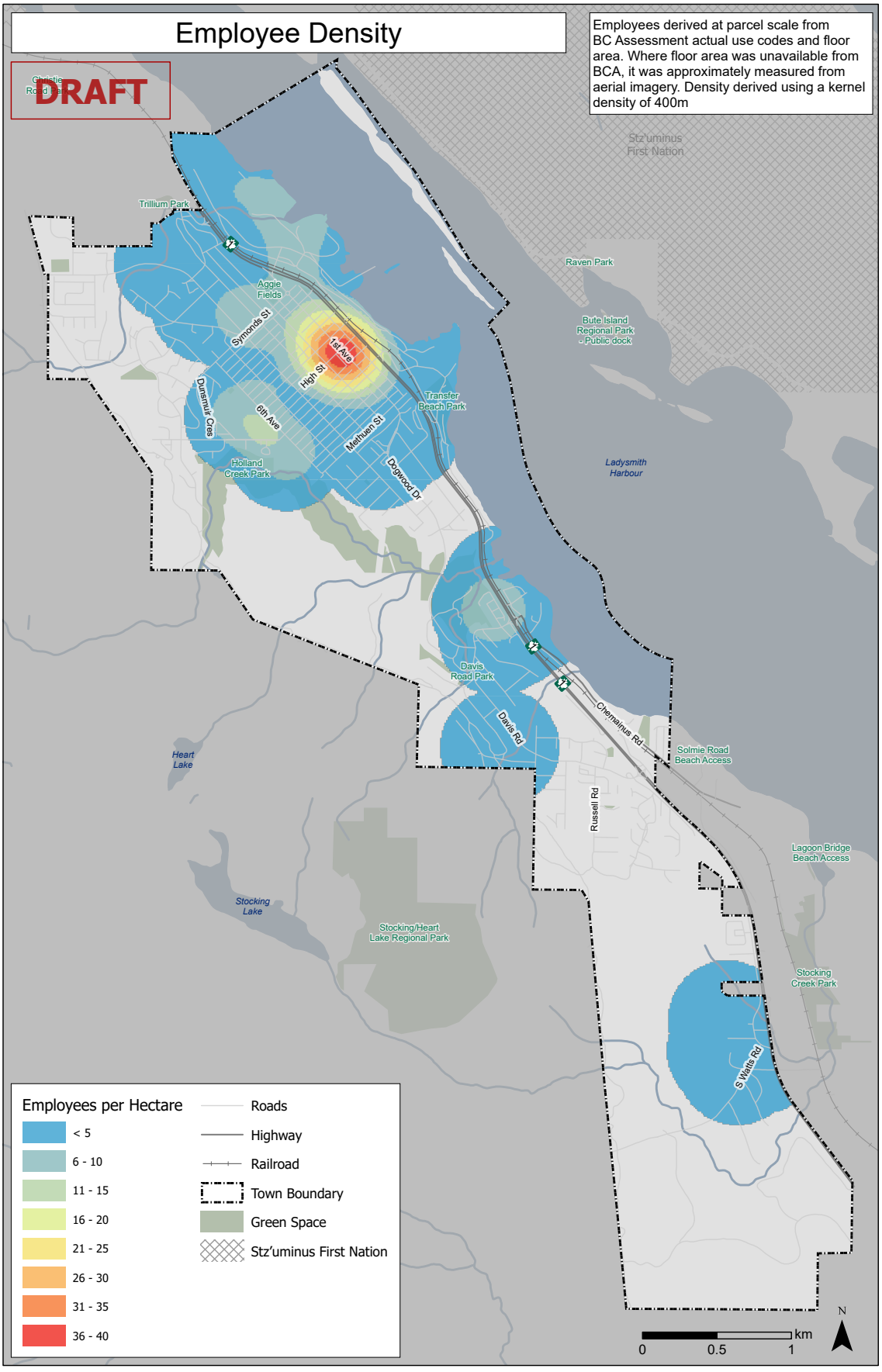

Population Density
Calculated from population at parcel scale and a kernel density of 400m
DRAFT
Stz'uminus First Nation
Trillium Park
Raven Park
Aggie Fields
Synonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Methuen St
Dogwood Dr
Transfer Beach Park
Bute Island Regional Park - Public dock
Holland Creek Park
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
People per Hectare
1 - 4
5 - 8
9 - 12
13 - 16
17 - 20
21 - 24
25 - 28
29 - 32
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1


Residential Unit Density
Calculated from units at parcel scale from BC Assessment and building permits and a kernel density of 400m
DRAFT
Stz'uminus First Nation
Trillium Park
Aggie Fields
Symonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Methuen St
Dogwood Dr
Transfer Beach Park
Holland Creek Park
Raven Park
Bute Island Regional Park
Public dock
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Units per Hectare
1 - 2
3 - 4
5 - 6
7 - 8
9 - 10
11 - 12
13 - 14
15 - 16
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

EMPLOYMENT DENSITY

Employment density is also important, as the concentration of jobs in a particular area can affect transportation choices including transit ridership even more strongly than the concentration of residents.

The map on the following page demonstrates how the single major employment hub – from an density standpoint – is situated in the Downtown. There are pockets of lower employment density situated in other commercial and industrial areas, including the waterfront area, while employment density in other areas of Ladysmith is quite low.


Employee Density
DRAFT
Employees derived at parcel scale from BC Assessment actual use codes and floor area. Where floor area was unavailable from BCA, it was approximately measured from aerial imagery. Density derived using a kernel density of 400m
Stz'uminus First Nation
Trillium Park
Raven Park
Aggie Fields
Symonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Transfer Beach Park
Methuen St
Dogwood Dr
Holland Creek Park
Bute Island Regional Park
Public dock
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Employees per Hectare
< 5
6 - 10
11 - 15
16 - 20
21 - 25
26 - 30
31 - 35
36 - 40
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

PART 5
URBAN FORM

5.1 STREETSCAPES

Streets are public places. While they function as corridors in the way they move people along them, they are equally important as places for sitting, playing, eating, socializing, shopping, lingering, and more. They comprise an important part of the social fabric of a community, and help build a sense of place and identity. Indeed, streets are for places for people as much as are parks and community centres.

Streetscape character and quality – including the relationships between buildings and public spaces like sidewalks – have significant influence on the experience and therefore desirability of walking, cycling, skateboarding, scooting, traveling with mobility aids, and more. As such, they also influence mode share and are thus important to reducing greenhouse gas emissions and supporting community health.

The following pages present examples of streetscapes in Ladysmith, offering some qualitative discussion about their urban design attributes.

1ST AVENUE

1 HISTORIC CHARACTER

First Avenue has been an important heart of Ladysmith since the Town developed. Some of the original buildings still prominently stand along the street. Along with the more recently constructed buildings, the historic buildings create a rich and varied streetscape imbued with historic character and a diversity of form and finishes.

2 STREET FURNISHINGS

Adding to this character are street furnishings and treatments such as coloured awnings and historically styled light standards.

3 DIVERSITY AND INTEREST

The primary retail (mixed use) street in Ladysmith, 1st Avenue is home to many independent businesses including a diversity of stores. The exhibit of retail items along the outside edge of the store fronts, along with sandwich board signage, adds to the unique character and charm of the street. It is no suprise that in 2017 1st Avenue was recognized with a "Canada's Best Street" award.

4 SEATING

Another good indicator of a successful street is the opportunity to sit and linger. This street includes a range of seating options, with views of the hub-bub of activity, where neighbours and friends can sit together under the shade of healthy established street trees.

5 PARKING

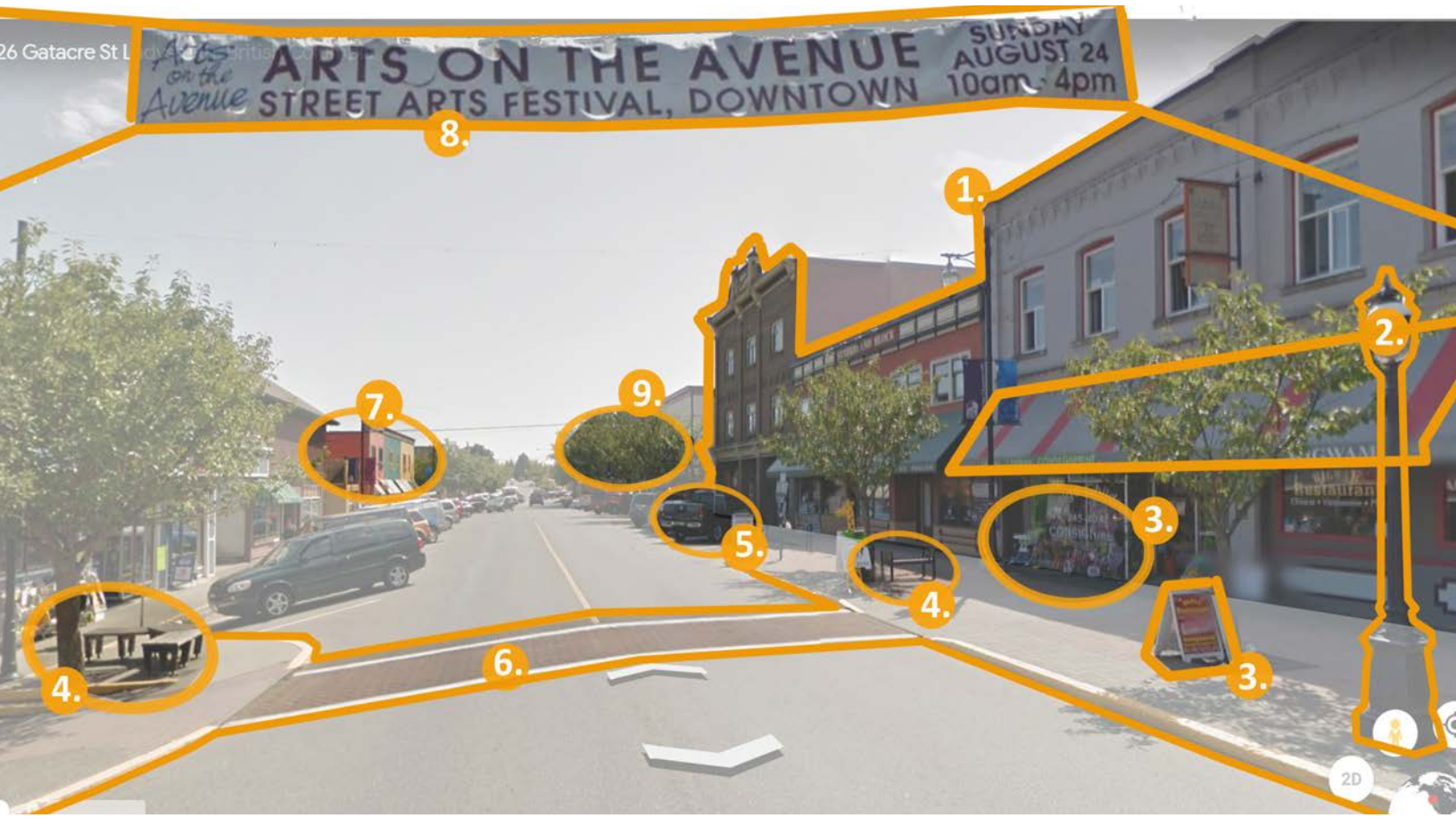
Having the ability to park close to the desired shops is also a key characteristic of 1st Avenue.

6 COMFORT AND SAFETY

Narrowing the street at specific locations creates a comfortable scale and provides opportunities for seating, street trees, and shorter crosswalks. Narrowing vehicular spaces also slows traffic speeds, further promoting favorable environment for pedestrians.

7 COLOUR AND INVITATION

Effective treatments create fun and inviting experiences along 1st Avenue, including fabric awnings, umbrellas put out by restaurateurs, colourful painted building frontages, and more.



Base image source: Google Streetview

8 PRIDE AND CELEBRATION

Also unique to 1st Avenue are the banners celebrating special events throughout the year, as well as the hanging of lights that form a festive and legendary winter celebration . These simple measures help create a sense of ritual, marking the changing seasons as well as conveying a sense of civic pride within the community.

9 URBAN TREES

Measures have been made to establish and maintain mature trees along First Avenue. In addition to providing beauty, weather protection, and an overall enjoyable pedestrian experience, urban trees provide important habitat for wildlife, carbon sinks, and natural cooling of buildings through shade.

ROBERTS STREET

1

CHARACTER

As with First Avenue, Roberts Street retains many of its original buildings. Its built form is interesting and diverse, with a variety of colourful treatments to the building frontages – which are angled with the hill – and obvious adaptations of use and program over time.

2

STREET TREES

Well established street trees close by on 1st Avenue provide good tree canopy. They offer shade and cooling in the summer months, visual delight through sping blossoms and fall colours, and the possibility of festive lights in the winter.

3

PARKING

On street parking provides convenient and direct access to local businesses and retail, while also creating a buffer between pedestrians and vehicular traffic.

4

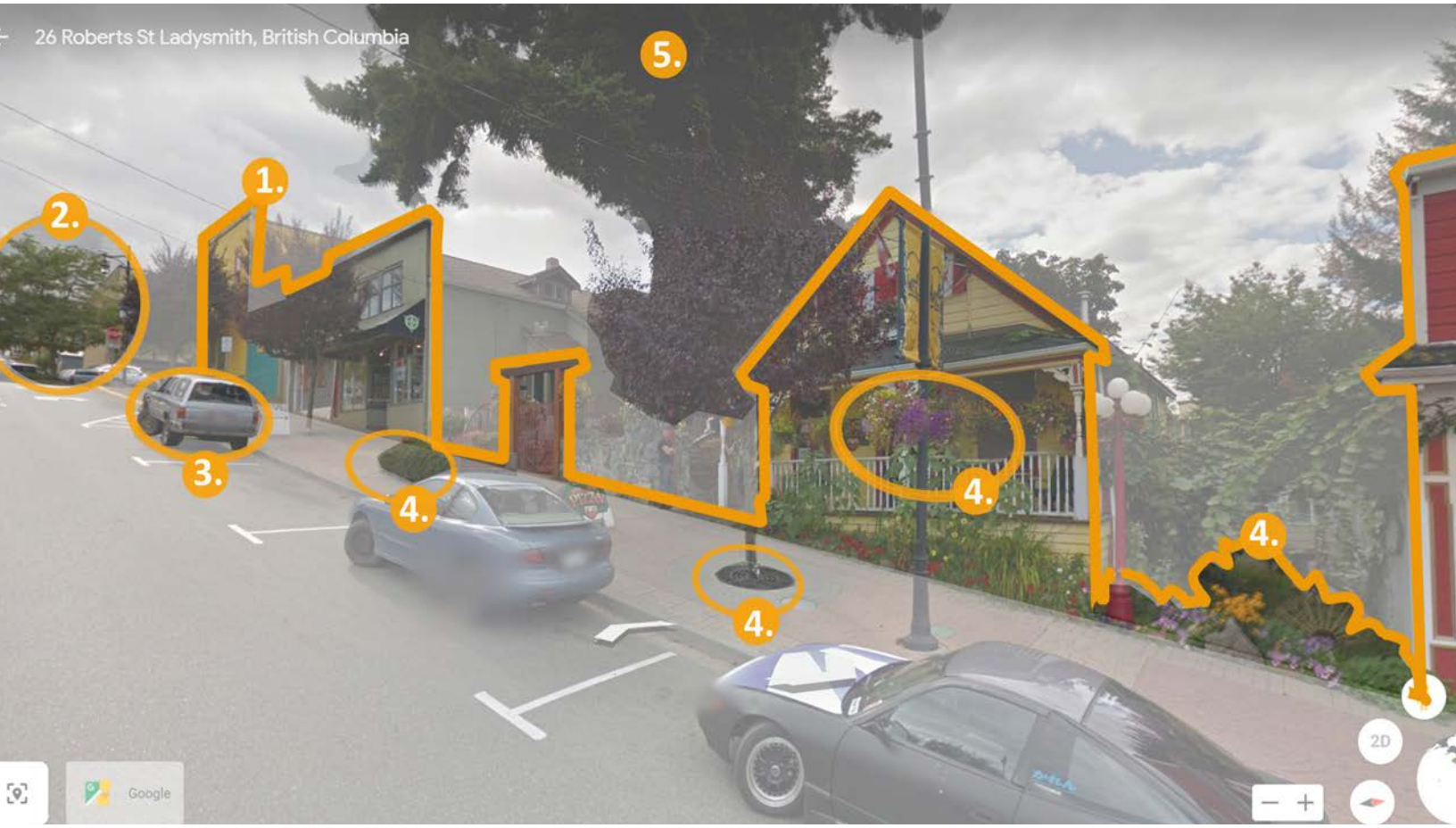
STREETSCAPE IMPROVEMENTS

Several street furnishings and specialty treatments occur along this lower part of Roberts Street. These include sidewalk plantings and street trees, ornamental tree grates, feature paving patterns, hanging flowering baskets, and banners. These treatments provide a sense of character and help foster a civic pride. They also promote participation by local property owners and businesses in enhancing the streetscape experience through adjacent plantings, gateway structures, and the overall upkeep of the buildings and gardens. Restaurants on this street help create a dining ambiance.

5

URBAN FOREST

Some of the remnant forest remains within the back yards and gardens of nearby homes and businesses, providing some habitat value.



Base image source: Google Streetview

2ND AVENUE

1 OPEN GREENSPACE

Ladysmith has important parks and other green spaces integrated into the fabric of the town centre. The relatively recent addition shown on the following page offers a variety of seating options, paved pedestrian connections between the adjacent streets, and terraced open lawn areas to sit and enjoy the views to the east. Additional parking areas are integrated along 2nd Avenue.

2 INTEGRATED SERVICES

This recent development accommodates a number of community services and programs, and is a good example how they can be co-located with outdoor public spaces and other public amenities. This development also demonstrates how to effectively design at a scale that is compatible with surrounding residential areas.

3 PARKING

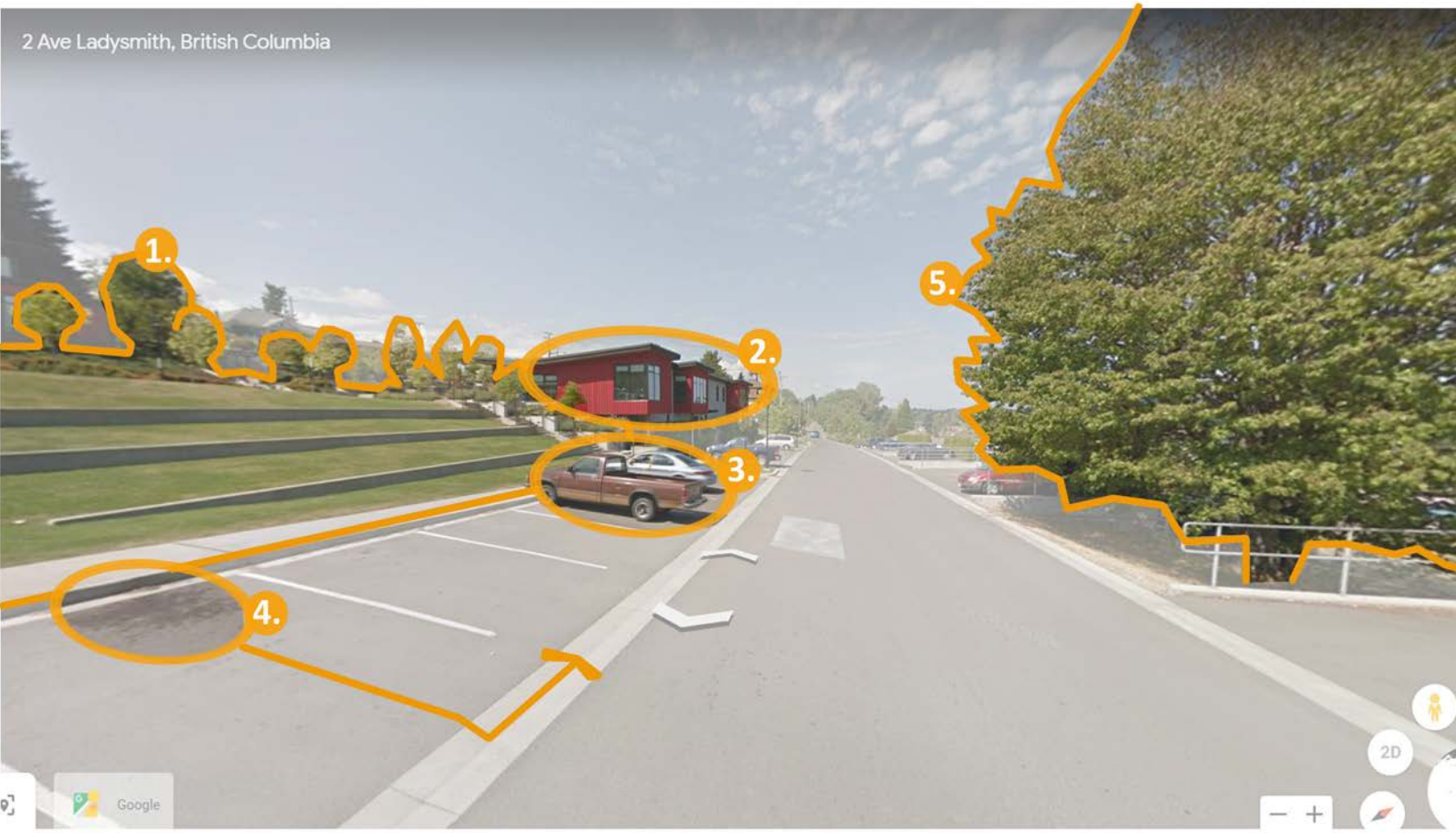
What could have otherwise been a surface parking lot, parking has been effectively incorporated into the 2nd Avenue right-of-way.

4 STORMWATER

Again, contamination of stormwater likely occurs here, and is evident by the oil deposits on the surface of the paved parking area. If untreated, contaminated stormwater can be conveyed within the storm lines and result in potential ecological impacts within nearby watercourses.

5 STREET TREES

Efforts were made to successfully retain this significant street tree, with contrinutes to the a healthy urban forest across the community.



Base image source: Google Streetview

BULLER STREET

1 PAVED AREA

Buller Street, like many of the steep east-west streets, has on-street parking. One the east side of this particular stretch (shown on the following page), angled parking is provided as one continuous paved surface. This amount of paving can contrubite to the heat island effect, and also increases the amount of surface stormwater run off. This in turn increases the chance of contaminants entering nearby marine and watercourses.

2 STORMWATER IMPACTS

It can be challenging to appreciate how stormwater entering one storm-drain could have an impact on local and regional ecologies. However when viewed as an aggregate of the total area runoff – and the network of drains and pipes feeding and concentrating toward one singular storm outfall that enters a creek system or foreshore area – the potential systemic consequences become more apparent.

3 STREET TREES

There are no street trees incorporated into the right-of-way within this section of Buller Street. Instead, the on-street parking has consolidated to form an expanse of paving where trees and green infrastructure could otherwise have occurred. As noted earlier, street trees provide some habitat value, especially if the trees have the opportunity to establish to maturity. They also help condition the local nearby environment through shading and evapotranspiration, and provide ecosystem benefits when integrated into local stormwater management strategies.

4 URBAN FOREST

In contrast, the private land adjacent to the street accommodates almost all the biomass, including trees, shrubs, and plants that grow within the adjacent gardens. It is important to note that hedges and trees can become vulnerable to potential removal during land development. Well-established trees and green infrastructure within the public realm can help buffer these changes, and maintain a healthy degree of tree canopy coverage within Ladysmith's urban forest.

Base image source: Google Streetview

5

AMENITIES

Having places to sit and rest are important amenities for pedestrians, and it is especially important to ensure it is accessible to seniors and citizens with mobility challenges who are navigating these steep streets using their own power (e.g. on foot, by wheelchair, by bicycle, etc).

Many of the north-south streets that traverse the steep east-west slopes have either disconnected sidewalks or no sidewalks at all. With Ladysmith's traffic volumes that are typical to the quieter communities within the region, it might not be an issue for the intermittent cars and trucks to share the streets with pedestrians. However, as Ladysmith grows and the number of residents increases, consideration may be given to augmenting and completing the sidewalk network, as well further incorporating seating areas, tree and boulevard plantings, and integrated storm and green infrastructure measures.

ROBERT STREET & 3RD AVENUE (OLD TOWN)

1

STREET LAYOUT AND SCALE

The original layout of streets within "Old Town" is predominantly on a grid pattern, with the streets varying in width and character. The location used as this example, at the intersection of 3rd Avenue and Roberts Street, is a good example of an older residential street block with narrower street widths.

2

STORMWATER INFILTRATION

The boulevards flanking the street are wide and, as shown on the following page, with sidewalks on both sides of the street. No curbs along the edge of the street result in these grass boulevards likely receiving and infiltrating most of the rain/storm water, with storm catch-basins located to collect the residual storm water conveyed at the surface during heavy down pours. Boulevards also help seperate pedestrians from moving vehicular traffic.

3

SOCIAL AND CONNECTED

Another distinct feature in older neighbourhoods such as this, is the frequent orientation of front doors and entry porches adjacent to the sidewalks. This a degree of visual connection between households and to/from the street, enabling neighbours and passersby to have social interactions.

4

STREET TREES

There is evidence of street trees beginning to establish within this boulevard, an important step in creating a resilient and healthy tree canopy.

5

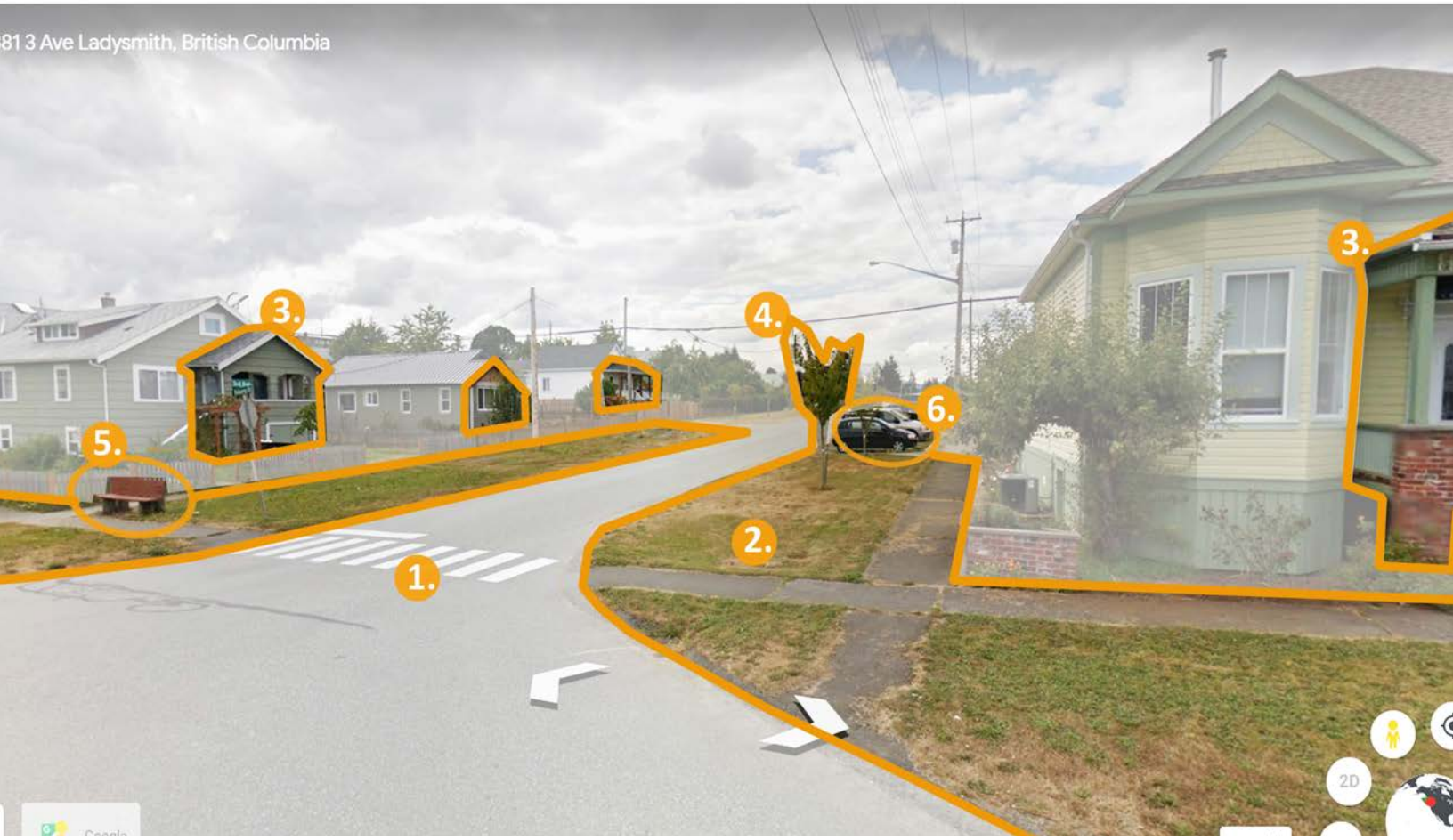
SEATING

There has also been some consideration to provide street furniture at a few key locations, with a seating bench placed at the corner of this particular intersection.

6

PARKING AND PLANTINGS

It is not uncommon for residents to park their cars and trucks on these gravel or grassed boulevards. There is a rural charm to these informal street edges and the unregulated nature of these streets, especially further away form the town centre. However, as these blocks develop with increased street tree plantings and potential densification, some measures could be considered to protect trees and their root zones, and the ability to maintain planted boulevards.



Base image source: Google Streetview

HIGH STREET INFILL

1

INFILL

These single-deatched homes on smaller lots provide an example of intensification within an existing neighbourhood, providing new housing choices and supporting overall compact development in Ladysmith. Other infill typologies such as row homes also provide "gentle density" in support of existing character while offering the added benefit of energy efficiency associated with shared walls.

2

OUTDOOR SOCIAL SPACES

Traditional elements such as covered front porches allow engagement with public spaces and streetlife, thereby offering opportunities for social connection.

3

FRONT FENCES

At the same time, front fences create a barrier to these social connections, and should generally be kept as low as possible to allow casual conversations with neighbours and passersby.

4

STREETSCAPE IMPROVEMENTS

While the absence of front yard garages saves space and creates a more intimate streetscape experience, the orientation of parking here dominates the street and can impede pedestrian movement. Like the fences, they also add a barrier to views and relationships between porches and public spaces.

5

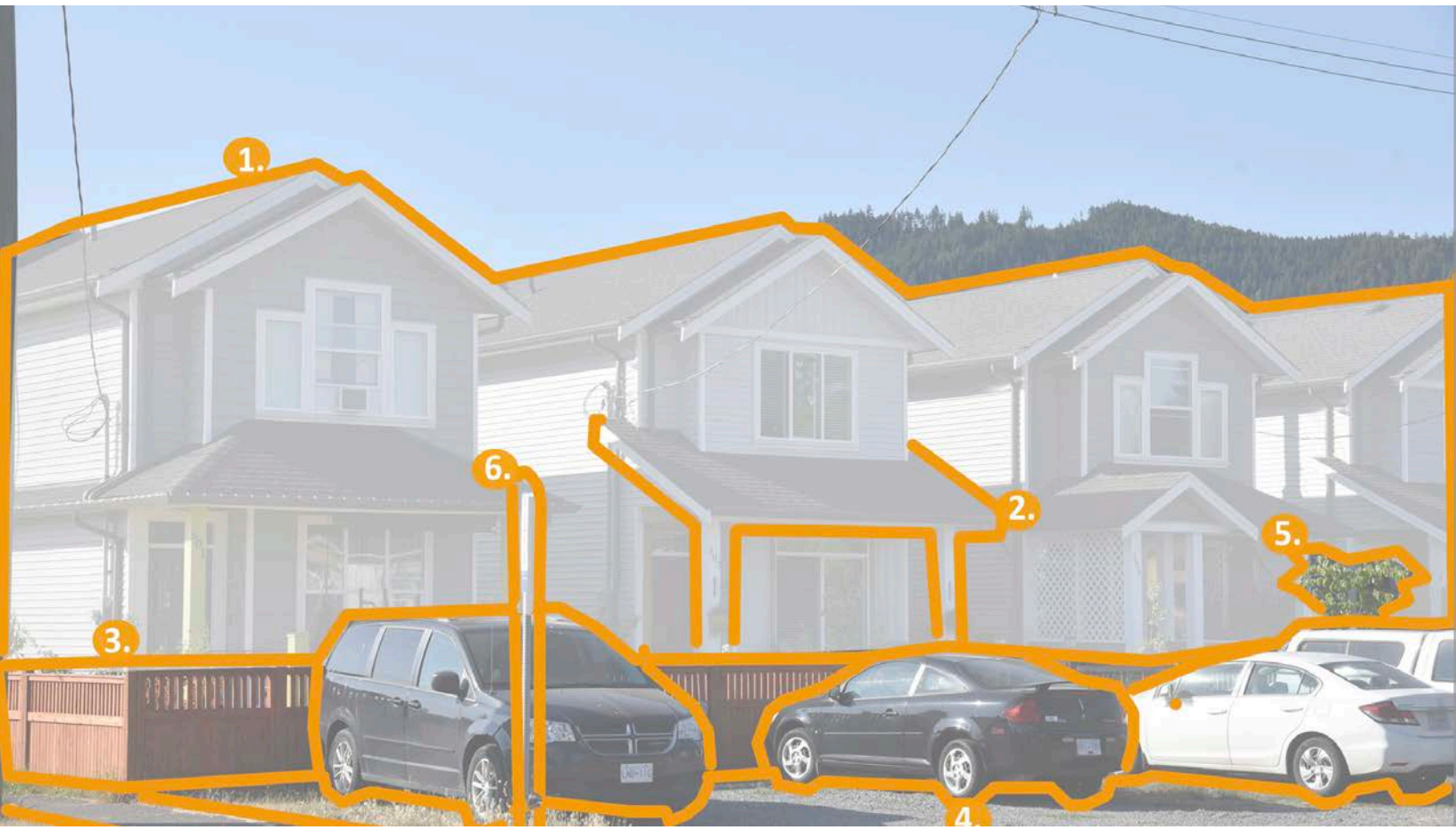
TREE CANOPY

Some tree canopy is provided in a front yard, however there is no ability to accommodate street trees in this layout.

6

TRANSIT ACCESS

Convenient access to transit is an asset here, and could be improved with amenities such as a bench or weather protection.



Base image source: Google Streetview

SUBURBAN STREET

1 THE CUL-DE-SAC

There are several suburbs within Ladysmith that have street layouts reflective of car-oriented planning approaches that were dominant in the last several decades. They tend to have wider streets and include cul-de-sacs, which increases the area of paved surfaces and contributes to the 'heat island effect'. This also prevents rainwater from infiltrating into the ground and natural subsurface water systems. The circuitous street layouts with the frequent dead-ends can also increase driving distances and inhibit people from walking and biking easily between neighbourhoods.

2 CAR-CENTRIC

Homes in these newer subdivisions were often designed with car-centric features such as wide driveways, lack of sidewalks, and double car garages that are the primary feature adjacent to the public realm and arrival point (i.e. as compared with front doors, porches, or stoops, which is where occupants of the home would welcome guests and engage with passersby and neighbours.

3 DRIVEWAYS

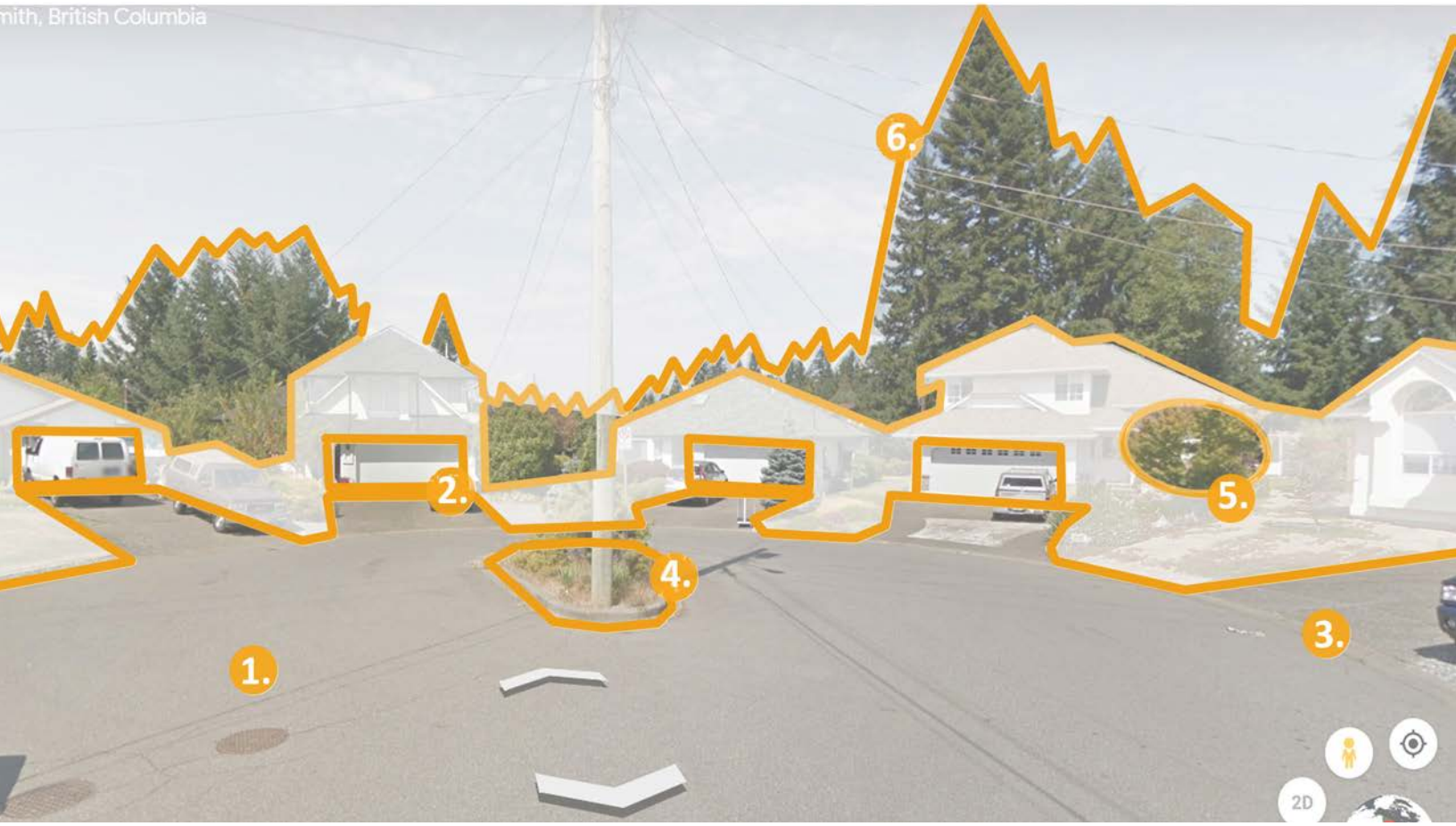
These wide driveways often accumulate oil and contaminants, which are then washed onto the street and into the storm system, conveyed and concentrated into one primary storm line, and then directed to an outfall into sensitive marine habitats including Ladysmith's inner and outer harbours, or the neighbouring creeks and watersheds.

4 STREET PLANTINGS

This small, sparsely planted island offers little habitat or visual amenity, and functions only to surround the utility pole. Such areas can adapt and be increased in size to become a more significant planted feature for both wildlife habitat and bringing neighbours together to tend a shared green space.

5 PRIVATE PLANTINGS

Not uncommon to certain development patterns, the only trees that exist within this cul-de-sac reside on private property. These private front garden plantings can contribute visually to the public realm, but were often designed before consideration was given to plant choices that support wildlife and biodiversity.



Base image source: Google Streetview

6 GREEN INFRASTRUCTURE

Although Ladysmith in still in the formative years of establishing its green infrastructure in public spaces, there are significant areas of remnant forest that remain within private yards. These provide important wildlife habitat, biodiversity, and contribute to the overall urban tree canopy.

5.2 CONNECTIVITY

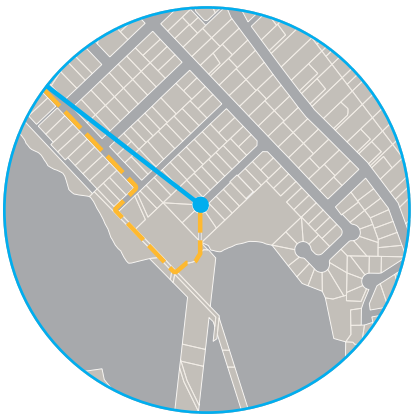
Street connectivity is a measure of travel directness and availability of alternative routes through a network, which influences the real distance traveled between a point of original (e.g. home) and a destination (e.g. transit stop, retailer, school, etc). In fact, connectivity is one of the most significant factors in the frequency and quantity of walking trips, which in turn supports transit and all of the associated environmental and social benefits.

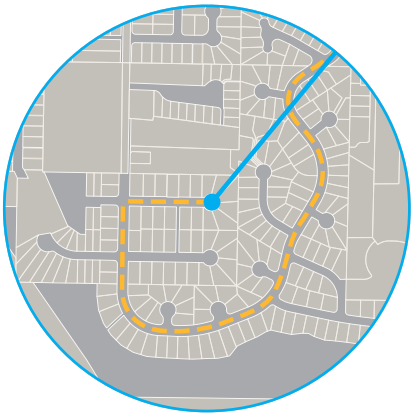
Connected streets provide multiple route options through the community, while "dead end" and "loop" or "cul-de-sac" streets serve adjacent properties only.

On the following page are three examples of street patterns with varying levels of connectivity. Each circle's radius (in blue) represents a five minute (400 metre) walk between two locations "as the crow flies", while the yellow dashed line shows the actual distance required to travel by foot, based on the street network. The corresponding walking time is listed below, ranging from 5 minutes to 16 minutes.

The downtown and surrounding historic area – as illustrated by the 1st Avenue example on the following page – reflect a traditional small block grid pattern that was common to this era. These small blocks are well connected and provide many direct options for getting around.

In comparison, street patterns in areas that developed toward the end of the 20th century and in the beginning of the 21st century – as illustrated by the Hartley Place and Rothdale Road examples – reflect larger, discontinuous block patterns and curvilinear streets with less connectivity. Wayfinding can also be challenging. Establishing connectivity for walking and cycling in these areas depends more heavily on off-street pedestrian networks between property lines and along designated trail corridors.





1st Ave

5 MINUTES

Hartley Place
Holland Creek Trail

8 MINUTES

Rothdale Road

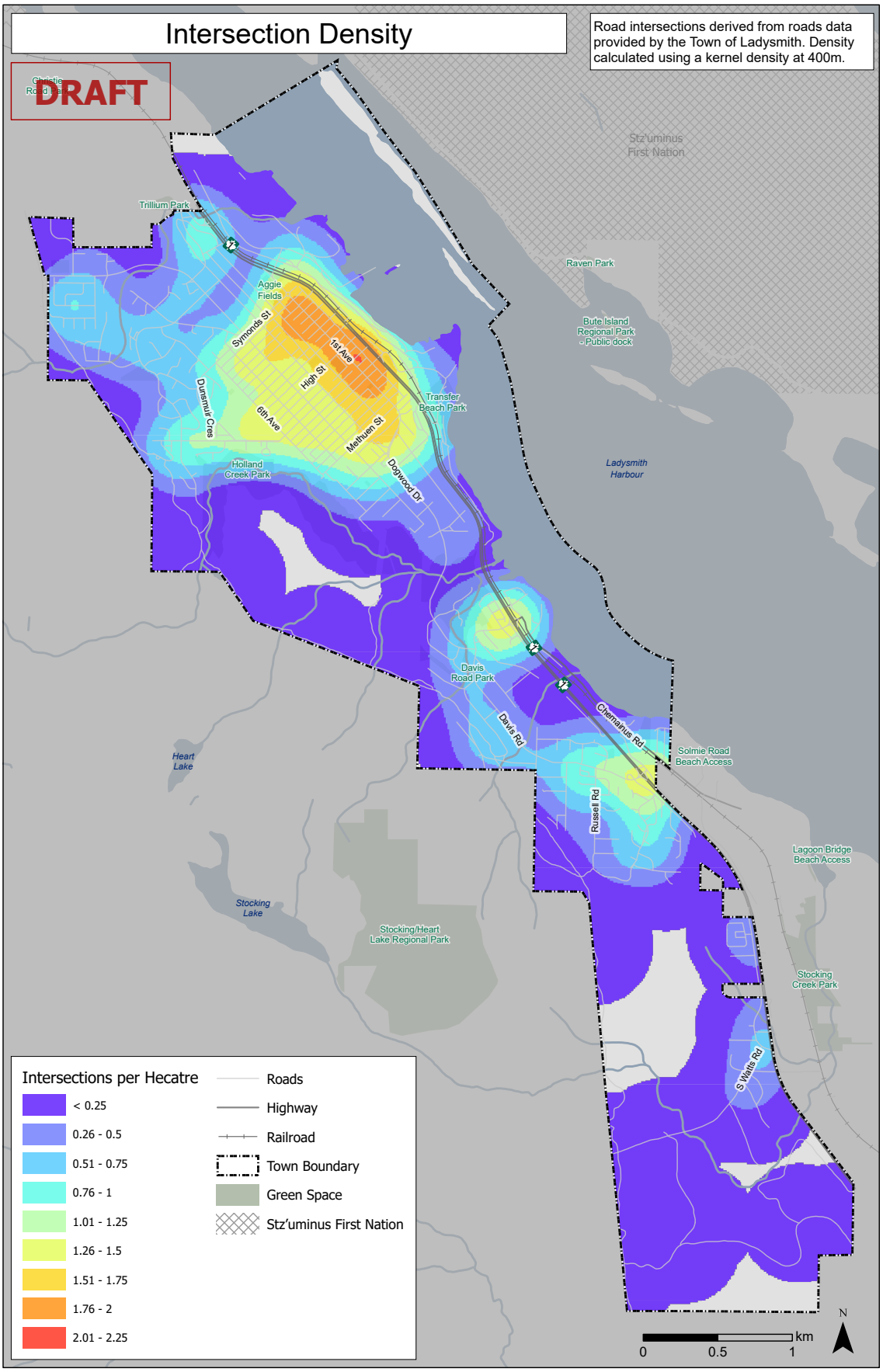
16 MINUTES

Bottom images source: Google Streetview

INTERSECTION DENSITY

There are other ways to measure connectivity, with one of the most common being intersection density. Research shows that a minimum of 50 intersections per square kilometer – or 0.5 intersections per hectare – is needed before pedestrian travel becomes commonplace.

The map on the following page presents connnectivity across Ladysmith, as defined by the number of intersections per hectare. The warmest colours (i.e. reds and yellows) show the areas if greatest connectivity, with the highest being in the historic areas comprised of a grid network. The lowest connectivity is shown in purples are are comprised of newer residential areas or undeveloped areas.


Intersection Density
Road intersections derived from roads data provided by the Town of Ladysmith. Density calculated using a kernel density at 400m.
DRAFT
Stz'uminus First Nation
Trillium Park
Raven Park
Aggie Fields
Symonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Methuen St
Transfer Beach Park
Bute Island Regional Park - Public dock
Holland Creek Park
Dogwood Dr
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Heart Lake
Russell Rd
Lagoon Bridge Beach Access
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Intersections per Hecatre
< 0.25
0.26 - 0.5
0.51 - 0.75
0.76 - 1
1.01 - 1.25
1.26 - 1.5
1.51 - 1.75
1.76 - 2
2.01 - 2.25
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

5.3 VISIBLE HERITAGE

Ladysmith has a rich history that begins with the Hul'qumi'num-speaking people who have lived and stewarded the lands and waters since Time Immemorial.

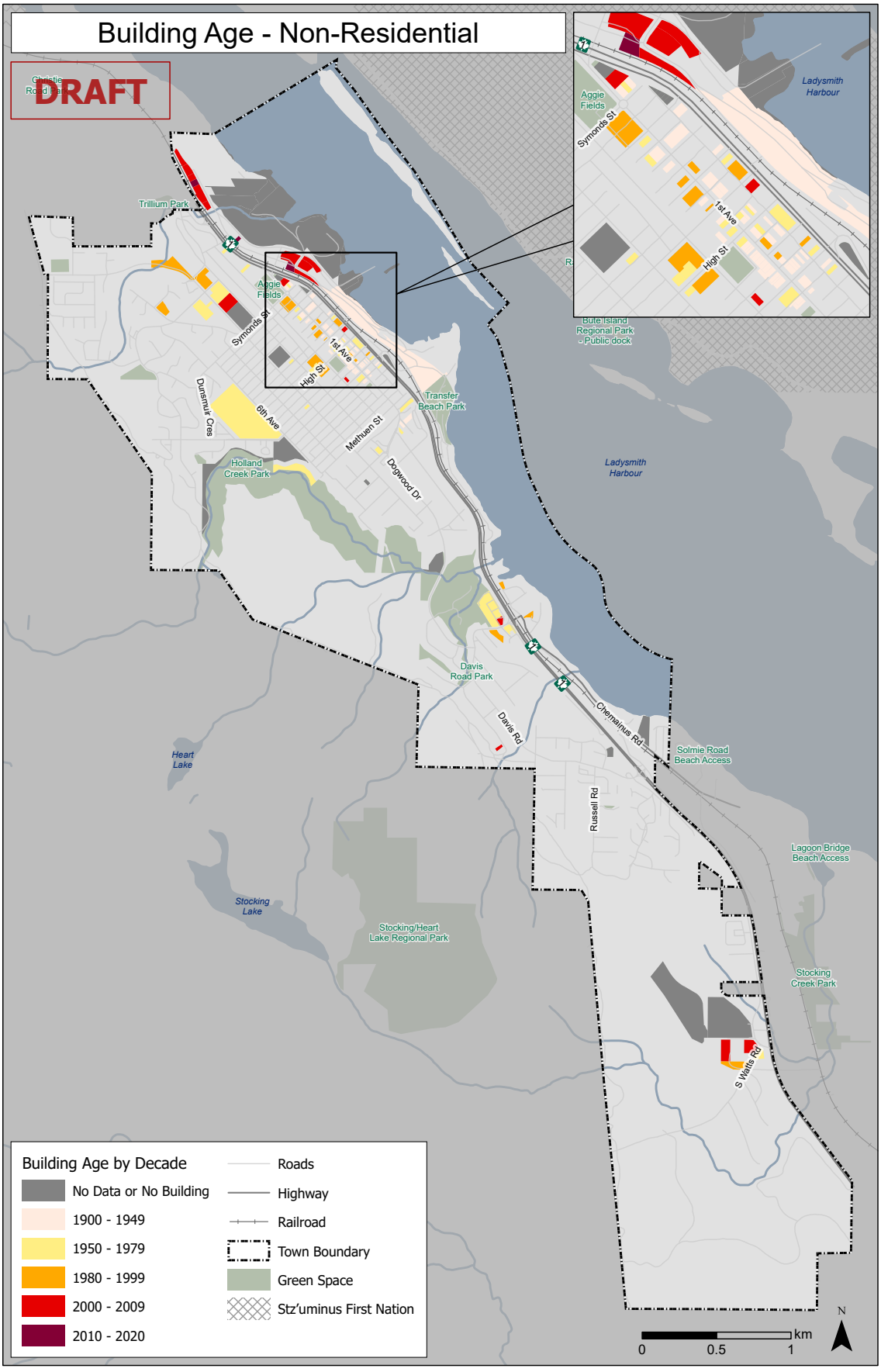
The continued presence and living culture of the Stz'uminus First Nation is visually evident within the town in public art such as street banners, Coast Salish carving at Ladysmith Secondary School, the carving studio in the Machine Shop, community events that celebrate Hul'qumi'num culture, and more. At the same time, there has been an expressed desire for better representation and inclusion.

According to the Stz'uminus First Nation's website, one of the elements of the Nation's mission is to: provide good governance based on their sacred teachings; honour stated values and be role models for those values; provide opportunities for their people, and to nurture and

support a safe and healthy community as the capacity of their people is built; and to instill pride in being a Stz'uminus member.

The more recent settler history is reflected in Ladysmith's built environment, particularly in historic downtown and surrounding area, and at the waterfront, and plays an important and valued role in the distinct character of the town. The map on the following page highlights how all buildings constructed before 1950 are situated in these areas.

A number of community organizations and facilities promote awareness and preserve Ladysmith's heritage, such as the Ladysmith and District Historical Society (which manages the Ladysmith Archives, the Ladysmith Museaum, and the Industrial Heritage Site for the Town of Ladysmith), the Ladysmith Maritime Society (which manages the Maritime Museum, Harbour Heritage Centre, and heritage vessels), and Tourism Ladysmith (e.g. through Heritage Walks).


Building Age - Non-Residential
DRAFT
Trillium Park
Aggie Fields
Symonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Methuen St
Dogwood Dr
Holland Creek Park
Transfer Beach Park
Bute Island Regional Park - Public dock
Ladysmith Harbour
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Russell Rd
Lagoon Bridge Beach Access
Heart Lake
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Building Age by Decade
No Data or No Building
1900 - 1949
1950 - 1979
1980 - 1999
2000 - 2009
2010 - 2020
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

The Ladysmith Community Heritage Register of historic buildings enables the Town to identify the significance of historic places; monitor heritage properties for proposed changes; and integrate heritage conservation activities into land use planning processes. There are currently 30 places listed on the Register, ranging from churches and commerical buildings (e.g. Jessup's Drug Store) , to institutional/community (e.g. Eagles Hall) and industrial buildings (e.g. Ladysmith Railway Station). Heritage assets that are not buildings are also including, such as the Knight's Clock, Dragon City Restaurant Sign, and Ladysmith Arboretum.

PART 6
PARKS & NATURAL FEATURES

6.1 WATERFRONT & WATER

The waterfront has long been loved. In the words of Elder Ray Harris (Shulqwilum), "Ladysmith harbour is a very important, cherished, loved place of the Stz'uminus. An unceded part of our territory... This was our paradise... Year round the uplands and ocean provided for us. What more could we ask for?

...Industry and pollution have affected our way of life. All around in the harbour you'll see the middens, clam shells. Today, for the last 30 years, there has not been a clam in this harbour fit for human consumption. Maybe longer than that. So there's work to be done."

Activities on the waterfront include recreation (i.e. walking, informal bike skills, park use, and water recreation), light industrial and commercial uses, and arts, culture, and heritage celebration. Fisherman's Wharf serves a local commercial fishing fleet, and the Community Marina promotes maritime heritage, tourism, and public marina use and access to the waterfront. It also offers a number of tours, programs, and events.

The Waterfront Area Plan (2018) sets out the following vision: "Located on the unceded traditional territory of the Stz'uminus First Nation, the waterfront area will bring our Stz'uminus and Ladysmith communities together to build a shared legacy in the spirit of mutual respect and benefit. The waterfront area will be a place of enriching public life, living, learning, creativity, and economic activity. The respectful development of this special place will create the opportunity for community prosperity, ecological regeneration, and brownfield restoration while honouring past, present, and future generations."

WATER QUALITY & ECOLOGICAL HEALTH

1

HISTORIC DEVELOPMENT

The Town of Ladysmith was built on the forested slope above the foreshore of 'Oyster Bay'. Since incorporation in 1904, the town and its infrastructure has continued to grow, with additional homes, businesses, cultural and recreational facilities, streets and utilities expanding up the slope.

Early in the 20th century, little was known about the merits of 'green infrastructure' or the importance of 'integrated stormwater management'. As a result, the majority of its stormwater continues to enter unmanaged into the adjacent creeks and waterways.

2

TRADITIONAL FOODS

As described earlier by Elder Ray Harris, for millennia, shellfish harvested in the harbour was an important source of food for Indigenous peoples. Industrial practices in the 20th century and resultant contamination has led to a sanitary closure to shellfish harvesting in the intertidal foreshore of Ladysmith Harbour. This has created a strong imperative to restore environmental health at the waterfront.

3

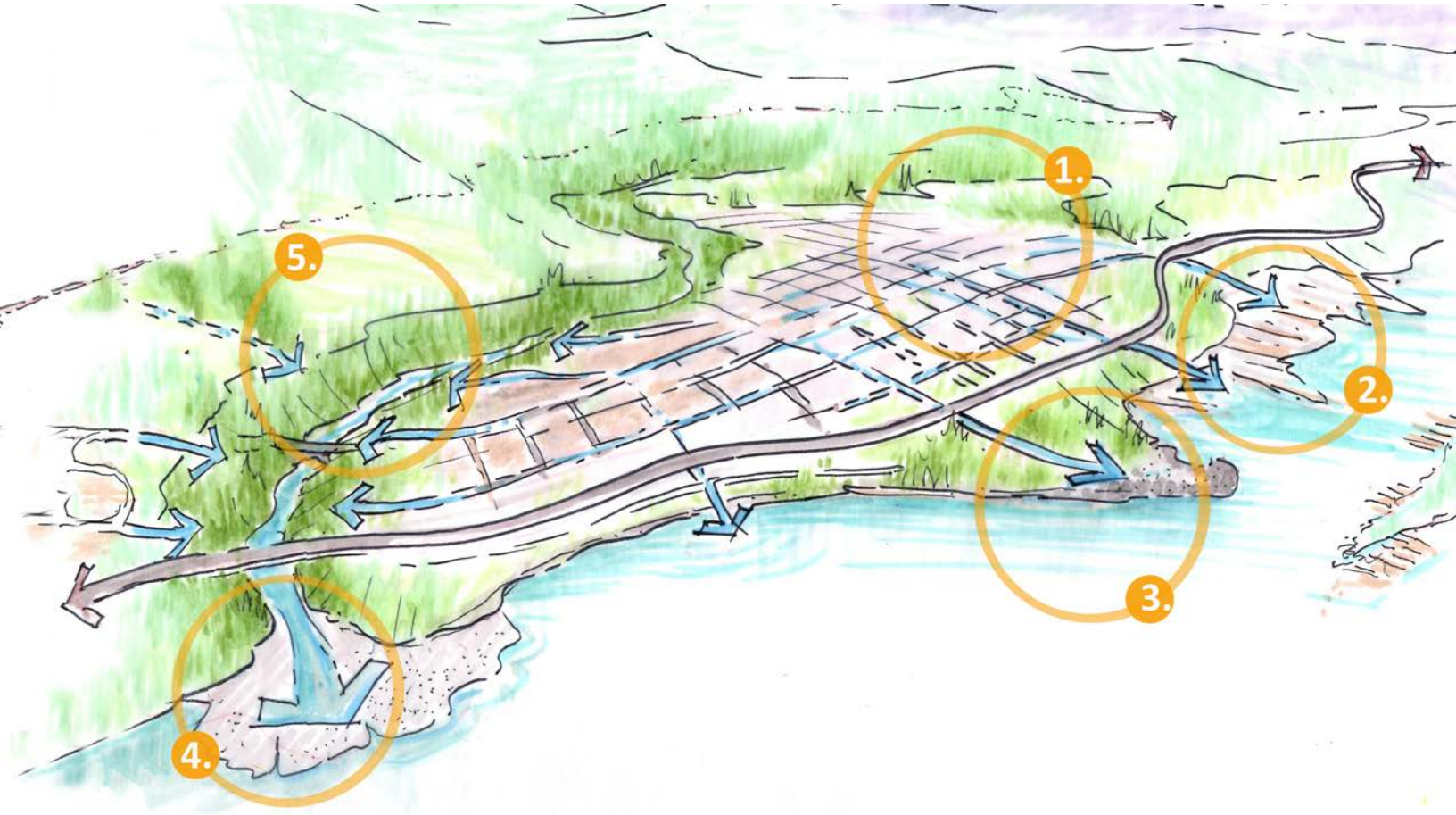
ECOLOGICAL RESTORATION

Further underscoring the importance of restoring environmental health in the harbour, the community engagement for the waterfront planning process revealed a growing desire for addressing contamination of Slack Point. Restoration also involves improving water quality entering the harbour from stormwater and sanitary outflows, as well as daylighting buried streams. These improvements would support the return of shellfish harvesting, and encourage the safe continuation of water-based recreational activities.

4

DEVELOPMENT IMPACTS

Development generally increases the volume and rate of storm surface runoff, due to an increase in the amount of impervious area caused by the construction of roofs and paved surfaces. The increased runoff caused by development can pick up contaminants and and also increases water temperatures as it passes over hot roofs and pavement. It can cause flooding in downstream areas, increase erosion in watercourses, and reduced dry season stream flows due to lower groundwater reserves. If this stormwater enters a creek system untreated – such as Holland Creek, which is a salmon bearing creek – it can have considerable and wide reaching environmental impacts .



5

TRAILS

The creeks and foreshore areas adjacent to Ladysmith are important ecological assets and valuable habitats for wildlife. The network of trails and access points along these natural riparian corridors provide important recreational value, offering both physical and psychological benefits to residents and visitors.

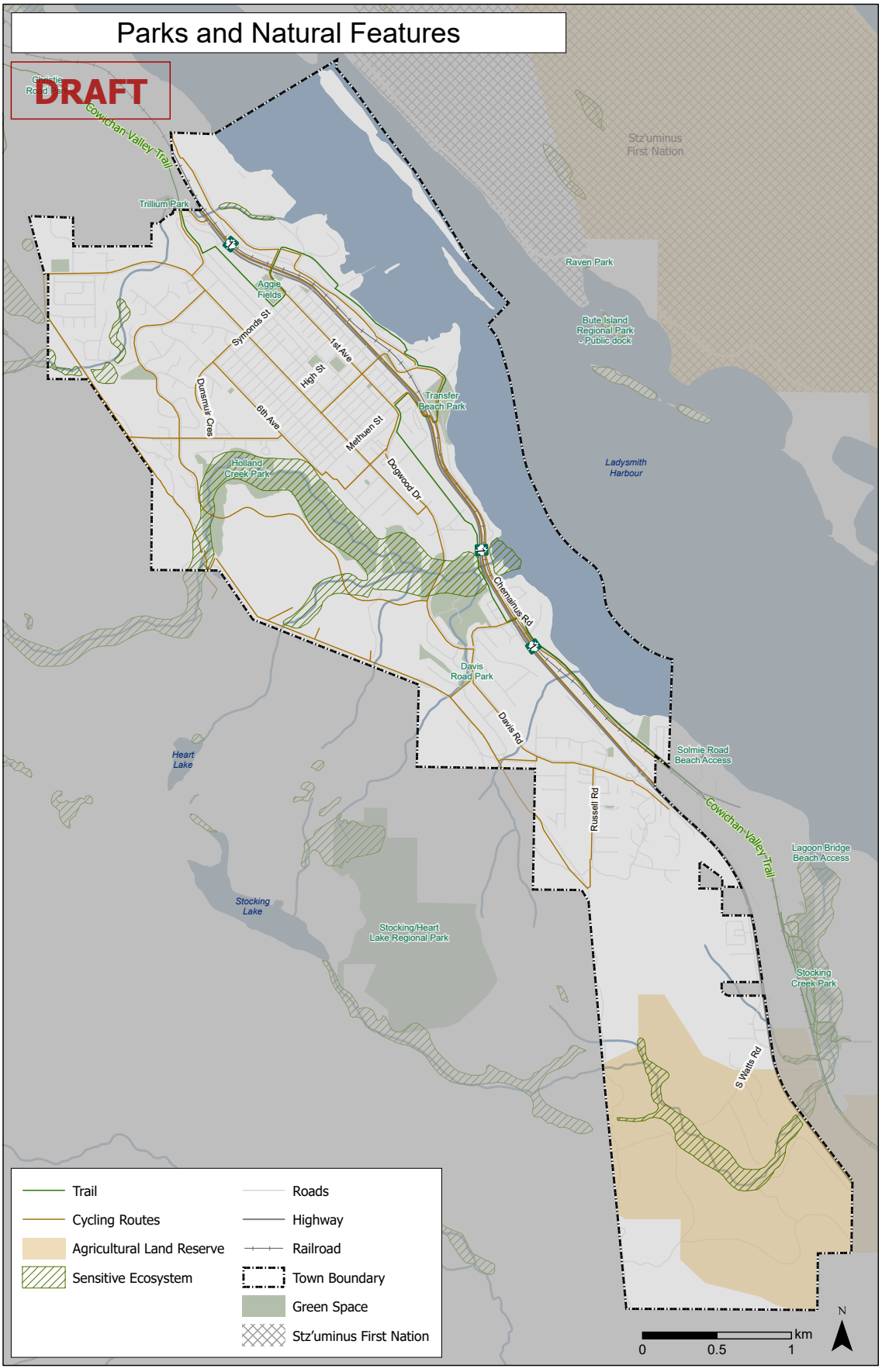
WATERFRONT AREA PLAN

Detailed background and policy directions about the Waterfront Area Plan can be found here, and will form an important part of the new OCP: https://www.ladysmith.ca/business-development/development-resources/waterfront-area-plan

6.2 PARKS & NATURAL AREAS

The Town of Ladysmith is home to over 110 hectares of parks and open spaces with diverse programming, ranging from waterfront recreation and play fields, to passive parks and playgrounds. Natural habitat areas – including regional parks sitated outside municipal boundaries – provide and abundance of trails and access to nature. Discussion on trails is further explored in Part 7 of this report.

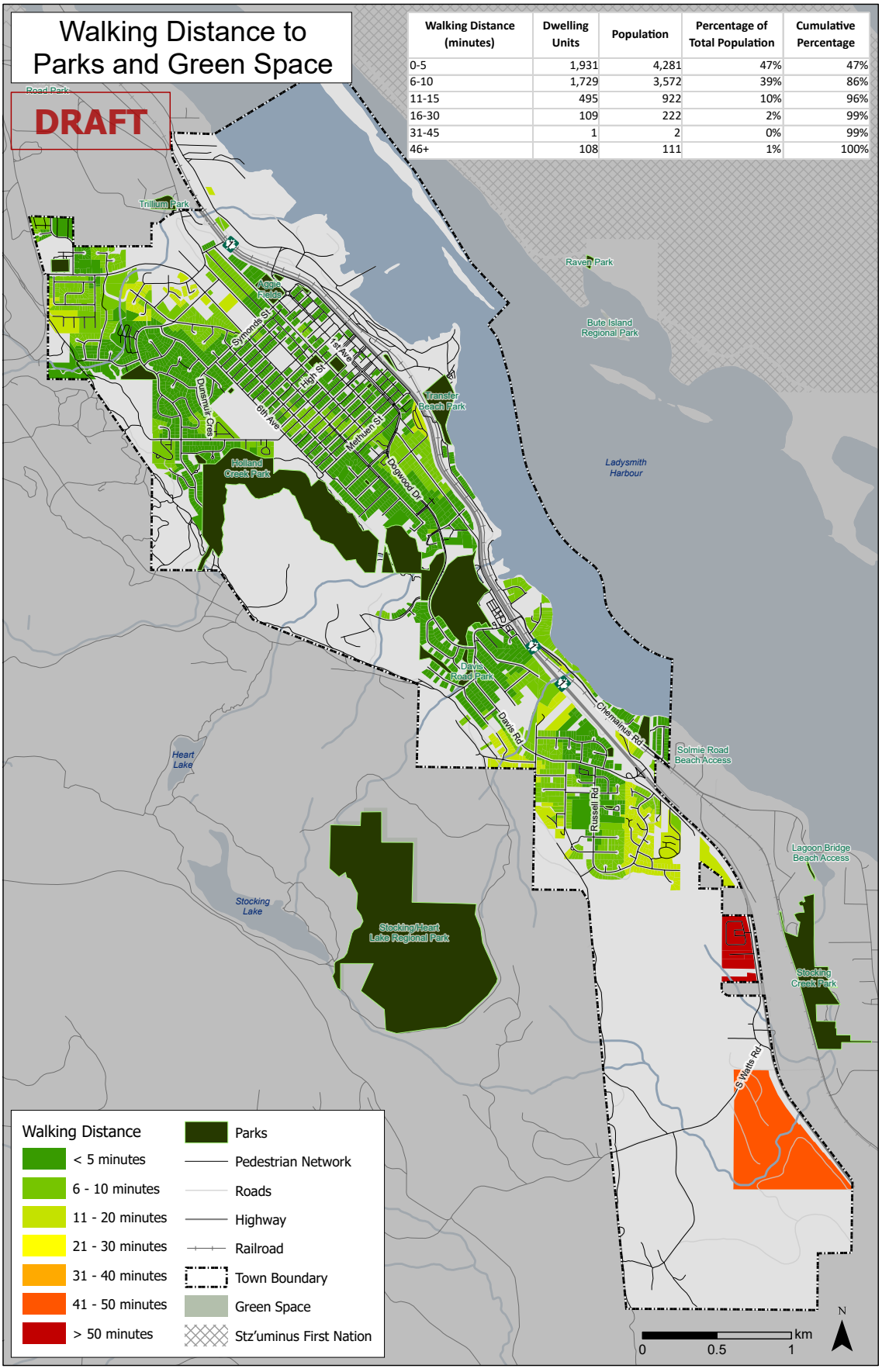
The map on the following page shows how trails and green spaces – including parks –integrate with sensitive ecosystems and the Agricultural Land Reserve.


Parks and Natural Features
DRAFT
Cowichan Valley Trail
Trillium Park
Aggie Fields
Symonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Methuen St
Dogwood Dr
Holland Creek Park
Transfer Beach Park
Stz'uminus First Nation
Raven Park
Bute Island Regional Park
Public dock
Ladysmith Harbour
Chemainus Rd
Davis Road Park
Davis Rd
Heart Lake
Stocking Lake
Stocking/Heart Lake Regional Park
Russell Rd
Solmie Road Beach Access
Cowichan Valley Trail
Lagoon Bridge Beach Access
Stocking Creek Park
S Watts Rd
Trail
Cycling Routes
Agricultural Land Reserve
Sensitive Ecosystem
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

ACCESS TO GREEN SPACE & NATURE

Having access to green space is vital to individual health and well-being, with research demonstrating that it has measurable and positive impacts on mental health such as reducing symptoms of depression, dementia, and Attention Deficit Disorder.

The map on the following page shows that 86% of residents live within a 10 minute walk of a park and green space, and 96% live within a 15 minute walk. Generally speaking, North Ladysmith residents have better access than South Ladysmith residents.



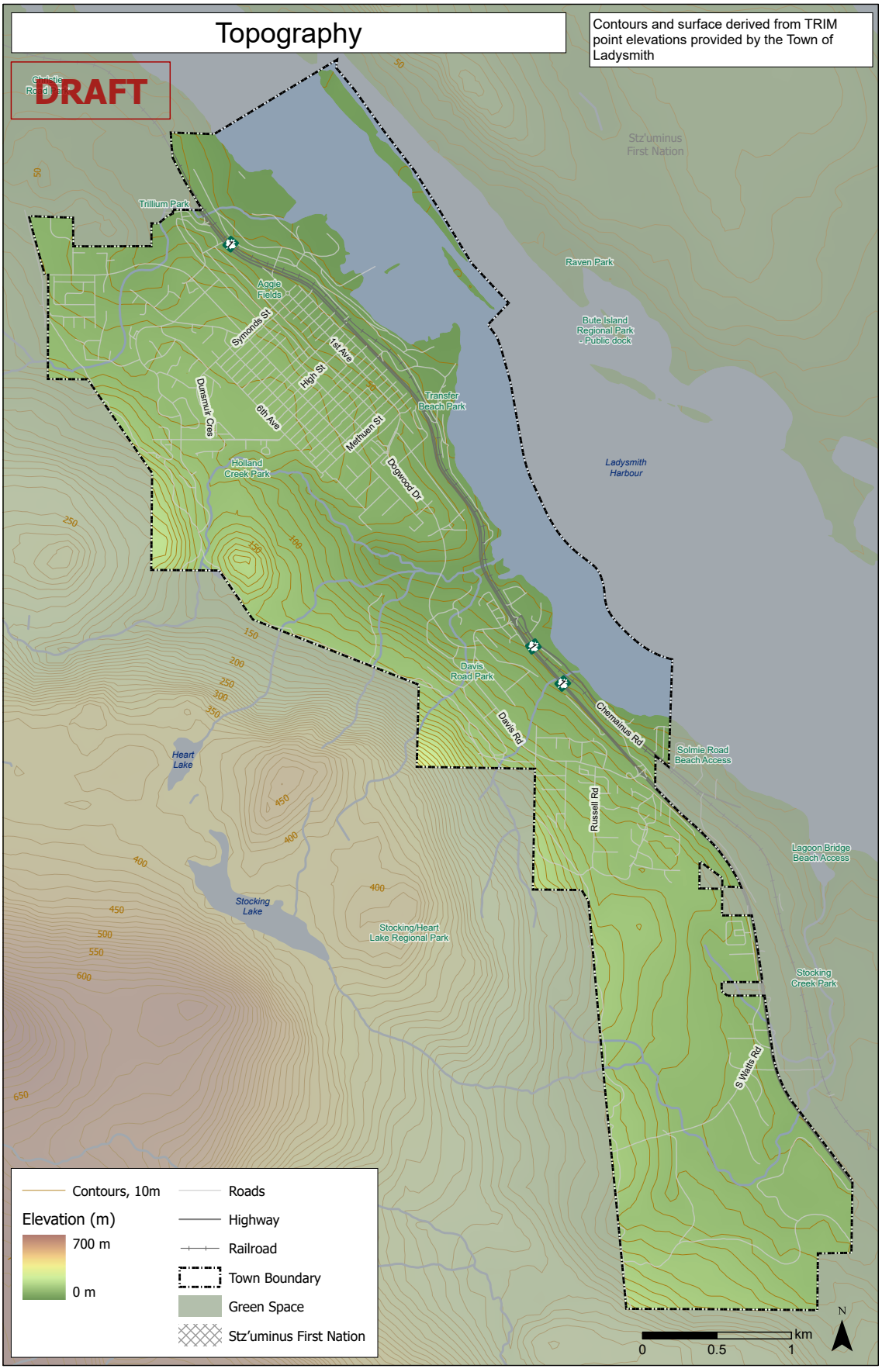
Walking Distance (minutes)	Dwelling Units	Population	Percentage of Total Population	Cumulative Percentage
0-5	1,931	4,281	47%	47%
6-10	1,729	3,572	39%	86%
11-15	495	922	10%	96%
16-30	109	222	2%	99%
31-45	1	2	0%	99%
46+	108	111	1%	100%

TOPOGRAPHY

A discussion on Ladysmith's natural features would not be complete without mention of topography. As was already described in Part 5 (Urban Form) of this report, Ladysmith's steep east-west streets make active transporation a challenge for many.

At the same time, the significant slopes in Ladysmith are an instrinsic part of the natural beauty and natural systems of the area. They add unique character within town, and are ideal for mountain biking and other recreational opportunities in nearby natural areas. Signficant elevation changes also provide stunning views to the harbour from town.

The map on the following page shows contours and elevation in the Ladysmith area.


Topography
Contours and surface derived from TRIM point elevations provided by the Town of Ladysmith
DRAFT
Stz'uminus First Nation
Trillium Park
Raven Park
Aggie Fields
Symonds St
1st Ave
High St
Dunsmuir Cres
6th Ave
Methuen St
Transfer Beach Park
Bute Island Regional Park - Public dock
Ladysmith Harbour
Holland Creek Park
Dogwood Dr
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Russell Rd
Lagoon Bridge Beach Access
Heart Lake
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Contours, 10m
Elevation (m)
700 m
0 m
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

PART 7
TRANSPORTATION

7.1 MORE THAN MOBILITY

Transportation is so much more than getting around. The choices available to us in terms of how we travel within our city impact individual health and safety, accessibility and equity, greenhouse gas emissions, affordability, and more. Likewise, streets are so much more than corridors for movement. They can be destinations unto themselves – places for socializing, shopping, playing, lingering, and more. They have the power of making walking and cycling delightful, or downright unpleasant. In this way, they also can define the look and feel of our community.

Ladysmith's transportation network, much like other communities in the Cowichan Valley, is primarily oriented toward private vehicles. That said, the Town benefits from high walkability in its downtown and other older areas, as described in the "land use" and "urban form" sections of this report. Ladysmith also has access to an extensive trail network.

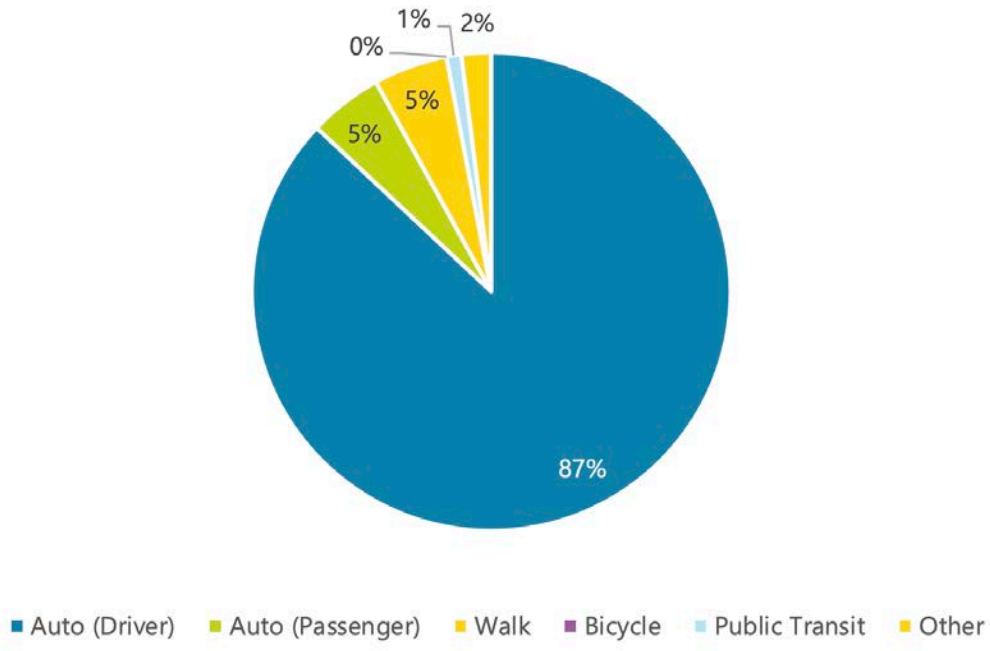
However limited transit, an underdeveloped cycling network, and barriers to pedestrian crossings of Highway #1 are a few of the challenges in Ladysmiths' transportation system.


GROCERS
FOR PET'S SAKE
OPEN
EXIT
PUSH
ROYAL CANIN
FRESH FISH TO DAY

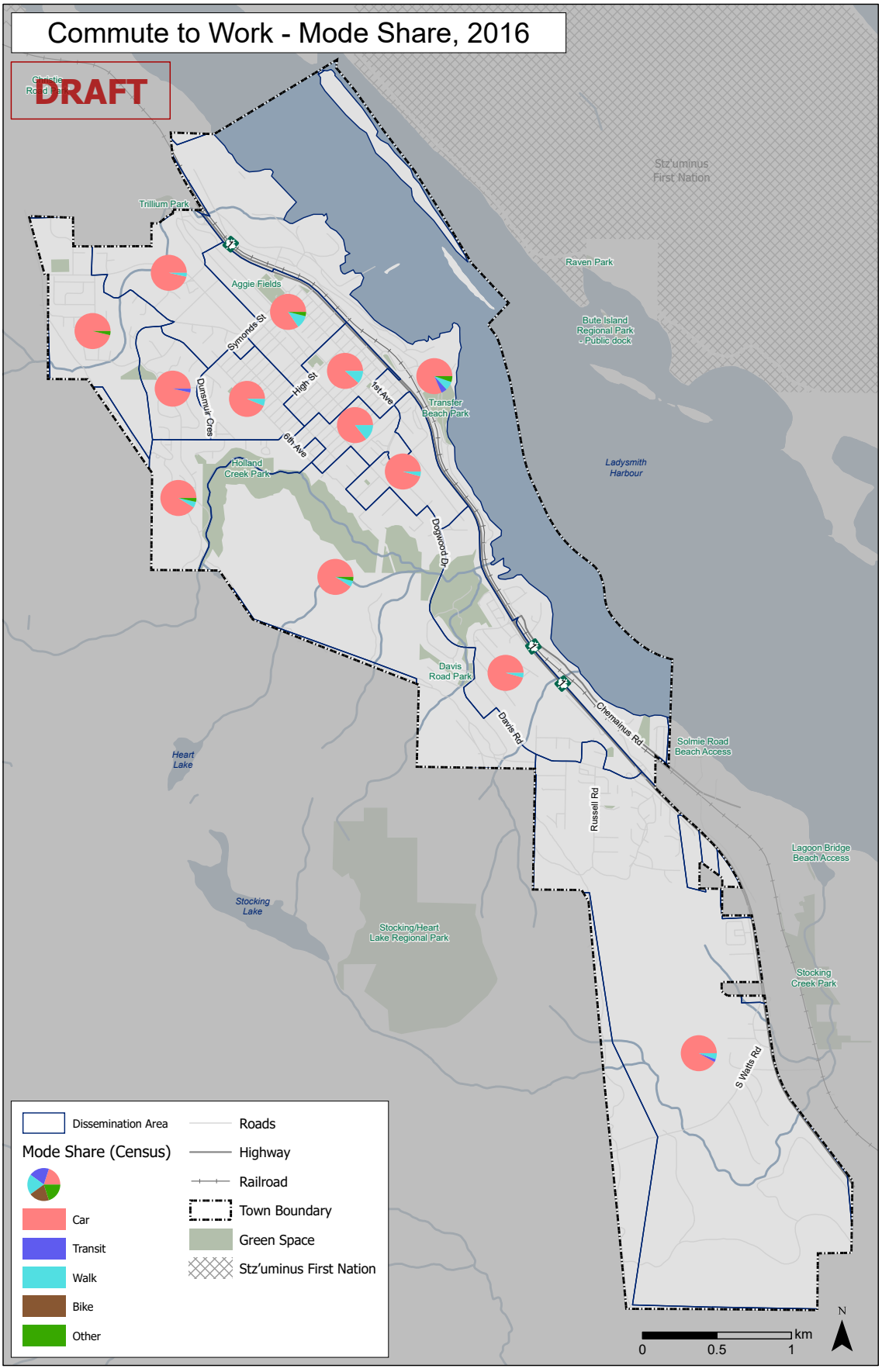
7.2 MODES OF TRAVEL TODAY

The Town does not have travel mode share data for all trip types. However, journey to work data are available from the 2016 Statistics Canada census. As of 2016, driving was the dominant commuting mode among Ladysmith residents with 87% of the employed labour force traveling by private vehicle for commute trips and another 5% travelling as vehicle passengers. About 5% of trips are by walking, no trips by bike, only 1% by transit, with the remainder as 'other'.

As the population of Ladysmith has grown over time, so too has the transportation mode share evolved. According to Stats Canada, Ladysmith's population driving a private vehicle has increased from 81% in 2006 and 80% in 2011 to 87% now. Much of this change in the proportion of people driving to work came from a decrease in the proportion of people walking, which decreased from 11% and 10% in the same years to 5% now, although in real terms the number of people who said they walked to work remained relatively constant (210 respondents in 2006 versus 220 in 2016. The proportion of people travelling to work as a vehicle passenger also reduced slightly from 5% in 2006 to 4% in 2016, with a slight bump in 2011 when it was 11%.



Ladysmith Mode Share for Commute Trips, 2016


Commute to Work - Mode Share, 2016
DRAFT
Trillium Park
Aggie Fields
Symonds St
Dunsmuir Cres
High St
1st Ave
5th Ave
Holland Creek Park
Transfer Beach Park
Stz'uminus First Nation
Raven Park
Bute Island Regional Park - Public dock
Ladysmith Harbour
Dogwood Dr
Davis Road Park
Davis Rd
Chemainus Rd
Solmie Road Beach Access
Russell Rd
Lagoon Bridge Beach Access
Heart Lake
Stocking Lake
Stocking/Heart Lake Regional Park
Stocking Creek Park
S Watts Rd
Dissemination Area
Mode Share (Census)
Car
Transit
Walk
Bike
Other
Roads
Highway
Railroad
Town Boundary
Green Space
Stz'uminus First Nation
N
km
0
0.5
1

CVRD Mode Shares for Commute Trips

Mode	North Cowichan	Duncan	Ladysmith	Chemainus
Car (Auto Driver)	83%	71%	87%	79%
Car (Auto Passenger)	6%	5%	5%	4%
Walk	6%	16%	5%	12%
Bike	1%	2%	0%	2%
Transit	2%	3%	1%	1%
Other	2%	3%	2%	2%
TOTAL	**100%**	**100%**	**100%**	**100%**

Compared to other municipalities in the Cowichan Valley (e.g., North Cowichan, Duncan, Chemainus), Ladysmith has a comparatively higher share of commute trips by car. Further, its walking and cycling mode share is the lowest among Cowichan Valley municipalities, slightly below North Cowichan but significantly lower than Duncan and Chemainus.

The census also includes data on commuting duration. As of 2016, about 33% of the total commute trips are less than 15 minutes and about 67% of trips are greater than 15 minutes. The trips where commuting duration is 15 minutes or less are strong candidates for sustainable transportation. However, given that about 40% of residents commute to a different census subdivision and census division, many are—and continue to be—reliant on their vehicles.


CROSSWALK

7.3 PEDESTRIAN NETWORK

Walking, including using a mobility device, is fundamental to all forms of transportation. It is a part of every trip, whether travelling by car, transit, or bicycle. Ensuring people can freely, safely, and comfortably move by foot or by wheel ensures an equitable community that is accessible to people of all ages and abilities.

Even though the Town does not have a formal sidewalk inventory, many parts of Ladysmith are walkable as residents have access to sidewalks, crossings, and short blocks—this is especially the case along 1st Avenue and more broadly in the downtown. Many of the roads outside of the downtown do not provide sidewalks; residents are forced to walk along gravel or paved shoulders of the road.

As indicated above, about 5% of all commute trips are by walking. However, there is limited data on the number of residents walking for other trip purposes including recreational and discretionary trips. There is some data on pedestrian volumes and crossings of Highway 1.

A 2018 traffic operations review that was conducted for the Ministry of Transportation and Infrastructure (MOTI) included pedestrian volumes for Highway 1 crossings at two locations: Highway 1 and Buller Street; and Highway 1 pedestrian underpass near Methuen Street.

The study concluded that pedestrians may be crossing at this location to access an informal path leading to Oyster Bay Drive, the Marine Walk segment of the Cowichan Valley Trail / Trans Canada Trail and other destinations on Ladysmith Harbour and therefore avoid having to cross at the Transfer Beach Boulevard/Roberts Street intersection, which is 300 metres south. The study also reported that 171 pedestrians used the underpass pedestrian underpass near Methuen Street in a 12-hour period, with the peak occurring in the evening.

Some of the key challenges facing Ladysmith's pedestrian network are summarized as follows:

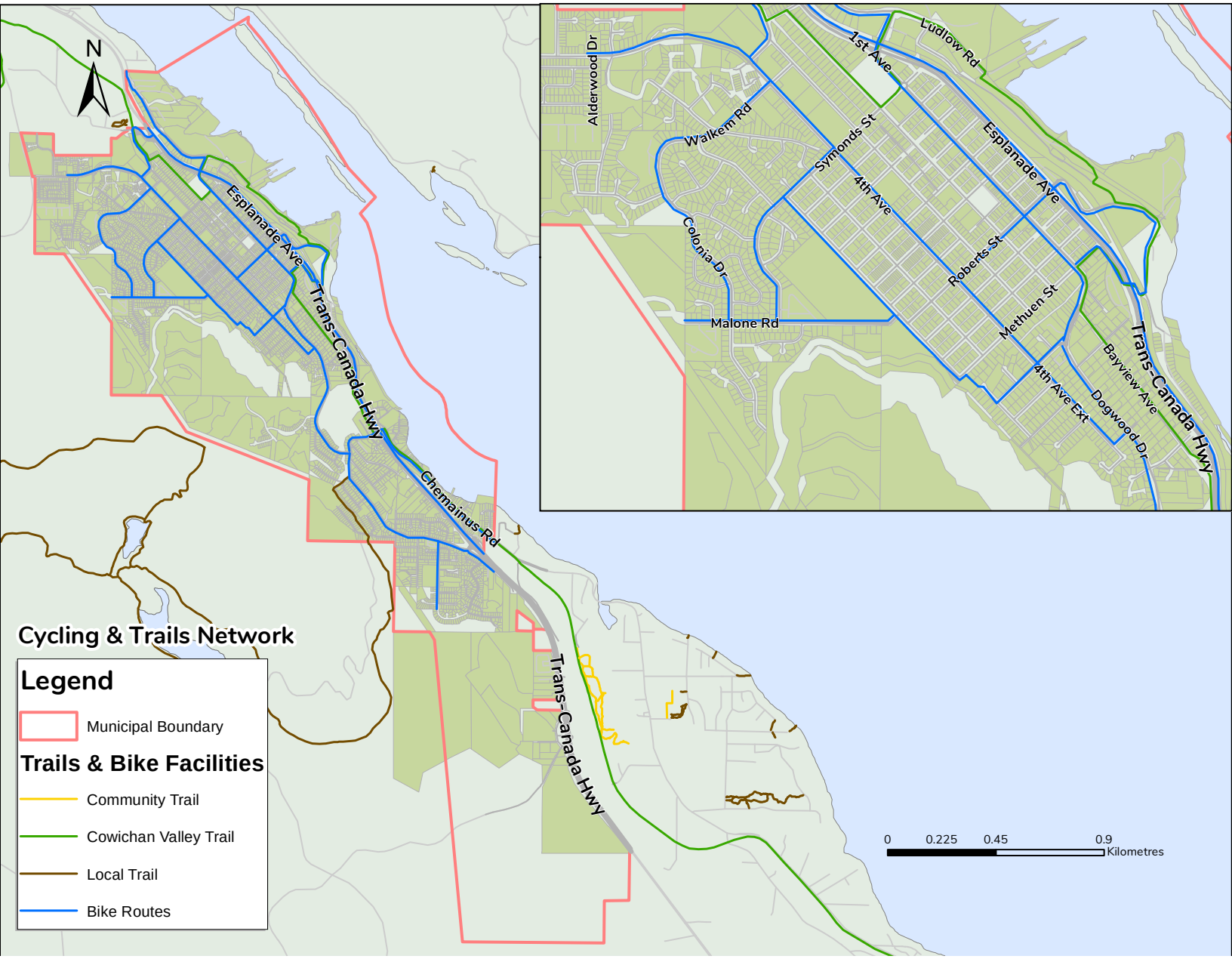
- There is a lack of sidewalk connections surrounding the core, which makes it more challenging for everyone, particularly those with mobility impairments, to walk / roll to downtown.

- Even though some parts of the Town are within a 15-minute walk of key commercial amenities, schools, and employment, there are also many areas that have a much farther walking distance, which makes it harder to complete the trip by foot.. Refer to Section 5.2..
- Accessing the waterfront area as a pedestrian remains a challenge. One potential solution identified in the MOTI study is a grade-separated pedestrian crossing at the Highway 1 / Buller Street intersection to accommodate vulnerable road users.
- As noted in Part 6 (Parks and Natural Features), while varying topography and steep terrain add distinct character and provides compelling views, it also makes walking challenging for many.

7.4 TRAIL NETWORK

Ladysmith, like many other municipalities in the Cowichan Valley, benefits from access to an extensive trail network. As shown in the figure on the following page, there are multiple types of trails that fall within the Town's boundaries, as follows:

- The Cowichan Valley Trail | a multi-use trail that is part of Trans Canada Trail route on Southern Vancouver Island. The Cowichan Valley section runs from the Capital Regional District boundary at the top of the Malahat, north to Shawnigan Lake and the Kinsol Trestle, west to the Town of Lake Cowichan then north to the Nanaimo Regional District. About 4.6 kilometres of the Cowichan Valley Trail crosses the Town's boundary.
- Holland Creek Trail | a 5.8 kilometre trail along both sides of the Creek that appeals to multiple groups.
- Rotary Lookout Trail | a 1.2 km trail that is immediately west of the downtown.
- Stocking Lake Trail | an 11.8 kilometer recreational trail southwest of the downtown.


N
Esplanade Ave
Trans-Canada Hwy
Chemainus Rd
Trans-Canada Hwy
Alderwood Dr
Ludlow Rd
1st Ave
Walkem Rd
Symonds St
Esplanade Ave
4th Ave
Colonia Dr
Roberts St
Malone Rd
Methuen St
Bayview Ave
Trans-Canada Hwy
4th Ave Ext
Dogwood Dr
Cycling & Trails Network
Legend
Municipal Boundary
Trails & Bike Facilities
Community Trail
Cowichan Valley Trail
Local Trail
Bike Routes
0
0.225
0.45
0.9
Kilometres

7.5 CYCLING NETWORK

Cycling can be an enjoyable, relatively low cost, healthy, and sustainable form of transportation. These positive attributes are already recognized by the Town through its Bicycle Plan. The Plan includes two primary goals for its cycling network: (1) increase bicycle trips and (2) increase cyclist safety.

Even though the Town has a Bicycle Plan in place, very little cycling infrastructure has been constructed since 2009. The total length of the Town's cycling network is 24 kilometres. However, the existing bike facilities are largely 'shared use lanes', which means that cyclists are required to ride in a vehicle travel lane with traffic. The BC Active Transportation Design Guide does not include shared use lanes as a recommended facility type. Further, according to the Transportation Association of Canada (TAC), many cyclists are not comfortable using these facilities. TAC indicates that marked shared lanes are not recommended for the design group except on lower speed/lower volumes roads and if insufficient space is available to provide a more appropriate bike facility.

While consideration may also be given to lowering posted speed limits as a way of providing improved safety and comfort for pedestrians and cyclists in multimodal streets, the BC Active Transportation Design Guide notes that the operating speed of a roadway—rather than its posted speed limit—should dictate the type of active transportation facilities to be considered. Therefore, lowering speed limits are a tool that can be implemented to improve active transportation usage and safety but design treatments should also ideally be considered as a way of ensuring vehicle operating speeds align with reductions to posted speed limits and also that pedestrians and cyclists are provided with optimal facilities.

Similar to walking, there is limited data on the number of non-work cycling trips completed within the Town on a day to day basis. The share of commute trips by bike currently accounts for less than 1%. The low cycling mode share may be attributed to its limited cycling facilities, poor connectivity, steep topography, and the longer commuting distances.

The 2009 Bicycle Plan included a summary of the key barriers / challenges to cycling, many of which are still relevant today. These include:

- Topography including steep hills that make it harder to cycle, especially children and older adults.
- Safety. There are no protected and off-street cycling routes that connect to key destinations including commercial areas or to other key destinations like schools. This means that cyclists are required to ride in traffic, which is uncomfortable more most users.
- Poor road conditions, which could include faded road markings, potholes, and poorly maintained bike facilities, make it harder to ride.
- Bicycle theft. The provision of public bike parking facilities, particularly for electric bike users, is critical for supporting more cycling trips.

MOUNTAIN BIKING

Mountain biking is already a popular recreational activity for many residents of Ladysmith however, as both a form of recreational transportation and a tourism opportunity, mountain biking can become an even more integral part of Ladysmith's identity, economic development strategy, and overall wellbeing. Mountain biking is growing in popularity both regionally and internationally, and residents often go to Nanaimo/North Cowichan to ride as there is no formal trail network within Ladysmith. (Refer to more details on page 125).

Even though the Town does not officially provide an inventory of mountain biking trails, according to Trailforks.com, there are over 180 trails in proximity to Ladysmith, as shown below.

Mountain Biking Trails in Proximity to Ladysmith. Source: TrailForks (Available online at www.trailforks.com)


Ladysmith

7.6 TRANSIT NETWORK

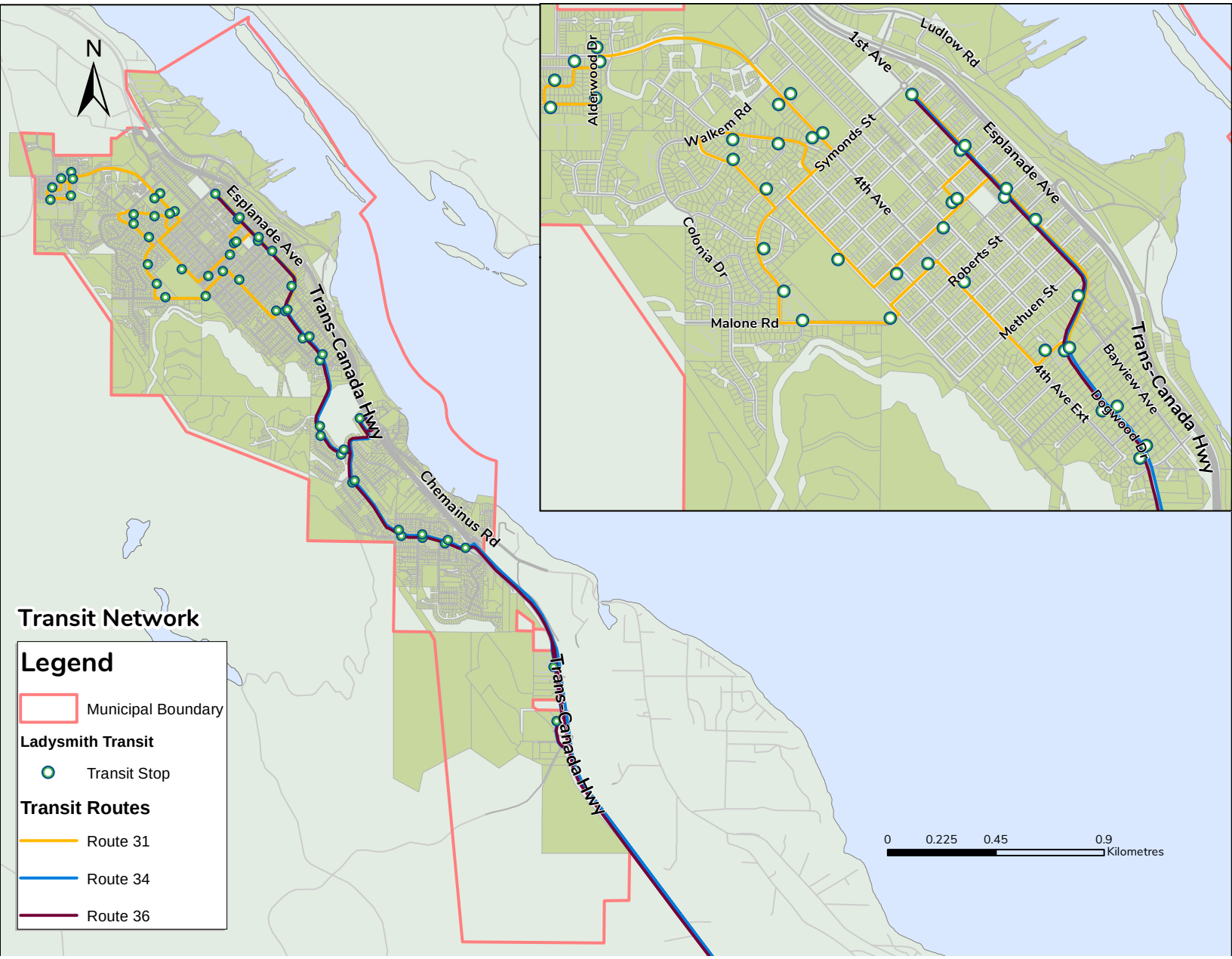
Public transit is a critical component of a successful transportation network. It often serves as the primary alternative to driving for longer trips, especially for those who do not own a vehicle or cannot drive. A well connected, reliable, and frequent transit system can help a community reduce its reliance on private vehicle travel.

As indicated above, a very small percentage of work trips (1%) are currently by transit, which is provided by BC Transit. However, transit service has only been around since 2013 and ridership could increase through strategic improvements in infrastructure and service. Currently, there is one local route serving the town, which is Route 31 (Ladysmith / Alderwood). The two regional routes are: Route 34 (Ladysmith / Chemainus); and Route 36 (Ladysmith / Duncan Express). New regional routes are expected in 2022.

The table below provides a summary of the three routes. Overall, the data indicate that ridership of the three routes is relatively low compared to other routes in the CVRD. In 2019, the 31, 34, and 36 represented 1%, 2%, and 2%, respectively, of the total boardings for all 15 of the transit routes in the CVRD.

Transit Routes Serving Ladysmith

Route	Trips		Revenue Service Hours		Average Daily Boardings
Route 31	6	6	2	2.5	14
Route 34	4	4	3	3	29
Route 36	7	4	4.62	2.63	34


N
Esplanade Ave
Trans-Canada Hwy
Chemainus Rd
Trans-Canada Hwy
Alderwood Dr
Walkem Rd
Symonds St
1st Ave
Ludlow Rd
Esplanade Ave
4th Ave
Colonia Dr
Roberts St
Malone Rd
Methuen St
4th Ave Ext
Bayview Ave
Dogwood Dr
Trans-Canada Hwy
Transit Network
Legend
Municipal Boundary
Ladysmith Transit
Transit Stop
Transit Routes
Route 31
Route 34
Route 36
0 0.225 0.45 0.9
Kilometres

There are a total of 108 bus stops within the Town boundary. According to 2019 bus stop activity data from BC Transit, almost all bus stops in Ladysmith have less than 10 boardings and alightings per day with only a few in the 12-15 range (Dunsmuir Crescent at Bickle Drive and Alderwood Drive at Birchwood Road).

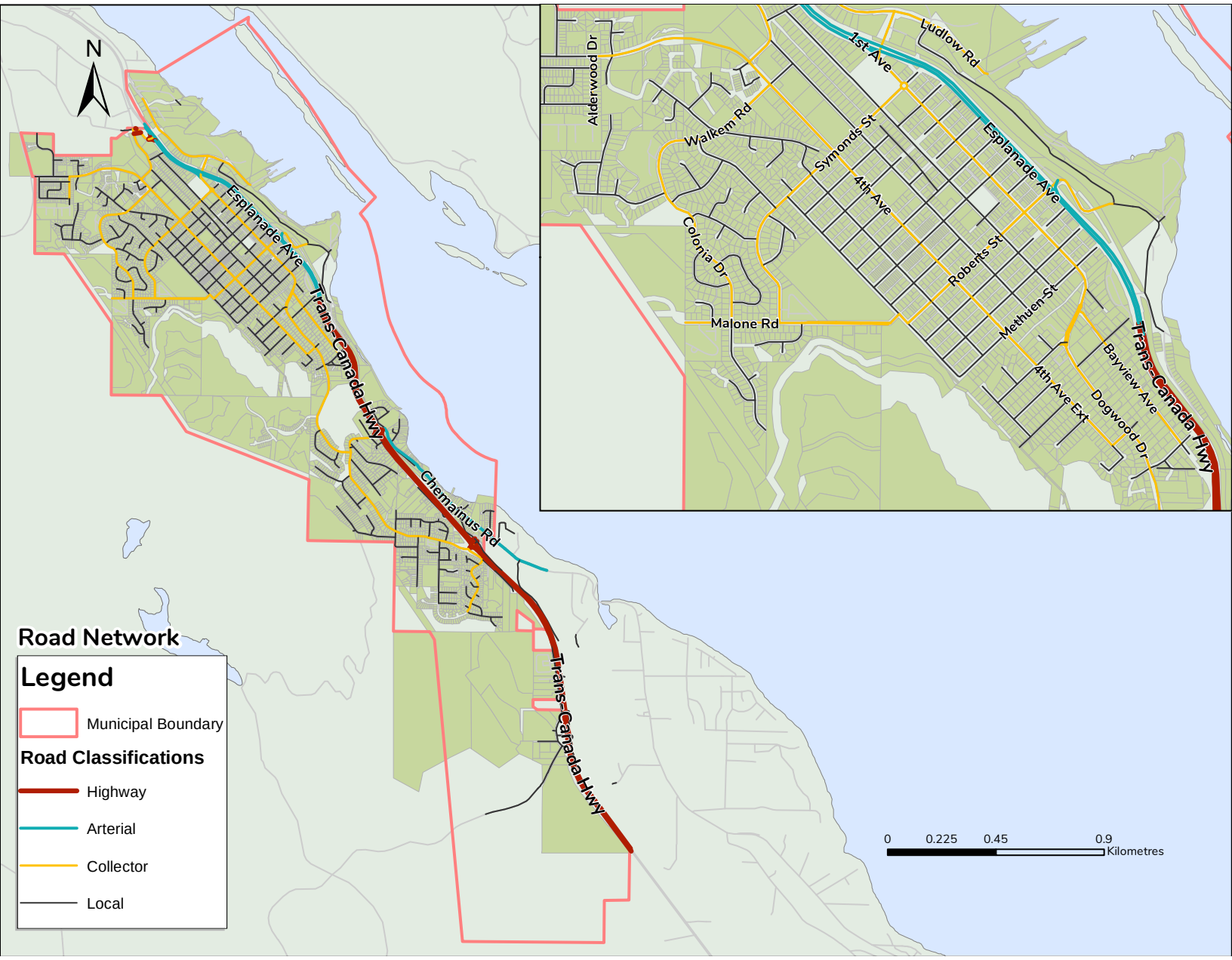
Key challenges for the transit network include:

- Limited local service. Route 31 offers limited service frequency and experiences low ridership, with an average of 14 passengers per trip in 2019 making it one of the lowest ridership routes in the Cowichan Valley.
- Similarly, the regional routes also offer limited service frequency and also experience low ridership.
- There is no service to the airport, ferries, or the major urban centres of Victoria or Nanaimo.

7.7 ROAD NETWORK

The road network forms the skeleton of a community's transportation system. Highway 1 (Esplanade Avenue) serves as the primary access to Ladysmith from Vancouver Island. The road network includes about 6.7 kilometres of arterial streets, 17.4 kilometres of collector streets, and a number of local streets that provide access to residential neighbourhods. The Town does not have any current data on traffic volumes for its municipal roads. However, there are 2018 traffic volume data for the Trans-Canada Highway (Highway 1), which provides a general indication of how much traffic flows through the Town.

- Highway 1 and Grouhel Road: 1,950 vehicles in the AM peak hour and 3,050 vehicles in the PM peak hour
- Highway 1 and Ludlow Road/1st Avenue: 2,100 vehicles in the AM peak hour and 3,200 vehicles in the PM peak hour
- Highway 1 and Transfer Beach Boulevard/Roberts Street: 1,900 vehicles in the AM peak hour and 3,000 vehicles in the PM peak hour
- Highway 1 and N. Davis Road: 1,950 vehicles in the AM peak hour and 3,200 vehicles in the PM peak hour
- Highway 1 and S. Davis Road: 1,550 vehicles in the AM peak hour and 2,450 vehicles in the PM peak hour
- Highway 1 and Edgelow Road S./Thicke Road: 1,500 vehicles in the AM peak hour and 2,350 vehicles in the PM peak hour


N
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Trans-Canada Hwy
Chemainus Rd
Trans-Canada Hwy
Alderwood Dr
Ludlow Rd
1st Ave
Walkem Rd
Symonds St
Esplanade Ave
4th Ave
Colonia Dr
Roberts St
Malone Rd
Methuen St
Trans-Canada Hwy
Bayview Ave
4th Ave Ext
Dogwood Dr
Road Network
Legend
Municipal Boundary
Road Classifications
Highway
Arterial
Collector
Local
0 0.225 0.45 0.9
Kilometres

Overall, based on the 2018 study, all of the Highway 1 intersections within the study area are operating at a level of service (LOS) A or better during AM peak hour and at LOS C or better during the PM peak hour. This indicates that the traffic is generally flowing on Highway 1 through all of the intersections within the Town boundary.

LEVEL OF SERVICE (LOS) CRITERIA, BY INTERSECTION TRAFFIC CONTROL		
Level of Service	**Unsignalized Intersection Average Vehicle Delay (sec/veh)**	**Signalized Intersection Average Vehicle Delay (sec/veh)**
A	Less than 10	Less than 10
B	10 to 15	11 to 20
C	15 to 25	20 to 35
D	25 to 35	35 to 55
E	35 to 50	55 to 80
F	More than 50	More than 80

Traffic during AM peaks is generally lower than that of PM peaks. This is due to a higher concentration of individuals leaving work, commercial transportation, travel to run errands, school being released, and recreational travel occurring more during the PM peaks as well as the overlap of these various trip purposes at the same time while morning travel tends to be more spread out across these uses. Additionally, these counts were conducted during August when school is not in session and peak tourism travel occurs further increasing the disparity between AM and PM peaks. It is important to understand that as communities grow in size and population, wait times at intersections are expected to increase and levels of service will move from A towards F.

Another important finding from the 2018 study was that traffic along Highway 1 generally travels above the posted speed limit through the study area by approximately 10 km/h to 25 km/h. Travelling above the speed limit has implications for the overall road network.

For example, when the posted speed limit is inconsistent with the speed that drivers are comfortable travelling through a highway segment, issues such as driver frustration, excessive speeding, and unsafe driving manoeuvres can arise. Further, the study noted that reducing the posted speed limit may result in lower compliance, exacerbate safety concerns, and result in collisions.

The study included two specific recommendations around safety improvements:

- Additional speed limit signage for southbound vehicles on Highway 1 upstream of Grouhel Road to alert drivers of the speed transition from 90 km/h to 70 km/h and to encourage drivers to slow down in more urban areas.
- Additional speed limit signage for Highway 1 northbound vehicles on the north side of the N. Davis Road intersection to alert drivers of the speed transition from 90 km/h to 70 km/h and to encourage drivers to slow down in more urban areas.

Key challenges for the road network include:

- Highway 1 has limited crossing opportunities for pedestrians. The 2018 Binnie study concluded that a grade-separated pedestrian crossing facility near Highway 1 at Buller Street could be considered as the Town implements the vision outlined in the Waterfront Area Plan, which also include direction for a pedestrian overpass.
- Without adjusting the posted speed signs, vehicles may continue to travel above the posted speed limit, which could result in more collisions at Highway 1 intersections within the Town boundary.

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7.8 EMERGING TRENDS

Transportation is a rapidly evolving sector with new technologies and systems being introduced on a frequent basis. While gas powered vehicles and single-occupancy vehicle travel dominated the 20th century, advances in technology and telecommunications along with societal changes have resulted in several new mobility services ranging from carsharing, ride-hailing, micromobility vehicles (e.g., e-bikes/e-scooters), and more. There has also been increasing interest in electric transportation from electric vehicles to e-bikes and e-scooters.

Given Ladysmith's transportation context, there are a few emerging transportation trends that are particularly relevant to Ladysmith, including the rise in: electric vehicles; electric bikes; mountain biking; and telecommuting.

ELECTRIC VEHICLES

Electric vehicles (EV) are a class of vehicles that run fully or partially on electricity. These vehicles have a battery instead of a gasoline tank, and an electric motor instead of an internal combustion engine. Electric vehicles and other types of zero-emission vehicles can play an important role in reducing community greenhouse gas emissions.

There are no publicly available data on EV ownership in Ladysmith. However, based on provincial trends, the EV ownership within the Town is likely growing. The province's 2020 zero-emission vehicle update reported the following:

- Light-duty zero emission vehicle (ZEV) sales represented 9.4% of all new light-duty vehicle sales in BC, up from 8.7% in 2019.
- There were 54,469 light-duty ZEVs registered in BC as of December 30, 2020 compared to about to just under 40,000 in 2019
- The total number of public Level 2 charging stations increased from 1,768 in 2019 to 2,127 in 2020.
- In 2020, BC had the highest uptake rates of ZEVs in North America.

Accoding to chargepoint, there are currently two Level 2 charging stations in Ladysmith located in front of the Ladysmith Museum. Even though there are few publicly available charging stations in the Town today, the provincial data above suggests that EV adoption will continue to grow province-wide, which will have implications for the number of publicly available charging stations. This represents an opportunity through the OCP process to provide policy direction that can support provincial efforts to increase EV adoption.

ELECTRIC BICYCLES

Electric bicycles (e-bikes) are bicycles with an electric motor of 500 watts or less, and functioning pedals. The e-bike will assist a rider pedalling up to a top speed of 32 km/h, at which the electric motor will no longer assist the rider. Electric bicycles make cycling more attractive for a greater diversity of the population, particularly for seniors and people with disabilities, as they increase the maximum length of bicycle trips, minimize the impact of hills and other terrain challenges, and allow people to bike with heavier cargo loads. Further, electric bicycles can help communities achieve their GHG emission reduction targets. With supportive cycling infrastructure in place, e-bikes have the potential to substitute for, or completely replace, almost all trips taken by a gasoline powered car, which could address congestion issues within urban areas.

Recent research has reported the following impacts on vehicle ownership:

- A 2018 study presented results of a North American survey of electric bike owners. The study reported that 62% of e-bike trips replaced trips that otherwise would have been taken by car. Of these trips previously taken by car, 45.8% were commute trips to work or school, 44.7% were other utilitarian trips (entertainment, personal errands, visiting friends and family, or other), and 9.4% were recreation or exercise trips. The average length of these previous car trips was 15 kilometres, which is greater than the distance between Ladysmith and Chemainus!
- A more recent study found that approximately 39 kilometres of driving per week is displaced by the average e-bike adopter along with 14 kilometres of travel by conventional bicycle.
- A 2020 study found that people who purchased an e-bike increased their bicycle use from 2.1 to 9.2 km per day on average.

All of these studies indicate that e-bikes allow users to travel longer distances, which help substitute for trips that would otherwise be made by a vehicle. As an emerging mobility form, there is limited ownership data available in Ladysmith. However, e-bikes can be especially attractive in the Town due to [a] longer travel distances [b] the hilly terrain and topography and [c] access to the extensive trail network including the Cowichan Valley Trail.

MOUNTAIN BIKING

Mountain bike trail development is identified as one of the specific strategies in the Ladysmith Economic Development Strategy. This would include "surveying and mapping trails, creating signage, and promoting mountain biking in Ladysmith as part of a growing network of Island-based mountain biking destinations."

Even though mountain biking is a recreational activity, the development of the Town's cycling network can improve connectivity to the mountain bike trails and reducing the need to drive. Further, mountain biking is an emerging economic development opportunity for the Town, which can enhance Ladysmith's overall transportation network and options.

TELECOMMUTING

Telecommuting or teleworking (more simply referred to as working from home), is the act of completing work assignments from a location other than an office via an internet and phone connection. Telecommuting allows employees to work from wherever they are located, instead of having to commute to work via a transportation mode.

Telecommuting has been a phenomenon for over 20 years and has been witnessing an upward trend. According to data from Statistics Canada, more than 1.7 million paid employees worked from home in 2008 at least once a week, which was an increase of 23 percent from the 1.4 million in 2000. More recently, telecommuting has become even more popular due to the COVID-19 pandemic.

Data from Statistics Canada indicate that nearly one-third of businesses reported 10 percent or more of their workforce was teleworking or working remotely on May 29, 2020. This represents a doubling of the rate since February 1, 2020, when close to 17 percent of businesses reported 10 percent or more of their workforce was teleworking or working remotely.

Making telecommuting an attractive option locally also means that communities may compete with other communities. High quality amenities, walkability, livability, and other attributes of a community will likely be weighed by workers who can choose to live anywhere.

Data on telecommuting is limited in the Cowichan Valley and within Ladysmith specifically. However, based on national trends and data indicating that telecommuting will continue to increase once the COVID-19 pandemic is over, working from home may become more commonplace within the Town. Further, as a more remote community with longer commute distances, it is likely that some Ladysmith residents are already telecommuting, especially during the pandemic.

A report by Statistics Canada found that telework capacity varies substantially across industries. The industries where telecommuting is most feasible include finance and insurance, educational services, and professional, scientific and technical services. These industries are currently underdeveloped according to the Ladysmith Economic Development Strategy.

From 2011 to 2016, finance and insurance, education services, and professional, scientific and technical services all saw negative growth in the Town decreasing by 29%, 36%, and 29%, respectively. However, over time, some of these sectors are anticipated to grow if the recommendations in the Town's Economic Development Strategy are implemented such as the establishment of a post-secondary facility in Ladysmith.

PART 8
CONCLUSION

8.1 SO MUCH MORE TO LEARN

The information in this background research report will be used to provide some context for public engagement undertaken during the OCP process, so that participants have the opportunity to offer more informed input where relevant. It will also assist the project team in creating different planning scenarios to further explore with community members. Some of the information will be included in the OCP itself.

While this report offers a snapshot of existing conditions, so much more will be uncovered through engagement with the Ladysmith and Stz'uminus First Nation communities. A tremendous amount of wisdom resides within communities, and every single person has inherent expertise to offer.

Understanding the lived experiences of different people – including how people see Ladysmith and value its different attributes – is essential. This information will help shape a more comprehensive understanding of where we stand today, so that tomorrow we can move forward together.


stz'uminus


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2049
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