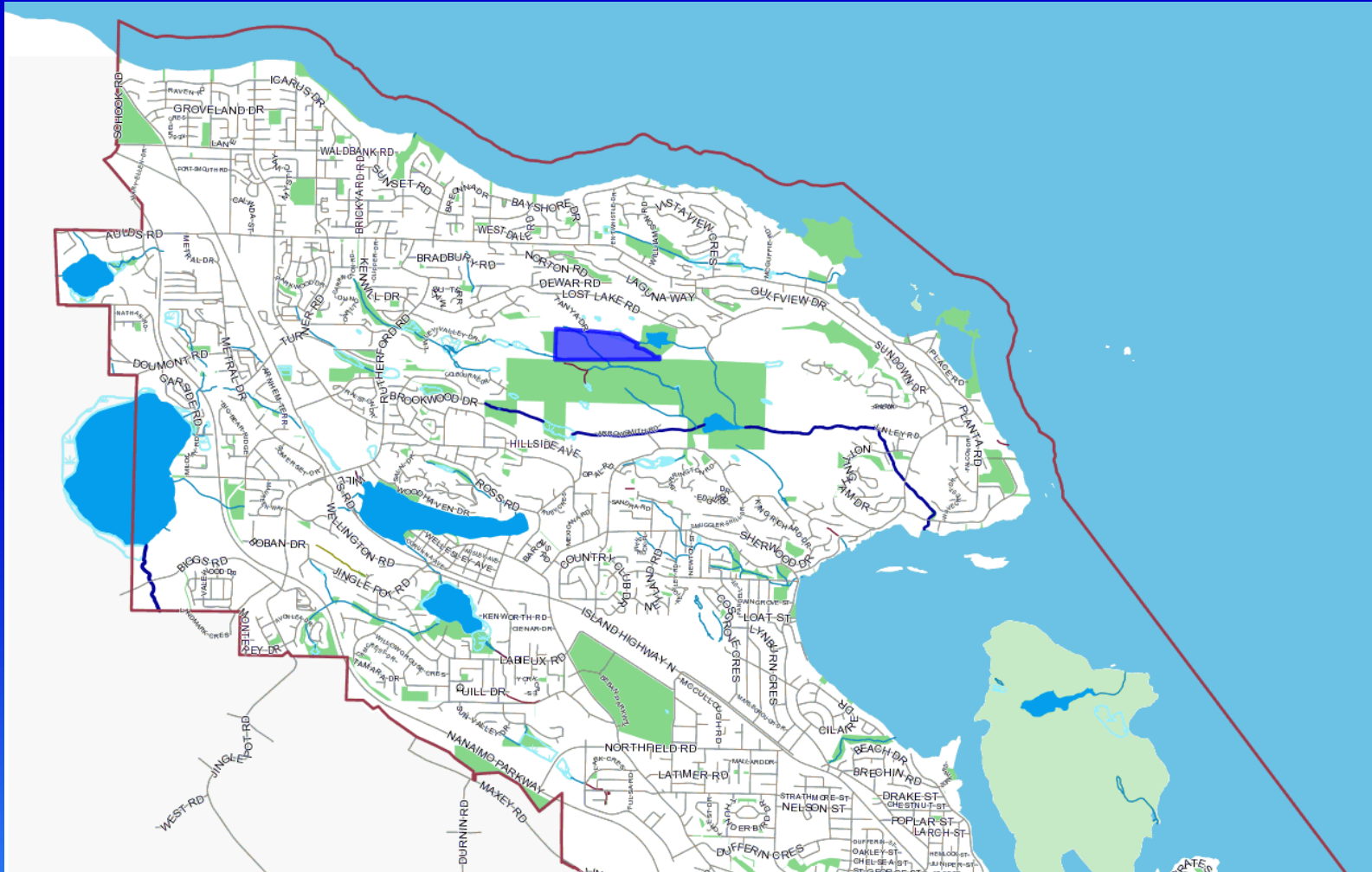
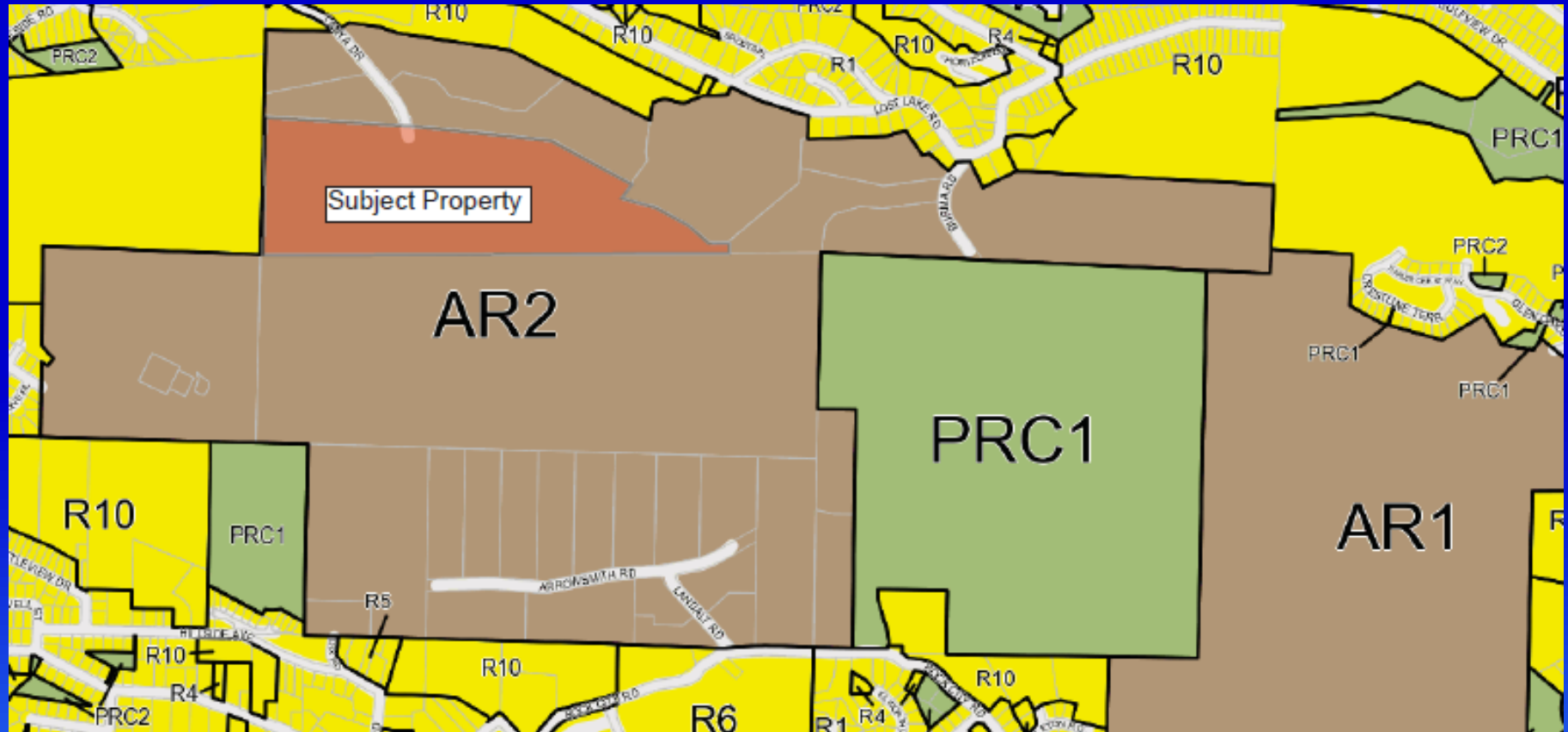


5260 Tanya Drive

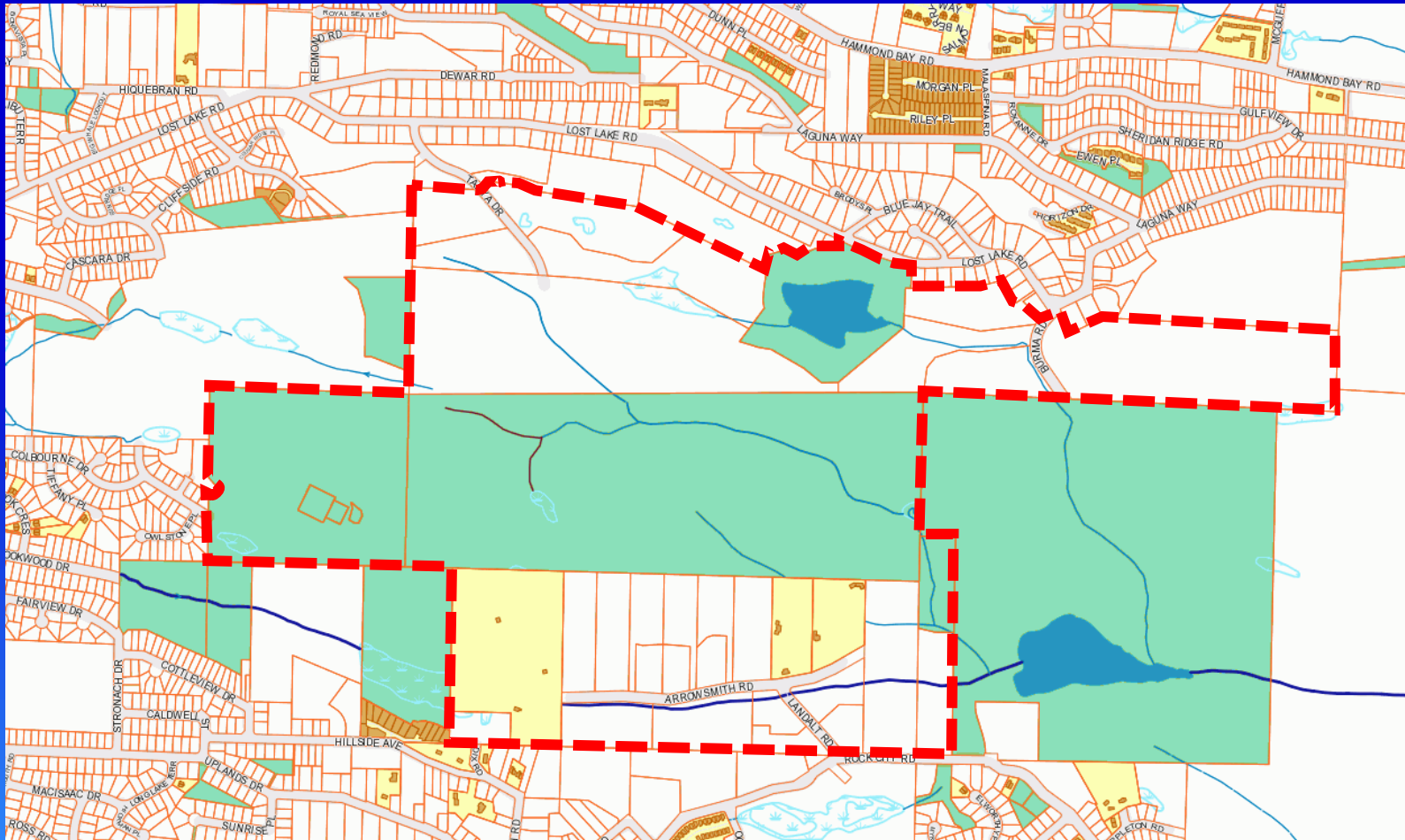
Mr. David Steingard Delegation
Committee of the Whole
2016-JAN-25



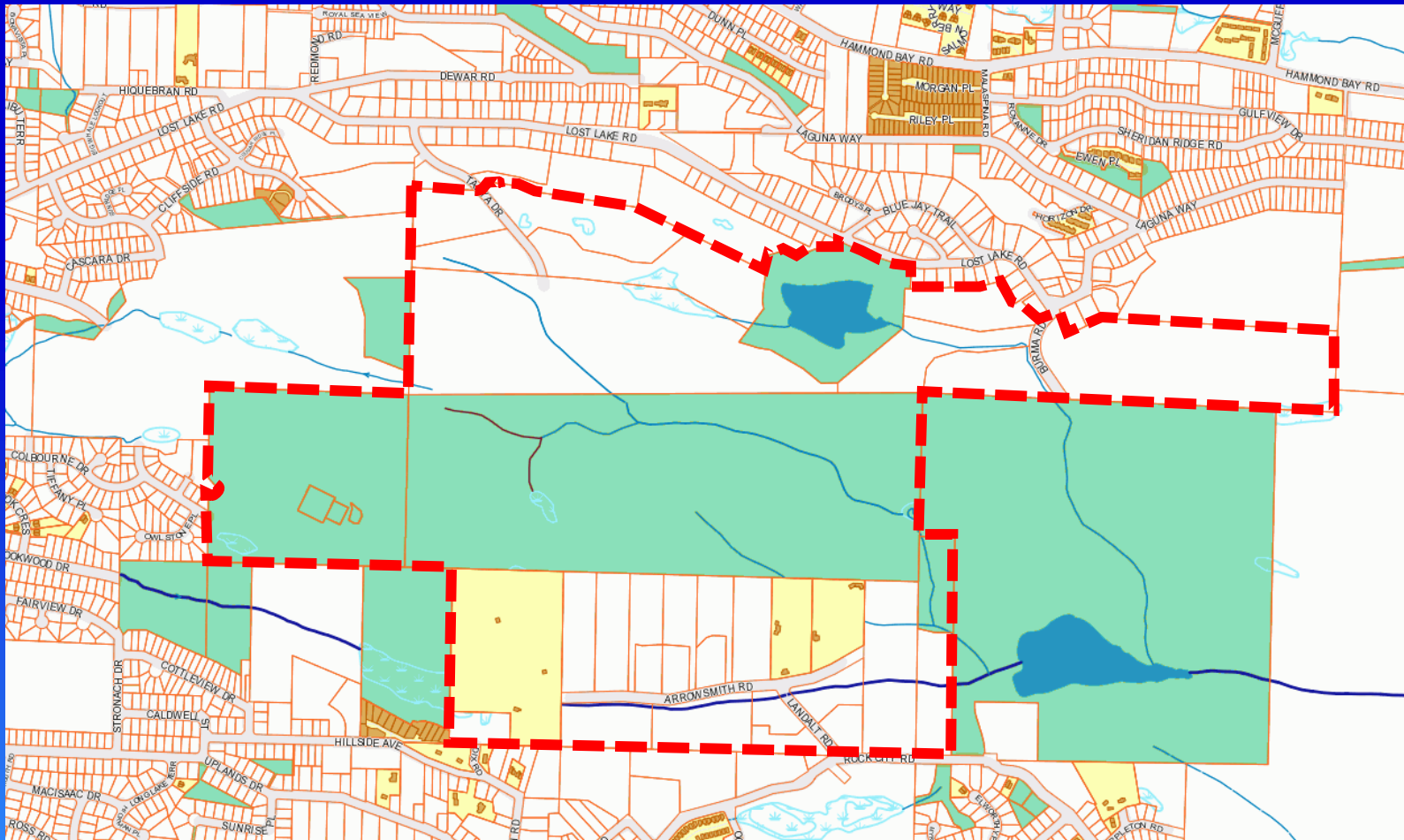
The Urban Reserve (AR2) in 2013



The Linley Valley Park Land purchased in 2014 has changed the Urban Reserve



*Is the Urban Reserve still relevant in 2016,
considering the land acquired as park in
2014?*



Attachment A

City of Nanaimo

Linley Valley Proposed Pedestrian & Greenway Acquisition

Acquired Parks Parks
In Progress Future Parks



0 250 500
Meters

CITY OF NANAIMO
GIS Section

Published September 17th, 2014
gis.support@nanaimo.ca

5701 Vanderneuk Road
32.5 Acres

5783 Linley Valley Drive
12.2 Acres

Lost Lake Park
20 Acres

5600 Vanderneuk Road & 3842 Stronach Drive
\$2,000,000
41.7 Acres & 8.7 Acres

3518 Hillside Ave.
\$3,500,000
117 Acres

Linley Valley
Cottle Lake Park

3650 Cottleview Drive
\$30,000 Subdivision costs
5.8 Acres

3565 Rock City Road
\$130,000
4.3 Acres

3508 Hillside Ave.
Acquired through Subdivision
16.8 Acres

Linley Valley Cottle Lake Park
146.2 Acres

Why are we here?

- Broadview Developments would like to develop 5260 Tanya Drive
- Current AR2 zoning will permit the development of 5ac lots.
- We believe the highest and best use is not AR2 zoning, and would like to move towards a higher density, in keeping with the surrounding R10 zonings.

The AR2 Zoning – Urban Reserve

- The Urban Reserve designation identifies areas within the City for future urban development.
- We believe that there is a shortage of single family building lots in north Nanaimo, and as such, urban reserve areas should be planned for.
- Urban Futures were retained by the City of Nanaimo in 2006 and in 2013 to study future trends in Population, Housing and Employment. See reports available.

Urban Futures projects increased growth and housing demand for Nanaimo

URBAN FUTURES Strategic Research to Manage Change

Housing Occupancy Demand, City of Nanaimo, 2006 to 2031

Table A-2

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Owner-Occupied	Single Detached	20,085	20,576	21,032	21,493	21,944	22,378	22,802	23,215	23,625	24,041	24,447	24,857	25,223
	Attached GO	2,801	2,913	3,028	3,145	3,262	3,380	3,498	3,623	3,746	3,868	3,993	4,117	4,238
	Apartment	1,604	1,665	1,727	1,791	1,855	1,919	1,984	2,054	2,121	2,188	2,257	2,325	2,391
	Total	24,489	25,154	25,788	26,429	27,061	27,676	28,284	28,892	29,492	30,097	30,696	31,298	31,852
Rented	Single Detached	2,458	2,492	2,532	2,568	2,602	2,639	2,673	2,707	2,738	2,763	2,787	2,808	2,834
	Attached GO	3,427	3,492	3,563	3,635	3,698	3,760	3,819	3,881	3,933	3,980	4,021	4,062	4,098
	Apartment	5,707	5,835	5,958	6,089	6,201	6,313	6,420	6,533	6,636	6,731	6,823	6,918	7,004
	Total	11,593	11,819	12,053	12,292	12,501	12,712	12,912	13,121	13,306	13,475	13,631	13,789	13,936
Total	Single Detached	22,543	23,068	23,564	24,060	24,546	25,016	25,475	25,922	26,363	26,804	27,234	27,665	28,057
	Attached GO	6,228	6,406	6,591	6,780	6,960	7,140	7,317	7,504	7,679	7,849	8,014	8,179	8,336
	Apartment	7,311	7,500	7,686	7,880	8,056	8,232	8,404	8,587	8,757	8,920	9,080	9,243	9,395
	Total	36,082	36,973	37,841	38,721	39,562	40,388	41,196	42,013	42,799	43,572	44,327	45,087	45,788
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Owner-Occupied	Single Detached	25,589	25,935	26,262	26,567	26,859	27,136	27,402	27,649	27,897	28,112	28,315	28,501	28,676
	Attached GO	4,482	4,603	4,728	4,854	4,978	5,102	5,227	5,351	5,473	5,592	5,712	5,826	5,936
	Apartment	2,524	2,590	2,656	2,721	2,786	2,850	2,912	2,974	3,034	3,091	3,148	3,202	3,253
	Total	32,595	33,128	33,645	34,142	34,623	35,087	35,542	35,974	36,404	36,795	37,175	37,528	37,864
Rented	Single Detached	2,877	2,894	2,911	2,925	2,935	2,941	2,942	2,939	2,934	2,930	2,924	2,917	2,910
	Attached GO	4,168	4,199	4,229	4,264	4,295	4,326	4,355	4,384	4,410	4,442	4,472	4,504	4,536
	Apartment	7,172	7,247	7,320	7,406	7,482	7,557	7,630	7,702	7,763	7,826	7,887	7,946	8,005
	Total	14,217	14,341	14,460	14,594	14,712	14,824	14,927	15,025	15,106	15,199	15,284	15,367	15,450
Total	Single Detached	28,466	28,829	29,173	29,491	29,794	30,077	30,344	30,588	30,831	31,043	31,239	31,418	31,586
	Attached GO	8,650	8,803	8,957	9,117	9,273	9,428	9,581	9,735	9,883	10,034	10,184	10,329	10,472
	Apartment	9,696	9,837	9,976	10,127	10,268	10,407	10,543	10,676	10,796	10,918	11,035	11,148	11,257
	Total	46,812	47,469	48,105	48,736	49,335	49,912	50,469	50,999	51,511	51,994	52,459	52,895	53,315

What are the benefits of development?

- There are key financial benefits to the City of Nanaimo
- The City will collect DCCs, permit fees and property taxes ongoing.
- The local construction industry will benefit greatly through new construction and
- A large portion of Linley Valley has been preserved through acquisition already. Development will add to this park, and provide key access points at no cost to the taxpayers.

Victoria Times Colonist, January 2016

Healthy capital housing surge expected to continue this year

CARLA WILSON
Times Colonist

Capital region construction watchers are bullish about the coming year, saying they expect strong demand for new housing to continue.

Last year saw 2,008 housing starts in Greater Victoria, marking the first time since 2010 that the number of new single-family homes, condominiums, townhouses and apartments topped 2,000.

Residential construction rebounded last year from 1,315 starts in 2014.

"We want to see that 2,000 mark, because 2,000 really represents a healthy home-building economy," Casey Edge, executive director of the Victoria Residential Building Association, said Monday.

Edge expects continued low interest rates and good employment numbers to bolster housing.

The National Association for Home Builders said in an April report that building 100 rental apartments typically creates a one-year impact of 161 jobs, \$11.7 million in income and \$2.2 million in taxes and revenue for local governments. The report said that construction of 100 single-family homes creates 394 jobs, \$28.7 million in income and \$3.6 million in local government revenue.

Housing starts in the capital region were fuelled by increased demand as real estate sales grew by 24 per cent from 2014.

Multi-family unit starts (usually condominiums) jumped to 1,321 in 2015, up 73 per cent from 764 the previous year, said Canada Mortgage and

Housing Corp. in a report on Monday. Victoria was a condo hot-spot, with 643 units starting last year. Langford was in second place with 243 units.

Single-family house starts climbed to 687, up 25 per cent, from 551 in 2014.

More single-family starts indicate that millennials (born starting in the early 1980s) are buying their first houses and starting to "get traction in our economy," Edge said.

Langford had the highest number of single-family housing starts, at 284, followed by Saanich, which had 80.

Guy Crozier of the ReMax Preferred Homes Team said the West Shore has land available for housing.

Crozier represents the Limona Group, developing Summerstone in Langford. The project has 69 single-family strata homes, priced between \$324,000 and \$354,000. Features include gas heat without ducts resulting in lower heating costs, high ceilings, open plans and strata fees of \$20 per month.

Nearly half the properties are sold, Crozier said. Limona focuses on building affordable housing. It buys and rezones land and develops it.

Although there is a feeling of optimism about the local construction picture, the picture is not as upbeat nationally. A new Bank of Canada business outlook survey said that investment and hiring plans are down to 2009 levels.

Even so, Cameron Muir, chief economist of the B.C. Real Estate Association, said this province's economy will be among the top performers this year, as it was in 2015. He said it is especially evident on the south coast,

which has been largely unscathed by the oil and gas downturn.

"Because our economy is performing relatively well and we are starting to see some pretty solid job growth, consumers are quite confident, so we've seen retail sales grow quite dramatically," said Muir.

Muir predicts the capital region's housing market will see continued momentum in the first half of this year, pulling back somewhat after that. That will be because pent-up demand is being met and interest rates may increase later this year.

Greg Baynton, CEO of the Vancouver Island Construction Association, predicts B.C. will continue to see increases in residential and non-residential construction. The expectation is that total 2015 building permit values on Vancouver Island — and the capital region in particular — will increase by 15 to 20 per cent over the previous year.

At the end of the third quarter of last year, close to 34,000 people were employed in construction on Vancouver Island, with about 15,000 in Greater Victoria, Baynton said.

The most recent capital region building permits from Statistics Canada came in at \$60.6 million for November, up by five per cent year-over-year. Along with residential building, Baynton points to other construction such as the Capital Park mixed use development near the legislature by Concert Properties and Jawl Properties, as well as the Jawl's 1515 Douglas St. office and commercial development, and various Department of National Defence improvements.

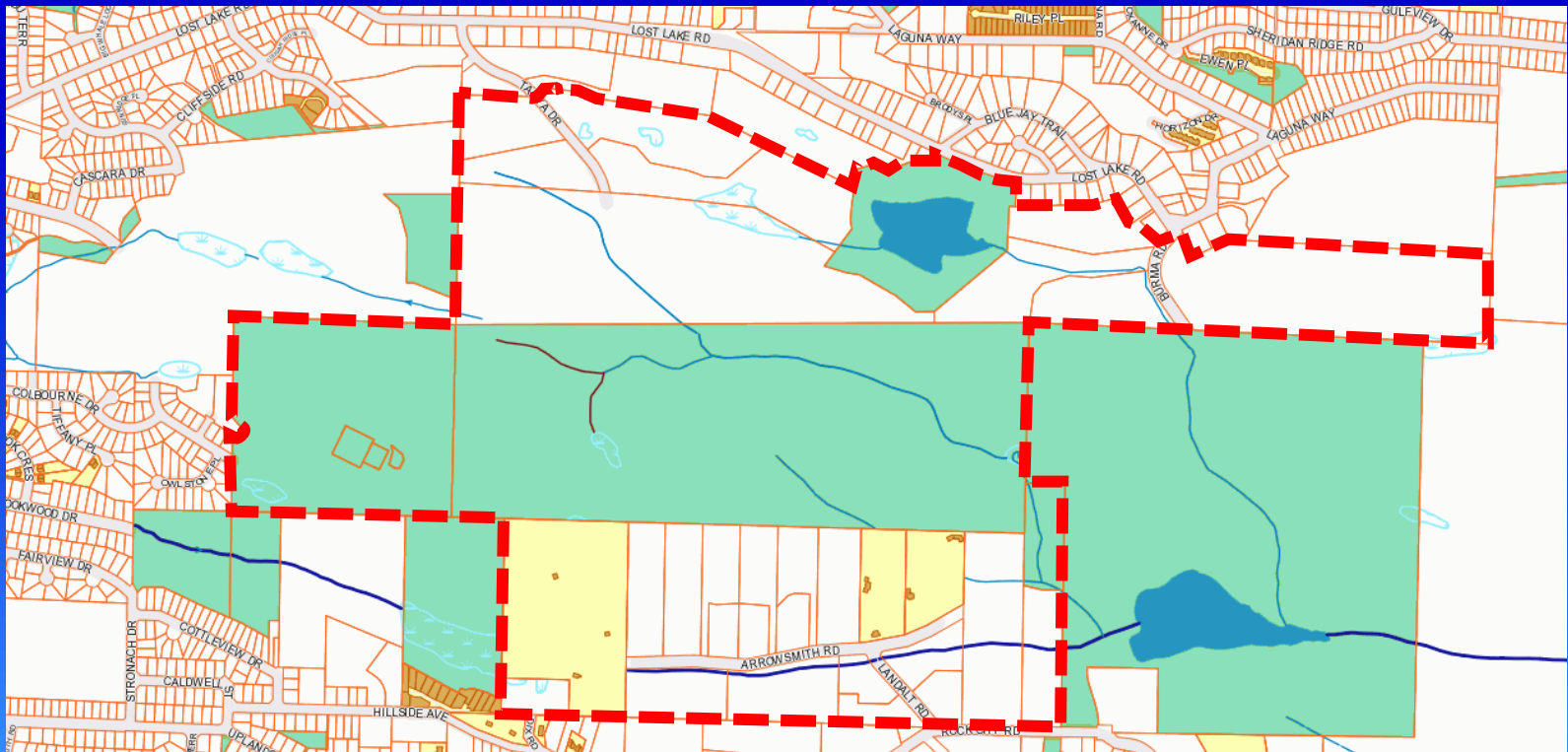
Victoria Times Colonist, January 2016

...to bolster housing.

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We have talked to the neighbours

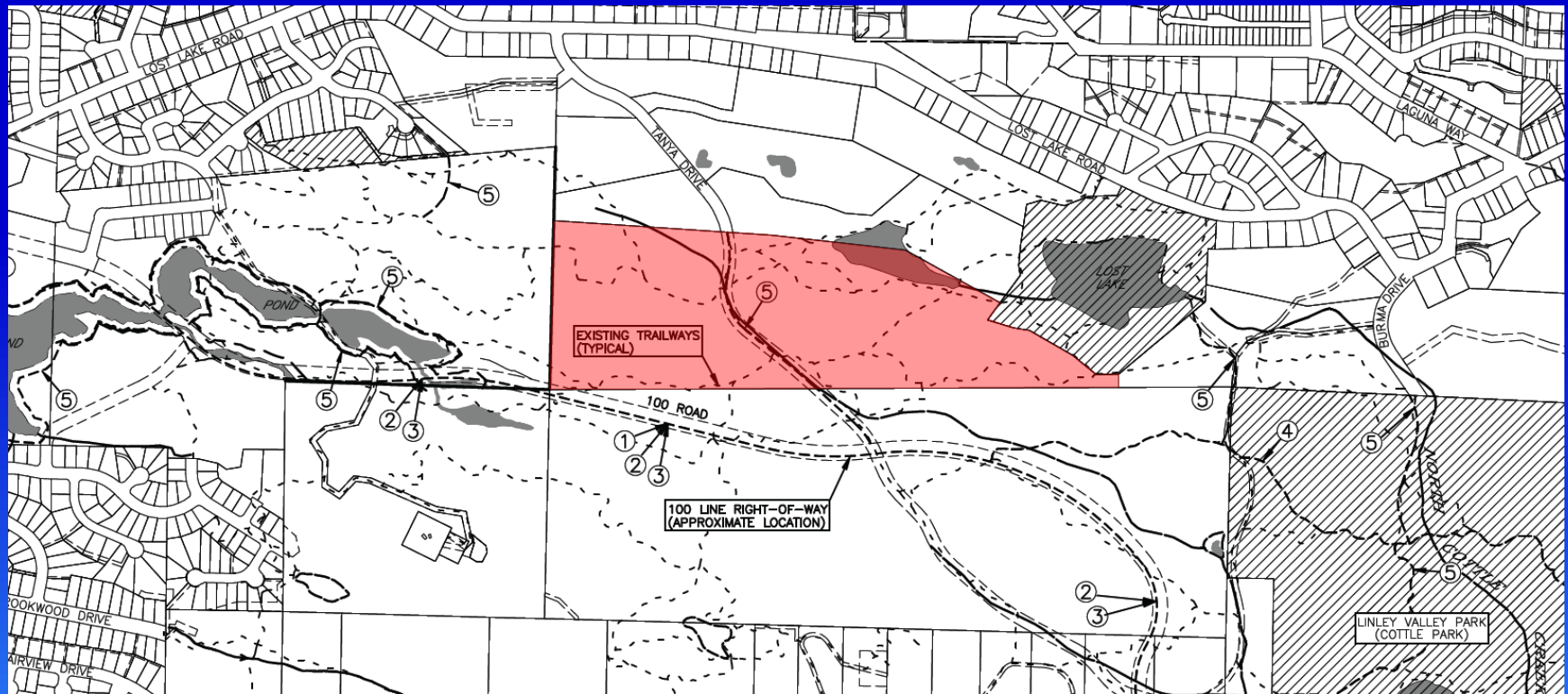
- Our group has talked to all of the other land owners in the Urban Reserve, north of the park.



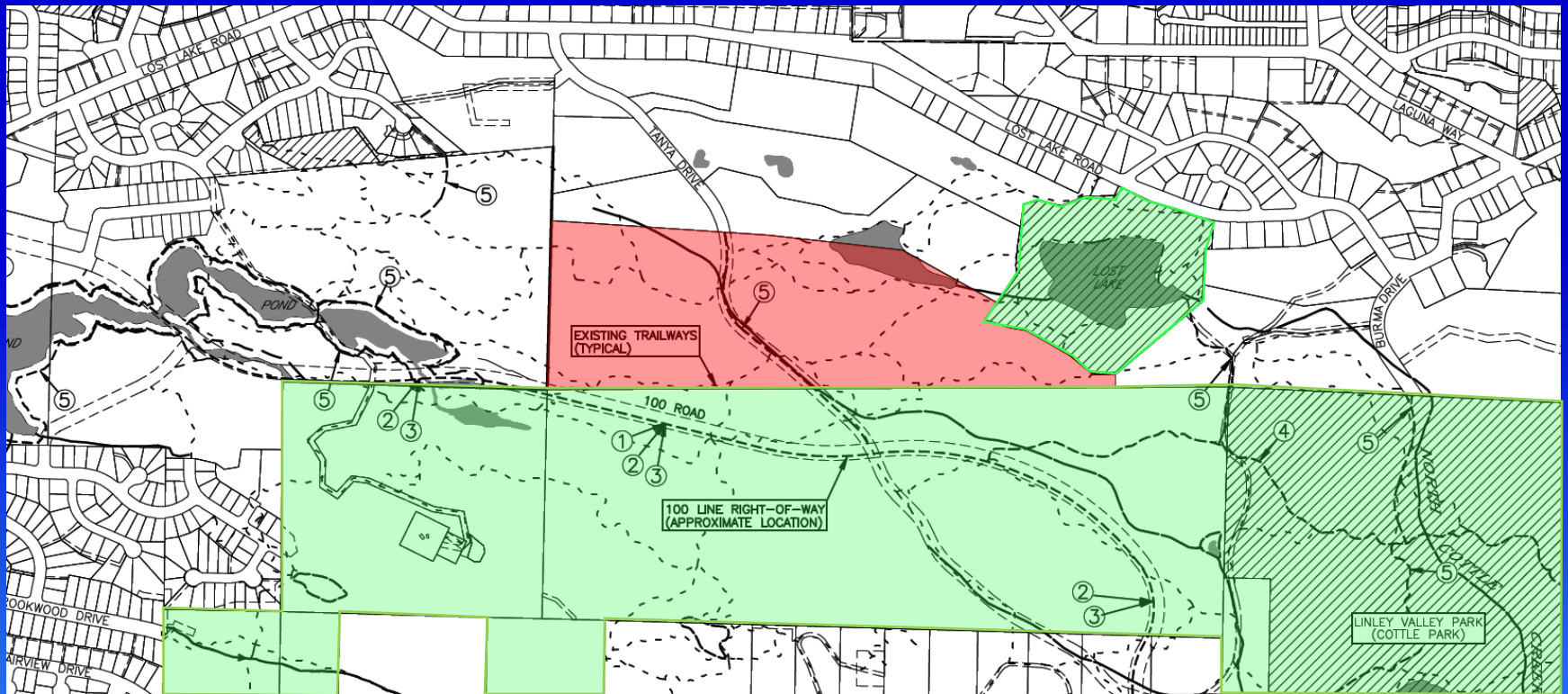
We have talked to the neighbours

- Our group has also talked to and met with the Save Linley Valley West group.
- We have invited them to join the planning process that we are engaged in, and they have declined.
- In 2015, our company commissioned an Environmental Impact Assessment by a registered professional biologist.
- The report identifies areas that are suitable for development, and areas that are suitable for protection.

Many trails exist on private property, and will not be accessible or retained with a rural, 5ac style development.



Planning a residential neighbourhood, will allow for the integration of park land, trails and a connection to the newly acquired park land.



BACKGROUND:

Linley Valley Acquisition Program Update

3518 Hillside Avenue - Transferred

This 117 acre parcel was purchased by the City for \$3,500,000. The property transferred to the City on 2014-JUN-16. This property is adjacent to the existing Linley Valley Cottle Lake Park and provides an important wildlife and pedestrian corridor to parkland in West Linley Valley.

5600 Vanderneuk Road & 3842 Stronach Drive - In Progress

This 41.7 acre and 8.7 acre parcel of land are held by the same owner. The City has a signed Option to Purchase agreement which expires 2014-NOV-30. The purchase price is \$2,000,000 for both properties. The City is currently working with the owner to investigate an alternative deal that may result in a purchase price of less than \$2,000,000. Should this alternative option not be satisfactory to Council, the existing option agreement can be exercised before the expiry date.

5260 Tanya Drive - Unsuccessful

The former owner of this 50 acre parcel of land had a valid Option to Purchase agreement in place when approached by the City in April 2014. The holder of the option had until 2014-JUL-31 to exercise the option agreement. The City placed an option agreement on the property for \$2,000,000 in case the existing option agreement was not exercised. The option agreement was exercised and the property has transferred to a new owner. The City has been unsuccessful in securing this property.

3665 Rock City Road (Rear Portion of 3651 Rock City Road) - Transferred

The City acquired this 4.3 acre property for \$130,000 in cash and provided a tax receipt for The property transferred to the City on 2014-JUL-31. The property is adjacent to the existing Linley Valley Parkland.

3650 Cottleview Drive- Transferred

This 5.8 acre parcel of land transferred to the property to the City for \$1. The City was responsible for the remainder of the project. The City included subdivision, geotechnical development cost charges and legal fees. Total

Total Costs

At the 2014-MAY-26 Council meeting, the 2014-2018 Financial Plan was amended to include up to \$7.9 million for the Linley Valley Parkland Acquisition Program. With the removal of 5260 Tanya Drive from the Program, the total costs are estimated to be \$5,660,000.

Asset Management

Park Improvements

Parks, Recreation & Environment (PRE) Staff estimate that the cost to complete a public park planning process, improve the park and trail systems, and restore the ecological areas within the properties will cost approximately \$720,000.

Development will be able to assist in planning process and will provide cash to fund parks projects.

**Asset Management
Park Improvements**

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How does the City benefit financially?

- Development Cost Charges or DCCs are paid when building lots and multi family units are created.
- Single family DCCs are \$16,060.35 / lot
- Multi family DCCs are \$96.10/m²

How does the City benefit financially?

- Conservative projections show that the financial benefit in the first year developed could be as follows:
- DCCs \$2,165,526
- Single Family Permits \$225,000
- Property Taxes \$647,400
- Total first year = \$3,037,926

The financial impact for 10 years using 2% annual increase

➤ Year 1 \$3,037,926	Year 6 \$714,781
➤ Year 2 \$660,348	Year 7 \$729,076
➤ Year 3 \$673,554	Year 8 \$743,658
➤ Year 4 \$687,026	Year 9 \$758,531
➤ Year 5 \$700,766	Year 10 \$773,702

Total = \$9,479,368

The Choice is Yours

- We believe our company can create a world class development in the heart of north Nanaimo.
- A large portion of Linley Valley has been preserved through acquisition.
- We can dedicate more park and add trails to complement what is already there at no cost to the taxpayers.
- The City will see financial benefits from the development of this land, at no cost to the taxpayers.

Tuesday, Jan 12, 2016

BUSINESS

Editor: Darron Kloster > Telephone: 250-380-5235 > Email: dkloster@timescolonist.com timescolonist.com/business

Healthy capital housing surge expected to continue this year

CARLA WILSON
Times Colonist

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Population and Housing Projections for the City of Nanaimo, 2006 to 2031

Prepared for:

The City of Nanaimo, as part of the
2006 Nanaimo Official Community Plan Review

November 2006

2013 - 7 YRS.

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Overview and Methodology

As part of a review and update of its Official Community Plan (OCP), the City of Nanaimo commissioned Urban Futures Incorporated to provide updates to population and housing projections conducted in 2002 as part of the City's review of the growth centre concept.¹ While the methodological approach underlying the current forecasts is the same as that used in the previous series of projections, a number of comments regarding the approach are useful.²

The approach used to forecast population and housing for the City involved two major steps. The first focused on the demographics of the City of Nanaimo and its surrounding Regional District, with a review of the components of population change that have shaped the region over the past two decades. Age specific trends in natality, mortality and migration were then used, along with the aging of the existing population, to forecast change over the coming decades. The trend projection of the City's population from 2006 to 2031 establishes the demographic basis for future housing occupancy demand, which represents the second step of the approach.

With respect to forecasting the housing implications of future population growth and change, the focus is on the lifecycle pattern of housing occupancy and how this occupancy pattern changes with age. Combining the lifecycle pattern of maintaining different forms of dwellings over the lifecycle with the age specific projection of population provides a projection of future occupancy demand by structure type and tenure for the City of Nanaimo.

This report has been divided into four major sections. Section I outlines projected population change at the Region- and City-wide levels between 2006 and 2031. Section II presents the implications of demographic change in the City for future housing occupancy demand. Section III provides a number of strategic considerations with respect to the City's growing and changing population. A Technical Appendix has been included in Section IV which tabulates annual projections of population (by five-year age groups) and housing occupancy demand by structure and tenure type.

Reference material used in this assignment was derived from federal, provincial, and municipal sources, and from Urban Futures information system. Outputs are from Urban Futures Population and Housing Projection Models. The data and information used in the conduct of this assignment and presented in this report have been compiled from sources believed to be reliable: their accuracy, however, cannot be guaranteed. For information regarding the contents of this report, please contact Ryan Berlin at Urban Futures.

¹ *Population & Housing Projections for the Regional District & City of Nanaimo, 2001 to 2031*, Urban Futures Incorporated.

² For a detailed discussion of the methodology underlying the population and housing occupancy demand forecasts models, please refer to the original report.

I. Demographic Growth and Change

Before focusing on the City of Nanaimo, it is important to consider population growth and change projected for the Nanaimo Regional District, the functional region within which the City is situated. As the City becomes further integrated into the region, it provides a broader context of future demographic change for the City.

A. The Regional Context

According to the most recent Census, there were 132,414 people living in the Nanaimo Regional District in 2001 (Figure 1). This was the result of annual growth in the Regional District's population that averaged four percent during the boom of the late 1980's and early 1990's, and by under one percent between 1996 and 2001 when the provincial economy was growing rather slowly.

It is estimated that since 2001 the Regional District's population has grown to 148,393 residents, or at an average annual rate just above two percent.³ Aging, births, deaths and migration are expected see the region's population grow, albeit at an annual rate that is expected to decline steadily to under one percent by the end of the projection period. By 2016 the total regional population is projected to grow to 187,627 residents, and further to 227,672 by 2031.

While the Regional District is expected to add 79,279 new residents over this 25-year period (53 percent total growth), the annual rate of growth is expected to be considerably lower than during the late-1980's and early-1990's (when it peaked at 6.3 percent in 1991), but higher than the late-1990's when growth fell to 0.4 percent in 1999. On average the Regional District's population is projected to grow by 1.7 per year over the 2006 to 2031 period.

Positive net migration to communities within the Regional District will drive

Figure 1

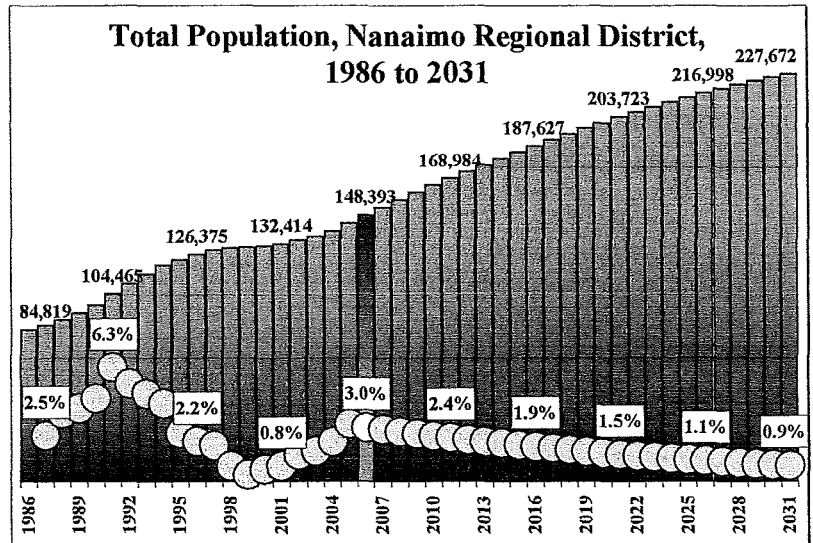
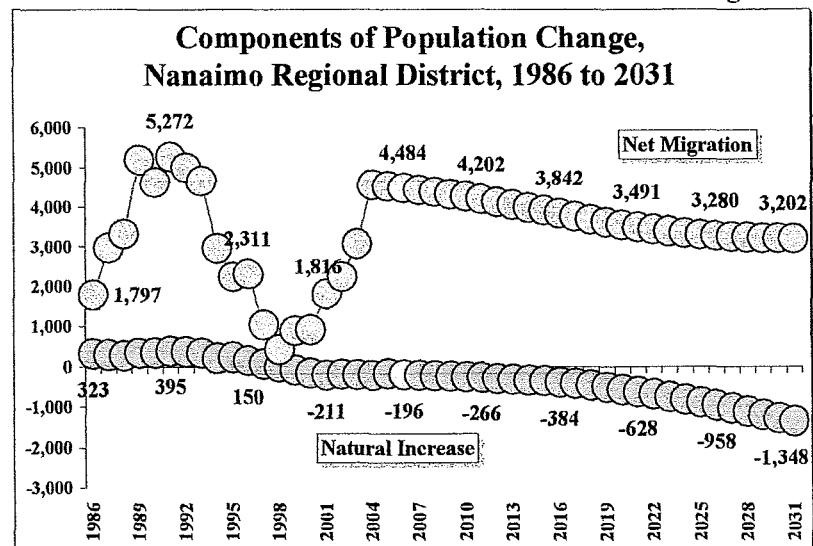


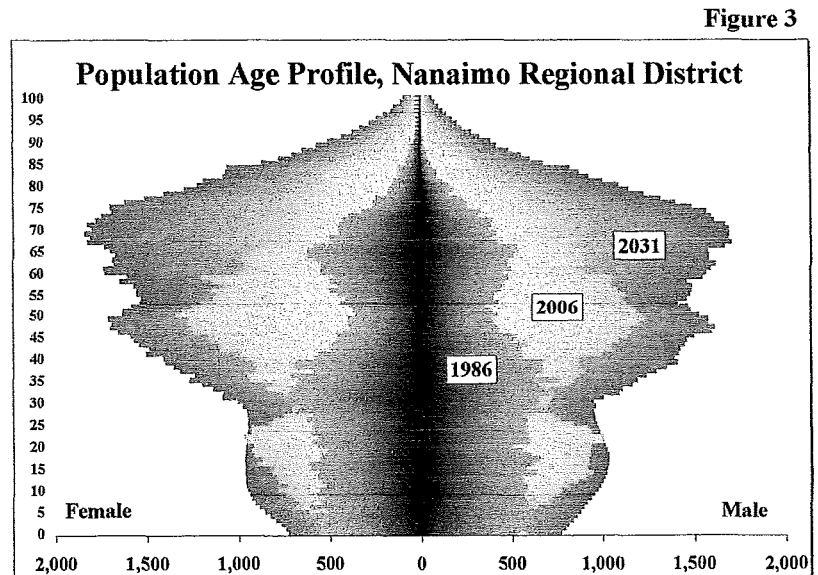
Figure 2



³ These estimates are based on Statistics Canada's most recent release of Annual Demographic Statistics for Regional Districts in BC. Preliminary population counts from the 2006 Census will not be available until the early 2007.

future growth, with this dimension of population change adding 4,484 people in 2006, just over 3,800 by 2016 and 3,200 annually by the end of the projection period (Figure 2).⁴ While this represents a significant increase over levels seen in the late 1990's when net migration fell to 429 people (1998), is still lower than net migration in the early 1990's, when it peaked at 5,272 people (1991).

Unlike migration, which has typically added residents to the region on a net basis, natural increase (the difference between the annual number of births and deaths) has actually taken people away from the regional population since 1999 as the annual number of deaths has exceeded the number of births. This pattern is expected to continue over the projection period, becoming more dramatic as declining fertility rates and fewer births combine with the aging of the post-World War II baby boomer generation into higher mortality stages of the lifecycle and more deaths. While natural increase subtracted 196 people from the region's population in 2006, it is projected to subtract 384 people by 2016 and 1,348 people by 2031. The implication of this trend is that net migration will be the driver to future population growth in the Regional District in the coming years,



While the regional population may be projected to grow at a slower rate than has been seen historically, it will change much more dramatically over the coming decades than it has historically. Figure 3 shows how the boom generation is the most prominent cohort in the region's age profile, with the peak of the boom falling between the ages of 30 and 35 in the 1986, between ages 50 and 55 today, and between ages 70 and 75 by 2031. The aging of the boom generation has, and will continue to, influence the composition of the regional population.

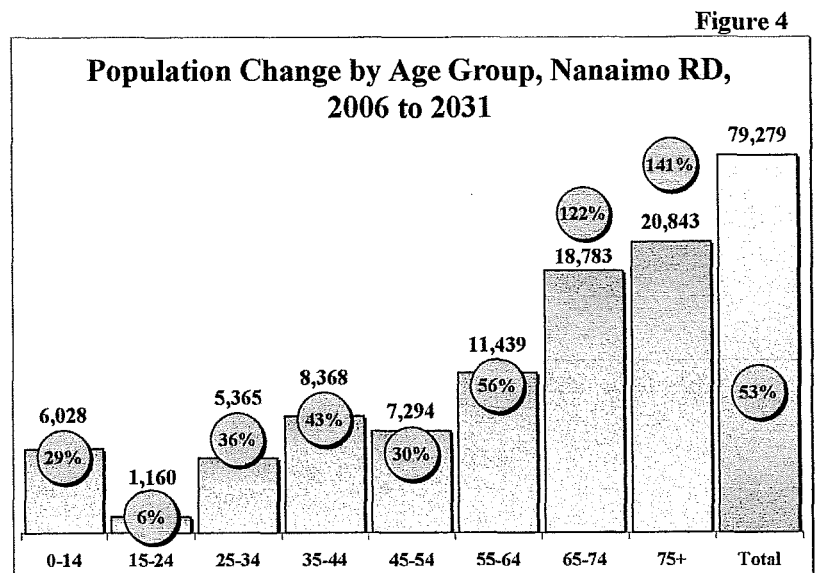


Figure 4 provides some additional detail of how the population is expected to change over the coming 25 years. Of the 79,279-person increase, almost two-thirds would be the result of increases in the 55 plus age groups, as they add 51,065 people. Within this group the 75 plus cohort would experience the greatest increase (both relative and absolute), adding 20,843 people

⁴ Note that net migration includes people moving to (and from) locations elsewhere in the province of British Columbia, other provinces and territories in Canada (domestic migration), and locations outside of Canada (international migration).

(141 percent increase) between 2006 and 2031. Similarly, the 65 to 74 age group is expected to add 18,783 people (122 percent growth), and the 55 to 64 age groups is projected to increase by 11,439 people (56 percent growth). Over the coming 25 years, the share of population 65 and older in the region is expected to grow from 20 percent to over 31 percent.

Contrasting this rapid growth would be the youngest age groups, with the 15 to 24 adding only 1,160 people by 2031, a six percent increase. The 25 to 34 age group would add 5,365 people (a 36 percent increase), followed by the under 15 age group, which would add 6,028 people (29 percent growth). The 35 to 44 age group would increase in size by 8,368 people (43 percent), and the 45 to 54 age group would add 7,294 people (30 percent). All of these age groups would grow more slowly than the 53 percent expected for the population as a whole.

B. Future Population Growth and Change in the City of Nanaimo

With the City of Nanaimo being home to just under 60 percent of the regional population (on average having roughly 58 percent of the regional population over the past 20 years), population changes in the City generally mirror those at the regional level. Between 1986 and 2006 the City's population grew by 33,758 people (66 percent), with most of this increase coming between 1986 and 1998 when 24,223 people were added (Figure 5).⁵ Between 1998 and 2001 population growth fell to historically low levels, again a reflection of the economic climate that prevailed at the time. Since 2001 however, growth has picked up, increasing by 2.3 percent annually between 2005 and 2006. By 2006 the City's population was estimated to have grown to 84,609 residents.

Accounting for aging, births, deaths and migration would see the City grow to 101,396 residents by 2016 and further to 118,022 by 2031. This 33,413-person increase represents a 39 percent increase over 2006, with annual population growth in the range of 1.5 percent by 2016 and just under one percent by the end of the projection period.

As at the regional level, increases in the City's population over the next 25 years

Figure 5

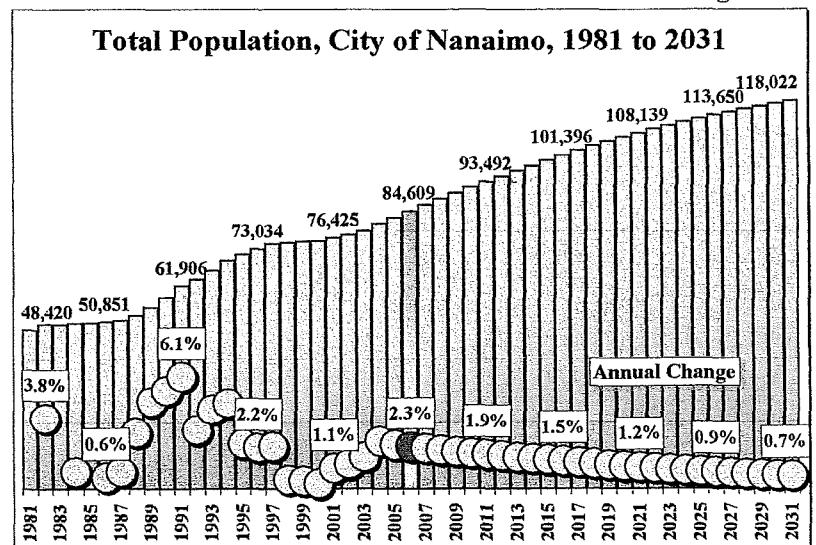
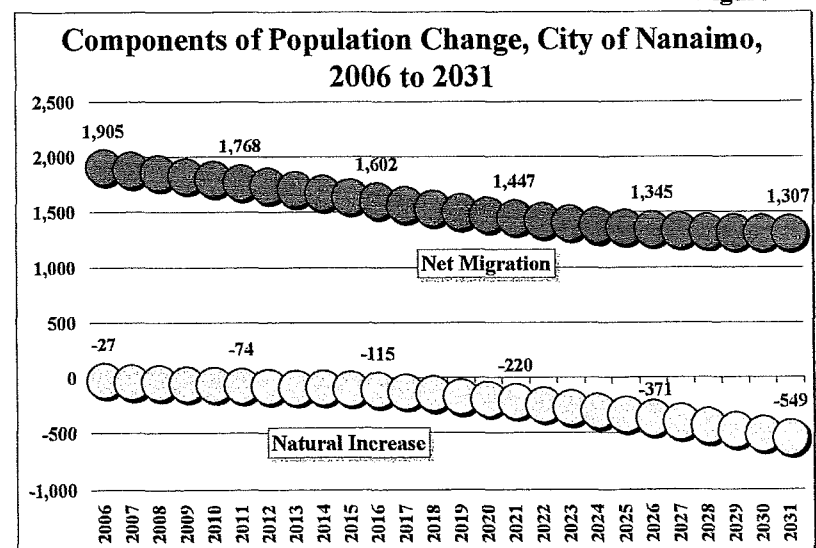


Figure 6



⁵ Historical estimates of the City of Nanaimo's population have been made by considering both BC Statistics' municipal estimates and the 1996 and 2001 Censuses.

will largely be driven by net in-migration (Figure 6). While natural increase will continue to subtract people from the City's population between 2006 and 2031: with an estimated 27 more deaths than births in 2006, there would be 115 more deaths than births in 2016, and 549 more by 2031. While annual net migration is expected to decline slightly over the coming 25 years, it is expected to more than compensate for natural increase. Net migration is projected to go from Figure 7 1,905 people in 2006, to 1,447 in 2021, and to 1,307 in 2031.

As in the region as a whole, the aging of the City's existing residents will be a dominant theme. As Figure 7 shows, the top of the profile is projected to grow significantly as the boom – currently between the ages of 41 and 60 – age into the retirement stages of the lifecycle. This growth is contrasted by the younger age groups which are not expected to increase significantly over the next 25 years.

Between 2006 and 2031 the 65 to 74 and 75 plus age groups are projected to experience the greatest absolute and relative increases by 2031, adding 10,147 people (a 143 percent increase over 2006) and 9,436 people (a 129 percent increase) respectively (Figure 8). The next-fastest growing age group would be the 55 to 64 cohort, which would see a 3,952-person, 37 percent increase over the next 25 years.

The aging of the City's population would result in smaller increase in its 25 to 34 year old population (3,200 people, a 33 percent increase), with all other under-55 age groups adding fewer people than the 25 to 34 group (from 2,480 additional people in the 35 to 44 group to 735 additional people in the 15 to 24 group).

The impacts of these projected demographic changes, both in terms of the total number of people living in the City and the future composition of residents, will have implications for numerous dimensions of daily life in the City. These range from the unadorned such as longer crosswalk lights or larger print in the local newspaper, to more substantive issues such as changing health care needs, consumer spending patterns, and changing housing demand. This latter issue of housing is explored in further detail in the following section.

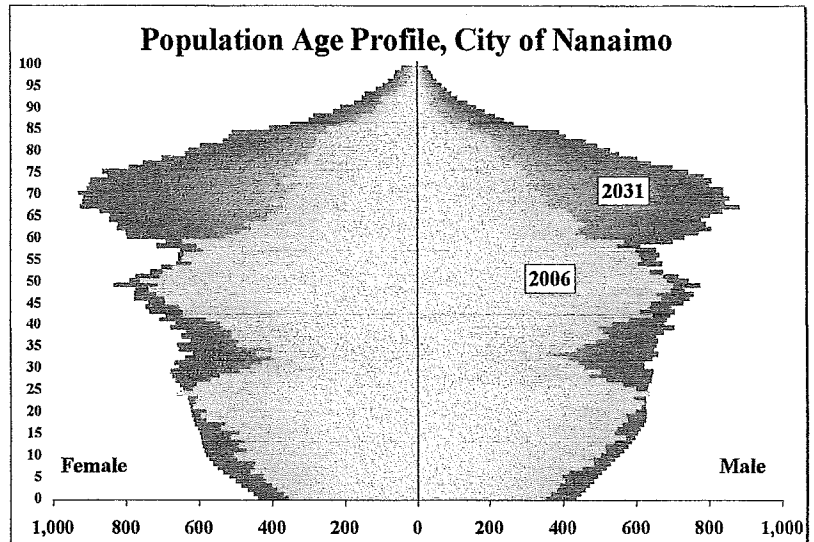
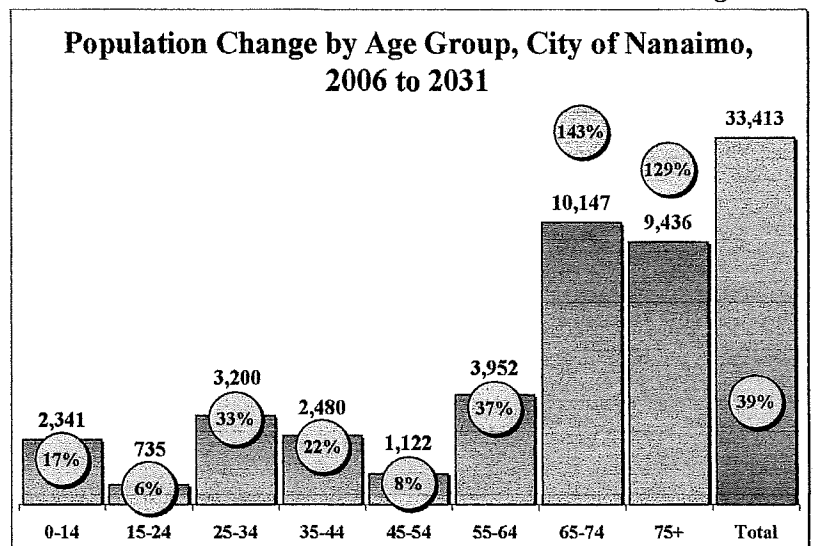


Figure 8



II. Private Housing Demand in the City of Nanaimo

A. The Lifecycle Pattern of Household Maintainer Rates

In order to project the implications of population change on housing within the City, the focus is on the lifecycle pattern of housing occupancy and how this occupancy pattern changes with age. The lifecycle of housing occupancy is generated through the percentage of people in each age group who define themselves as being primarily responsible for the finances of the household. This is commonly referred to the age specific household maintainer rate (Figure 9).⁶ Combining the lifecycle pattern of maintaining different forms of dwellings over the lifecycle with population change in the City provides a projection of future housing occupancy demand by structure type and tenure for Nanaimo.

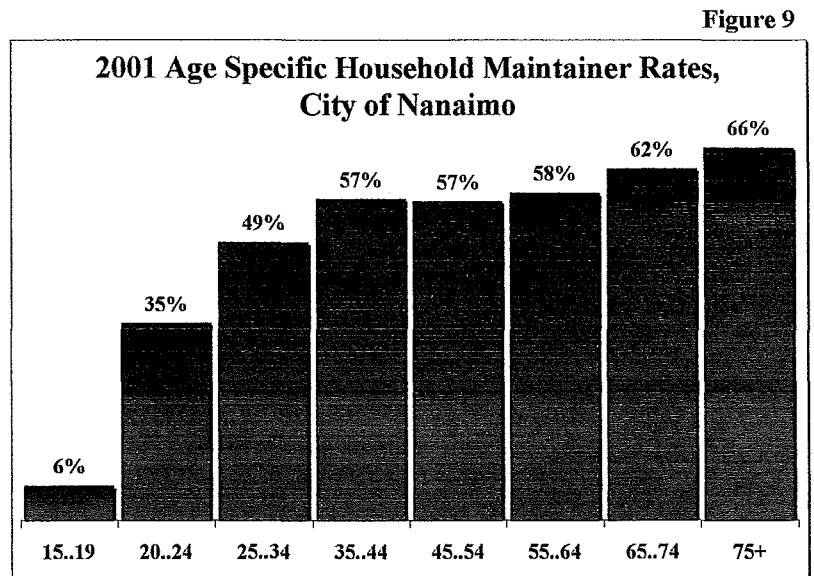
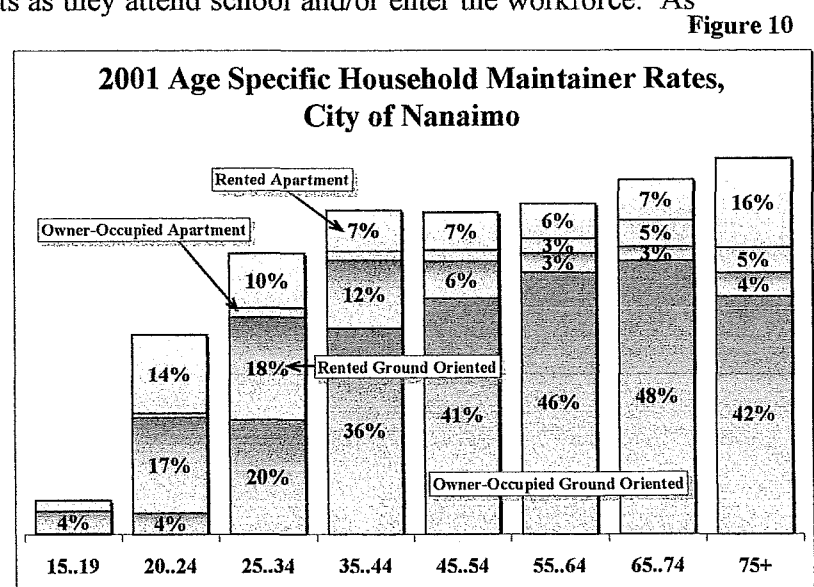


Figure 9 shows how the propensity for people to maintain a home generally increases with age. From a low of six percent of 15 to 19 year olds maintaining their own households (as most live with their parents), rates increased sharply for subsequent age groups as people move from the parental home to maintain homes of their own. The pattern then plateaus during the family rearing stage of the lifecycle before increasing slightly in the 65 to 74 and 75 plus age groups.

Generally-speaking, the majority of younger residents do not typically maintain their own household, instead living with their parents as they attend school and/or enter the workforce. As people begin to move out of their parents' residence and form families of their own, maintainer rates tend to increase, while people in the family-maintenance stage of the lifecycle show a stable propensity to maintain households. Higher mortality rates in the older age groups result in more people in this stage of the lifecycle living alone, thereby pushing household maintainer rates up.

When looked at on a tenure (owner-occupied versus rented) and structure type (ground oriented versus apartment)



⁶ The most recent data describing household maintainers are from the 2001 Census.

basis, dominance of ground oriented owner-occupied dwellings throughout the lifecycle is clearly seen (Figure 10). Propensities to maintain households living in this type of dwelling increased over the lifecycle, peaking at 48 percent in the 65 to 74 age group. Conversely the propensity to maintain rental apartments is strongest in the younger and older age groups – as this type of accommodation provides entry into the housing market and downsizing later in life.

B. Change in Household Maintainer Rates between 1991 and 2001

While Figures 9 and 10 provide a snapshot of the lifecycle of maintaining a home in the City, it is also interesting to consider how this lifecycle pattern has changed over the past decade. Figure 11 shows the change in maintainer rates for the province of BC between 1991 and 2001. Declines in the propensity to maintain a household characterized the younger population, with rates for 15 to 19 years olds falling by 8.5 percent (from 3.0 to 2.7 percent) and rates for the 20 to 24 year olds falling by 13.7 percent (from 24 to 21 percent).

Marginal declines were also seen in the 25 to 34 and 35 to 44 age groups, again reflecting the stability throughout the family rearing stage of the lifecycle. The changes for younger age groups were also reflected in an increasing propensity to remain in their parents' homes as they pursued more education or labour force opportunities.

In all of the 45 plus age groups, household maintainer rates increased over the course of the decade, albeit not substantially: each of 45 to 54, 55 to 64, and 65 to 74 age groups saw rates increase by less than one percent, while the 75 plus population saw household maintainer rates increase by 3.2 percent (from 61 to 63 percent). For these age groups, increasing maintainer rates resulted largely from the fact that an increasing proportion of older individuals were remaining in their private dwellings for longer – outside of institutional accommodation such as nursing homes and care facilities. As these demographic and behavioural changes are expected to continue for both the younger and older populations over the coming years, future changes in the pattern of maintaining a household can be expected to move in the direction of changes that have been seen historically.

C. Projected Household Occupancy Demand

Based on the City of Nanaimo's pattern of maintaining a household, trends in maintainer rates expected for the coming years and projections of demographic change for the City, annual projections of housing occupancy demand by structure and tenure type can be made. Overall, housing demand in the City would grow from 36,482 units in 2006 (up from 32,355 in 2001) to 48,105 in 2021 and further to 53,315 by 2031.

Figure 11

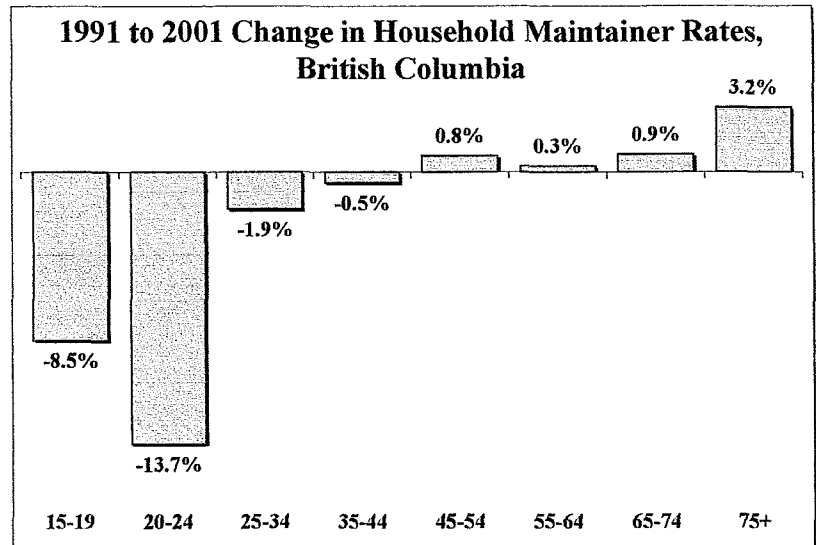
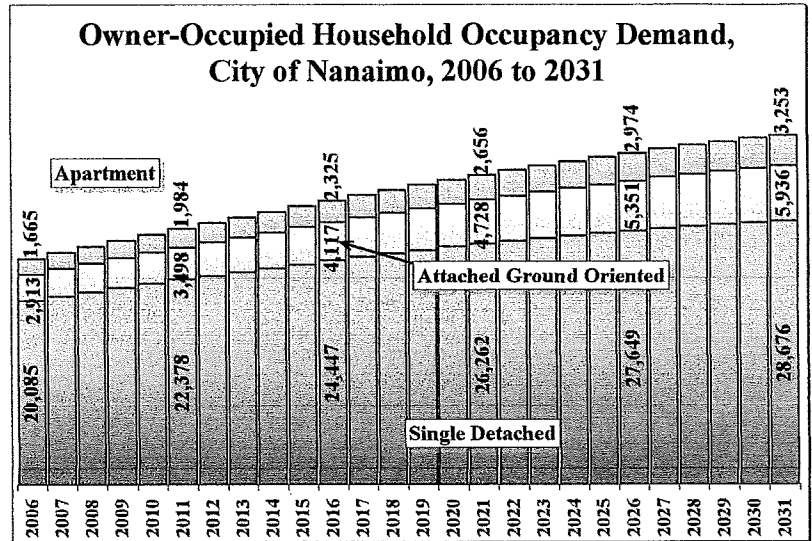


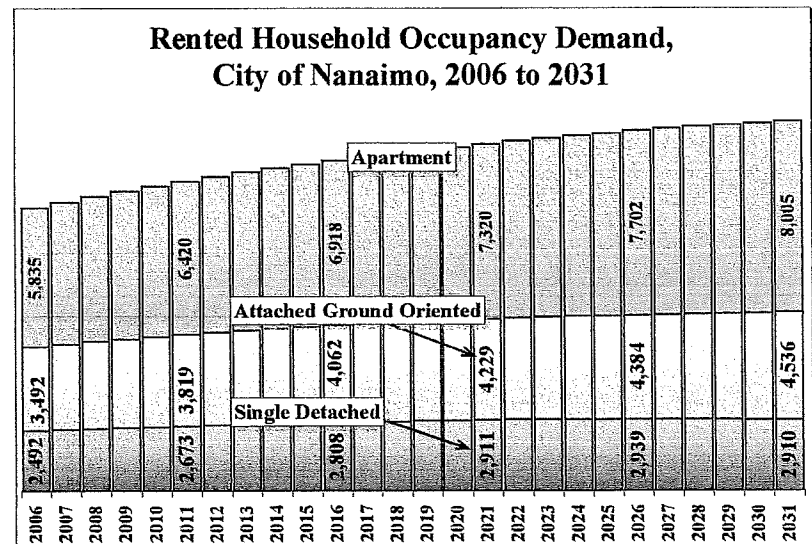
Figure 12

On the ownership side of the housing market, Figure 12 shows that demand for single detached dwellings is expected to constitute the bulk of demand over the projection period, increasing by 54 percent from 20,085 units in 2006 (81 percent of all owner-occupied units) to 26,262 in 2021 (78 percent) to 28,676 in 2031 (76 percent). Demand for owner-occupied attached ground oriented dwellings, such as townhouses and duplexes, would grow from 2,913 units in 2006 (a 12 percent share of all owner-occupied dwellings) to 4,728 in 2021 (14 percent) and to 5,936 by 2031 (16 percent). Owner-occupied apartments would continue to constitute the smallest proportion of the ownership market, increasing from 1,665 dwellings in 2006 (a seven percent share) to 2,656 in 2021 (eight percent) and 3,253 by 2031 (nine percent). Demand for this type of dwelling would increase by 95 percent by 2031.



The pattern of change for rented accommodation differs considerably from the ownership side of the market (Figures 13 and 14). Within the City of Nanaimo's rental housing market, demand for rented apartments would be the greatest, projected to grow by 37 percent over the projection period, from 5,835 units in 2006 (49 percent of all rented dwellings) to 7,320 in 2021 (51 percent) and 8,005 by 2031 (52 percent). Demand for rented attached ground oriented dwellings is projected to increase by 30 percent over the coming two and a half decades, increasing from 3,492 in 2006 (30 percent of all rental demand) to 4,229 in 2021 (29 percent) to 4,536 in 2031 (29 percent).

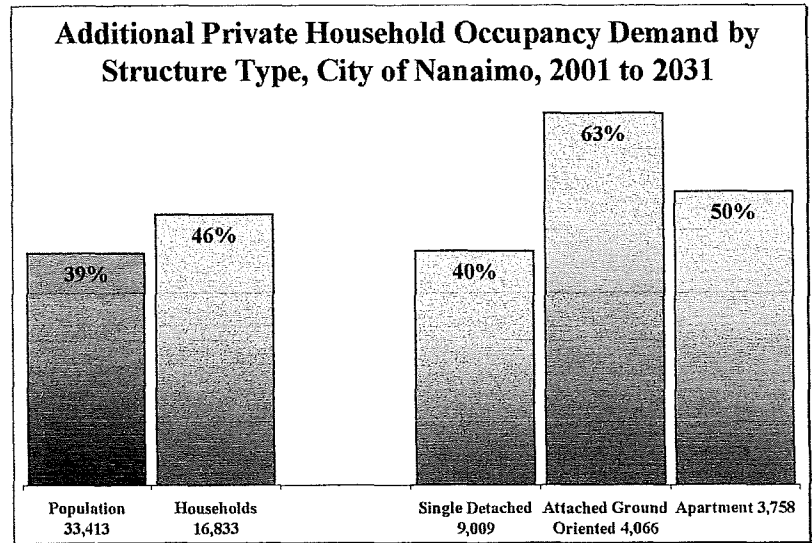
Figure 13



The demand for rented single detached dwellings would increase the least among all rented dwellings, with the number of units demanded growing by 17 percent by 2031. This would see occupancy demand grow from 2,492 dwellings in 2006 (21 percent of the rental stock) to 2,911 in 2021 (20 percent), 2,939 in 2026, and back to its 2021-level by 2031 (2,910 units, 19 percent of the stock).

Figure 14

Considering projected changes in housing occupancy demand along with demographic change highlights the impacts of not just a *growing* population, but of an *aging* population. For example, between 2006 and 2031 the City of Nanaimo is expected to add 33,413 residents, a 39 percent increase; over the same period, housing occupancy demand is expected to increase by 16,833 units – a 46 percent increase (Figure 14). The greater relative growth in housing would be driven by significant growth in the older segments of the City's population and the high maintainer rates that characterize this segment of the population.



Of these additional dwelling units, 54 percent would be single detached, as demand for households in this type of dwelling would increase by 9,009 units (a 40 percent). Demand for attached ground oriented dwellings would, on a relative basis, be the greatest among the three structure types, increasing by 63 percent (4,066) over the period, accounting for 24 percent of the total increase in demand for private accommodation. Net additional demand for apartments is projected to be 3,758 units between 2006 and 2031, 50 percent growth that would account for 22 percent of total net additional demand for housing.

III. Strategic Considerations

As noted previously, the aging of the City's (and the Region's) population will be a dominant theme over the coming decades. While the City of Nanaimo's population is expected to grow by 39 percent between 2006 and 2031, its 65 plus population is expected to grow by 136 percent and its under-25 population is expected to grow by only 12 percent.

In terms of total population, Figure 15 shows the significance of new residents/in-migrants (and their children) in contributing to the City's resident population. Starting from a base population of 84,609 in 2006, the stock of existing residents (and their kids) would continuously decline each year in the absence of migration, as the baby boomers age into the higher-mortality stages of the lifecycle and there are fewer kids born to replace them. By 2031 the population of existing residents and their kids would be 79,715 – 4,894 fewer than in 2006 (a six percent decline). Over this same timeframe the population of new residents (and their kids) would grow from 9,108 in 2011 to 38,308 by 2031, a 29,200-person (221 percent) increase over the two decade period. By 2031 94 percent of the City's 2006 residents would still be hanging around (or their kids), with new residents (and their children) accounting for a third of the City's population by 2031.

Figure 15

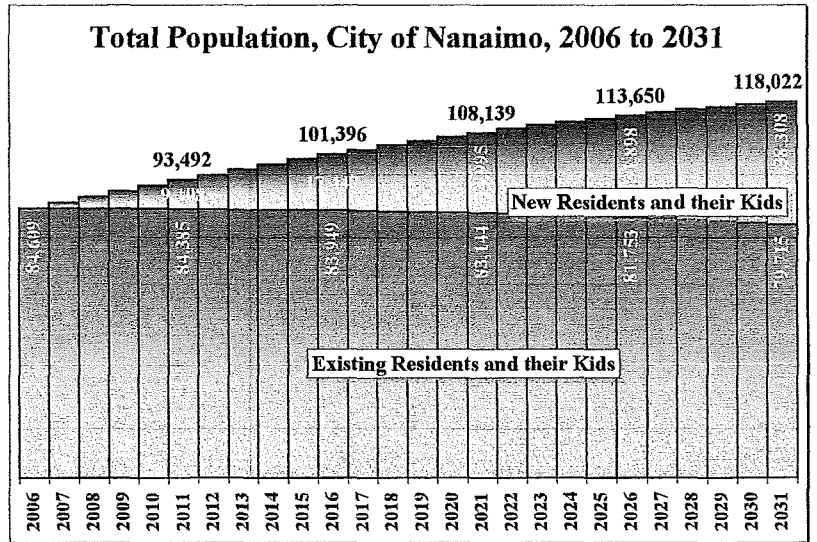
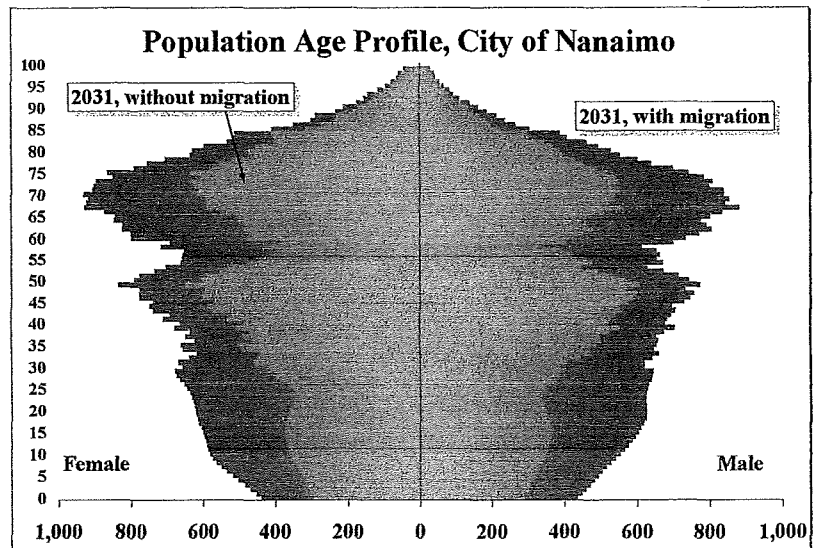


Figure 16 shows the contribution that migration will have on the City's age profile over the coming decades. While migration will certainly add to the total number of residents in the City, the greatest differences would be seen in the younger age cohorts as the most typical migrant (both international and domestic) is generally between the ages of 20 and 30.

Figure 16



Given the younger age profile of migrants, migration to the City will play an important tool in ensuring a reasonable balance in the number of working-aged individuals (the main contributors to the funding of social services) and the number of seniors (the primary users of social services) over the coming years.

IV. Technical Appendix

Population by Age, City of Nanaimo, 2006 to 2031

Table A-1

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
0-4	3,824	3,864	3,908	3,946	3,993	4,046	4,111	4,184	4,262	4,341	4,418	4,489	4,552
5-9	4,514	4,526	4,559	4,602	4,642	4,706	4,734	4,765	4,788	4,820	4,858	4,906	4,961
10-14	5,103	5,132	5,182	5,218	5,253	5,219	5,221	5,242	5,273	5,300	5,351	5,365	5,381
15-19	5,529	5,617	5,635	5,700	5,726	5,823	5,840	5,877	5,899	5,920	5,869	5,855	5,860
20-24	6,131	6,150	6,259	6,268	6,283	6,289	6,352	6,344	6,382	6,381	6,450	6,439	6,446
25-29	5,482	5,902	6,226	6,504	6,690	6,778	6,771	6,852	6,832	6,818	6,794	6,826	6,788
30-34	4,236	4,292	4,416	4,645	4,949	5,309	5,727	6,049	6,326	6,511	6,598	6,591	6,672
35-39	5,029	4,889	4,694	4,464	4,313	4,198	4,253	4,378	4,606	4,908	5,267	5,683	6,004
40-44	6,073	5,932	5,815	5,680	5,610	5,578	5,435	5,236	5,003	4,846	4,725	4,773	4,889
45-49	6,913	6,982	6,979	7,054	6,990	6,856	6,709	6,584	6,441	6,363	6,322	6,170	5,965
50-54	6,689	7,022	7,302	7,494	7,642	7,703	7,762	7,751	7,816	7,744	7,603	7,448	7,316
55-59	6,061	6,183	6,447	6,717	6,974	7,289	7,611	7,881	8,065	8,205	8,260	8,313	8,296
60-64	4,603	5,065	5,381	5,766	6,183	6,548	6,665	6,921	7,183	7,433	7,737	8,048	8,308
65-69	3,828	4,018	4,268	4,507	4,731	4,967	5,410	5,713	6,080	6,476	6,821	6,931	7,173
70-74	3,261	3,363	3,425	3,556	3,714	3,911	4,089	4,322	4,542	4,750	4,969	5,383	5,665
75-79	2,889	2,902	3,004	2,982	2,975	3,012	3,104	3,163	3,279	3,416	3,590	3,746	3,952
80-84	2,333	2,364	2,334	2,358	2,398	2,428	2,440	2,525	2,507	2,502	2,534	2,609	2,662
85-89	1,366	1,458	1,567	1,658	1,683	1,692	1,712	1,692	1,713	1,746	1,767	1,774	1,837
90+	746	801	870	931	1,039	1,139	1,209	1,294	1,355	1,416	1,462	1,499	1,521
Total	84,609	86,461	88,272	90,051	91,789	93,492	95,155	96,775	98,352	99,897	101,396	102,848	104,247

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
0-4	4,604	4,646	4,677	4,697	4,708	4,712	4,708	4,700	4,690	4,677	4,665	4,652	4,641
5-9	5,021	5,082	5,142	5,197	5,245	5,284	5,313	5,333	5,344	5,347	5,344	5,334	5,322
10-14	5,389	5,406	5,430	5,464	5,507	5,555	5,607	5,657	5,703	5,744	5,777	5,802	5,818
15-19	5,874	5,885	5,921	5,920	5,923	5,918	5,923	5,936	5,961	5,996	6,038	6,084	6,130
20-24	6,440	6,433	6,358	6,320	6,302	6,296	6,288	6,305	6,288	6,277	6,262	6,258	6,264
25-29	6,795	6,765	6,807	6,770	6,755	6,728	6,701	6,608	6,554	6,522	6,504	6,487	6,497
30-34	6,652	6,638	6,613	6,644	6,605	6,612	6,582	6,622	6,585	6,570	6,542	6,515	6,421
35-39	6,280	6,465	6,553	6,547	6,628	6,609	6,596	6,572	6,603	6,565	6,573	6,543	6,584
40-44	5,108	5,400	5,750	6,156	6,469	6,736	6,914	6,996	6,986	7,063	7,040	7,024	6,998
45-49	5,724	5,560	5,432	5,472	5,580	5,791	6,076	6,417	6,816	7,121	7,383	7,557	7,636
50-54	7,167	7,081	7,034	6,877	6,668	6,425	6,258	6,127	6,163	6,267	6,473	6,752	7,088
55-59	8,355	8,279	8,134	7,977	7,842	7,692	7,605	7,556	7,398	7,189	6,948	6,782	6,652
60-64	8,483	8,617	8,667	8,716	8,698	8,752	8,675	8,531	8,377	8,244	8,098	8,013	7,964
65-69	7,422	7,659	7,948	8,242	8,489	8,653	8,779	8,825	8,871	8,853	8,903	8,829	8,690
70-74	6,002	6,367	6,685	6,786	7,010	7,242	7,462	7,733	8,005	8,234	8,386	8,502	8,546
75-79	4,145	4,328	4,524	4,895	5,146	5,443	5,764	6,042	6,132	6,331	6,539	6,736	6,980
80-84	2,757	2,871	3,015	3,145	3,318	3,478	3,633	3,799	4,113	4,326	4,574	4,841	5,071
85-89	1,822	1,820	1,845	1,902	1,946	2,014	2,096	2,204	2,299	2,428	2,542	2,655	2,779
90+	1,558	1,589	1,606	1,615	1,650	1,650	1,662	1,686	1,723	1,775	1,811	1,863	1,940
Total	105,598	106,891	108,139	109,342	110,489	111,590	112,643	113,650	114,612	115,529	116,400	117,229	118,022

URBAN FUTURES
Strategic Research to Manage Change

Housing Occupancy Demand, City of Nanaimo, 2006 to 2031

Table A-2

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Owner-Occupied	Single Detached	20,085	20,576	21,032	21,493	21,944	22,378	22,802	23,215	23,625	24,041	24,447	24,857	25,223
	Attached GO	2,801	2,913	3,028	3,145	3,262	3,380	3,498	3,623	3,746	3,868	3,993	4,117	4,238
	Apartment	1,604	1,665	1,727	1,791	1,855	1,919	1,984	2,054	2,121	2,188	2,257	2,325	2,391
	Total	24,489	25,154	25,788	26,429	27,061	27,676	28,284	28,892	29,492	30,097	30,696	31,298	31,852
Rented	Single Detached	2,458	2,492	2,532	2,568	2,602	2,639	2,673	2,707	2,738	2,763	2,787	2,808	2,834
	Attached GO	3,427	3,492	3,563	3,635	3,698	3,760	3,819	3,881	3,933	3,980	4,021	4,062	4,098
	Apartment	5,707	5,835	5,958	6,089	6,201	6,313	6,420	6,533	6,636	6,731	6,823	6,918	7,004
	Total	11,593	11,819	12,053	12,292	12,501	12,712	12,912	13,121	13,306	13,475	13,631	13,789	13,936
Total	Single Detached	22,543	23,068	23,564	24,060	24,546	25,016	25,475	25,922	26,363	26,804	27,234	27,665	28,057
	Attached GO	6,228	6,406	6,591	6,780	6,960	7,140	7,317	7,504	7,679	7,849	8,014	8,179	8,336
	Apartment	7,311	7,500	7,686	7,880	8,056	8,232	8,404	8,587	8,757	8,920	9,080	9,243	9,395
	Total	36,082	36,973	37,841	38,721	39,562	40,388	41,196	42,013	42,799	43,572	44,327	45,087	45,788
		2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Owner-Occupied	Single Detached	25,589	25,935	26,262	26,567	26,859	27,136	27,402	27,649	27,897	28,112	28,315	28,501	28,676
	Attached GO	4,482	4,603	4,728	4,854	4,978	5,102	5,227	5,351	5,473	5,592	5,712	5,826	5,936
	Apartment	2,524	2,590	2,656	2,721	2,786	2,850	2,912	2,974	3,034	3,091	3,148	3,202	3,253
	Total	32,595	33,128	33,645	34,142	34,623	35,087	35,542	35,974	36,404	36,795	37,175	37,528	37,864
Rented	Single Detached	2,877	2,894	2,911	2,925	2,935	2,941	2,942	2,939	2,934	2,930	2,924	2,917	2,910
	Attached GO	4,168	4,199	4,229	4,264	4,295	4,326	4,355	4,384	4,410	4,442	4,472	4,504	4,536
	Apartment	7,172	7,247	7,320	7,406	7,482	7,557	7,630	7,702	7,763	7,826	7,887	7,946	8,005
	Total	14,217	14,341	14,460	14,594	14,712	14,824	14,927	15,025	15,106	15,199	15,284	15,367	15,450
Total	Single Detached	28,466	28,829	29,173	29,491	29,794	30,077	30,344	30,588	30,831	31,043	31,239	31,418	31,586
	Attached GO	8,650	8,803	8,957	9,117	9,273	9,428	9,581	9,735	9,883	10,034	10,184	10,329	10,472
	Apartment	9,696	9,837	9,976	10,127	10,268	10,407	10,543	10,676	10,796	10,918	11,035	11,148	11,257
	Total	46,812	47,469	48,105	48,736	49,335	49,912	50,469	50,999	51,511	51,994	52,459	52,895	53,315

413
125
70
608

34
62
113
209

447
187
183
817

Future Trends in Population, Housing, and Employment

*in the Regional District of Nanaimo
& for the City of Nanaimo's
Transportation Planning Study Area*

Prepared for



by

URBAN FUTURES
Strategic Research to Manage Change

February 2013

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I Introduction

1 Background

Map 1



Urban Futures has been retained by the City of Nanaimo to produce estimates and projections of population, housing, and employment for 229 transit analysis zones (TAZs) in the Regional District of Nanaimo (RDN), focusing on a study area centred on the City of Nanaimo (Map 1). The time horizon for the projections is 30 years, beginning in 2011 and running to 2041. The TAZ-level estimates (for 2011) and projections (to 2041) represent inputs to projecting transportation demand within the project study area, which will, in turn, inform the City's transportation master plan. As background to the projections presented in this report, Urban Futures produced a document that reported on historical trends in population, housing, and employment for a number of geographies, including British Columbia, the Regional District of Nanaimo, five administrative areas in the RDN, and the project study area (which is represented as an aggregation of the underlying TAZs). For a more detailed definition of the geographies considered in this report, please refer to the historical report produced by Urban Futures titled *"Historical Review of Trends in Population, Housing, and Employment in the Regional District of Nanaimo and for the City's Administrative Areas & Transportation Planning Study Area"*.

2 Projection Methodology & Overview of Approach

Map 2



The approach used in the development of small-area (TAZ-level) demographic, employment and housing projections builds on a foundation of empirically-observed, long-run historical trends in the factors underlying demographic and economic change in the RDN. These historical trends, however, have been considered against other evidence that may indicate divergence from long-run historical paths. The result of the modification of long-run trends in light of more recent evidence is that the projections represent a trend-based approach rather than simply a trend approach. While the final output is a series of

TAZ-level projections of housing, population, and employment, the output is a product of a series of linked models that begin at the provincial (BC) level, move through the regional (RDN) and sub-regional contexts (the City of Nanaimo, District of Lantzville, and Rest of RDN geography; Map 2) to generate the TAZ-level projections.

The **region-wide analysis** considers a range of factors—both internal and external to the RDN—that will ultimately shape the future of the Region and its communities. The Region’s external context considers the broader BC-wide demographic context, as trends and policies in this larger geographic and jurisdictional sphere will have a direct impact on the RDN’s demography and economy in the coming years, primarily through future levels of immigration to Canada and interprovincial migration to BC. Therefore, the modelling process began with consideration being given to the long-term population prospects for BC and how these prospects may affect future levels of international, inter-provincial, and intra-provincial migration to the RDN.

Having established the external context and how it might impact migration to the Region, the analysis then considered how trends in age specific fertility and mortality rates would impact future levels of natural increase (births and deaths) in the RDN. Combining future levels of births and deaths with migration and the aging of the Region’s current population then resulted in a projection of both the size and composition of the RDN’s population annually between 2011 and 2041.

The projection of regional employment by industry sector was, in its first instance, independent of the demographic projection. The initial iteration of the regional employment projections was a product of the historical relationship between provincial economic activity (as measured by BC’s real Gross Domestic Product, or GDP) and changes in sectoral employment in the RDN. Changes in this historical relationship, along with a long-range assessment of provincial GDP, allowed for an assessment of future employment within the Region to be made.

At this point an important junction in the modeling process was reached, one where the employment projections were compared against the potential supply of workers in the RDN as per the projection of regional population and labour force (the latter of which was developed through consideration of long- and short-term trends in age and sex specific labour force participation rates). These two dimensions—the demand for, and supply of, workers—were then resolved with each other through the unemployment rate mechanism. In undertaking this resolution, it was necessary to ensure that the projected rate of unemployment would fall within a reasonable range (comparable to historical levels) to ensure that projections of the RDN’s demography were consistent with its economic outlook over the course of the projection period.

Once the regional demographic and economic projections were resolved with one another, the demographic projection was then used as the basis for developing a regional projection of housing occupancy demand (for ground oriented and apartment dwellings). The behavioural link between demography and housing is represented through the lifecycle pattern of household maintainer rates, which are calculated as the percentage of people in each age group that are primarily responsible for their household’s finances. In looking forward, a trend-based projection of changes in household maintainer rates was developed that acknowledges the unique occupancy pattern of housing in the RDN. Relating these trends in age and structure type specific maintainer rates to the projected size and composition of the RDN’s future population resulted in a trend-based projection of the number of additional dwelling units by structure type required to accommodate the Region’s future population each year between 2011 and 2041. Combined, these three series of projections (population, employment, and housing) established the regional dimensions of change and the future context for the sub-regional and TAZ-level projections.

The **sub-regional projections** for the City of Nanaimo, the District of Lantzville, and the Rest of RDN geography (refer to Map 2 on page 1) were undertaken within a community lifecycle modeling framework. As the future distribution of housing within the Region will in large part determine the distribution of future population, the community lifecycle modeling framework relies on a land use approach to move from the projections of additional housing occupancy demand at the regional level to projections of

population in its sub-regions. In allocating future dwelling units to sub-regions in the RDN, consideration was given to both historical patterns of growth and development amongst sub-regions in the RDN as well as expected patterns of growth as reflected by the collection of plans and development policies throughout the Region. To account for the demographic characteristics of new residents moving into new units within the RDN's sub-regions, a custom data tabulation of household mobility status by age, household size, dwelling period of construction, and structure type of dwelling for the Regional District of Nanaimo was purchased from Statistics Canada and used to describe the composition of households moving into new dwellings (refer to Section VII for graphical representations of the mover profiles used in the modelling).

Along with the allocation of future housing and the demographic characteristics of future occupants, modeling the sub-regional populations also required consideration of the natural demographic changes occurring within each sub-area's existing population, including aging, natality, mortality and outward mobility. These demographic changes, combined with additions due to net growth in housing, determined the projected population described by age and sex for each of the sub-regions annually between 2011 and 2041.

Some of the factors considered in the allocation of regional employment to sub-regions included historical trends in sub-regional sectoral employment; the magnitude of employment in each sector that would serve residents of the local communities (population-serving employment); major employment-related projects planned within each sub-region over the medium-term; and long-range economic development plans and policies.

In sum, this framework was used to produce projections of housing by structure type, population by age and sex, and employment by type for each of the RDN's three sub-regions (Nanaimo, Lantzville, and the Rest of RDN area). Note that for modelling purposes Nanoose First Nation has been considered as part of the District of Lantzville, while Snuneymuxw First Nation has been considered as part of the City of Nanaimo in order to ensure statistical robustness in the projections.

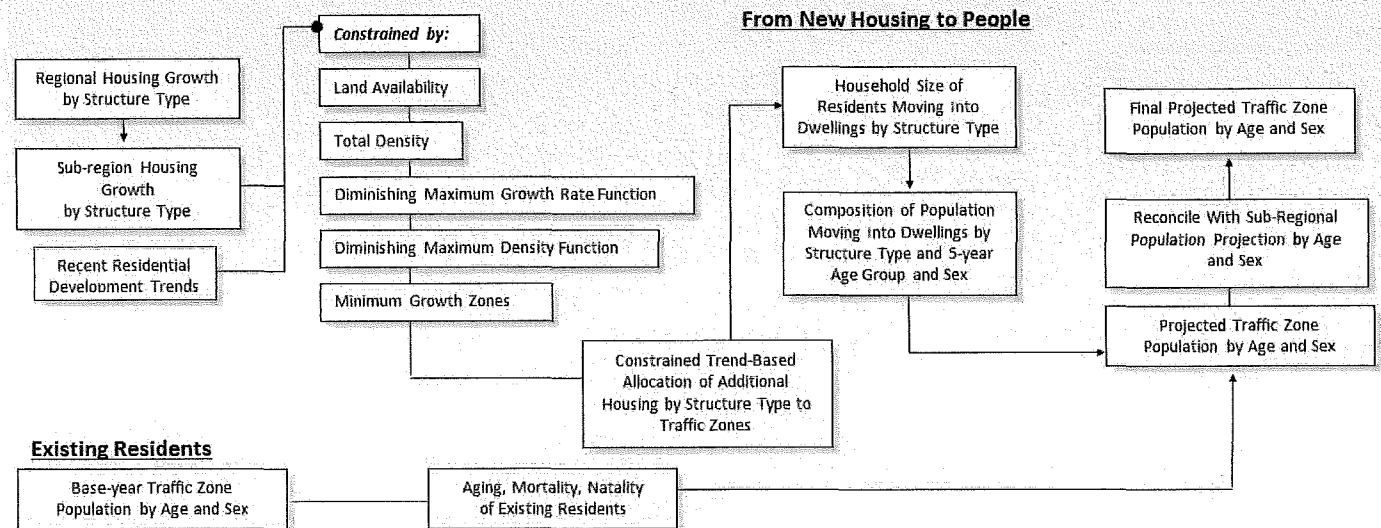
Having established projections for the RDN and its component sub-regions, the next step in the modeling framework was to produce projections of housing, population, and employment for each of the study area's **transit analysis zones**. TAZ-level estimates were produced using a land using approach, similar to the one employed in the development of the sub-regional projections. With the long-range projections for each sub-region representing the control totals for all underlying TAZs, allocations of additional housing units to TAZs were determined by a variety of factors, beginning with each TAZ's historical share of its parent sub-region's growth (in housing by structure type) as per the most recent Census data. Five other factors informed the allocations, including the following:

1. **Availability:** there must be land within a particular TAZ that permits the specific form of residential development;
2. **Density:** the density of residential land use (dwelling units per hectare) on eligible land cannot exceed a sub-region specific maximum density, which is calculated by excluding zones with very small areas zoned for the use, or where densities become very high and do not reflect reasonable development densities for the sub-region;
3. **Diminishing maximum growth rates:** growth in TAZs that experienced relatively robust increases (in housing) over the previous time period are reduced over time to isolate the effect of large development projects being completed in specific TAZs;
4. **Slowing growth in very dense zones:** the share of growth allocated to TAZs that are approaching the maximum density within a sub-region is reduced to isolate the effect of TAZs approaching build-out; and
5. **Incremental development:** historically, a TAZ may have experienced no growth, or negative growth.

In the approach of first carrying forward historical trends, this would result in these TAZs never accounting for a positive share of sub-regional growth in future years, even if suitable land were available. To provide the opportunity for such TAZs to share in projected future growth within a sub-region, these TAZs are allocated a small number of dwelling units, subject to underlying land uses and the TAZ not exceeding the maximum density constraint.

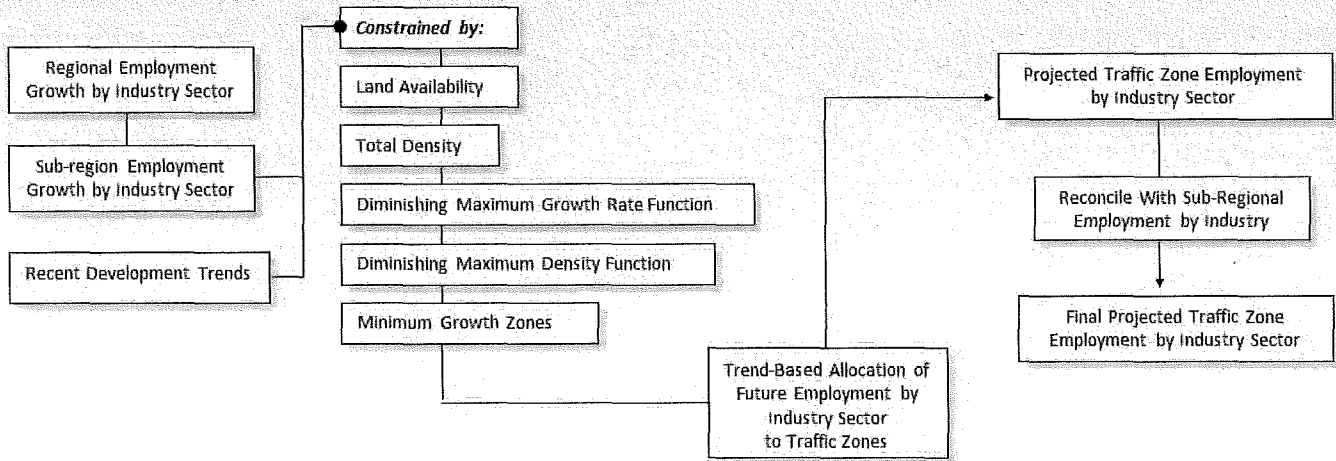
These modeling constraints have been complemented with information obtained from, and input provided by, the RDN, the City of Nanaimo, and the District of Lantzville to identify areas where growth in housing may not be reflected in either historical development trends or in the current land use database. Based on these inputs and the modelling framework described above, the resulting additional dwelling units allocated to each TAZ were then populated using structure type specific occupancy ratios and demographic characteristics. The resultant population vectors represent the net migration inputs that are added to the demographic modeling of each TAZ's existing resident population (aging, deaths, and births) to provide an assessment of total population by age and sex for each TAZ.

Traffic Zone Population Projection Methodology



Projections of employment were developed through the same land-using approach within a constrained allocation framework, complemented by input from the City of Nanaimo regarding the magnitude and timing of future employment growth, with additional employment by sector allocated to each TAZ based in its first instance on the historical distribution of employment growth and the capacity of underlying land uses to accommodate future growth. It is important to note that for transportation modeling purposes, the projections of future employment at the TAZ level focus on employment by total place of work, which includes the aggregate of those at a usual place of work outside the home and those who work at home. In addition to those with a usual place of work, an allocation has been estimated for those with no usual place of work, such as taxi or truck drivers, based on the existing distribution of population and employment with a usual place of work.

Traffic Zone Employment Projection Methodology



3 Report Structure

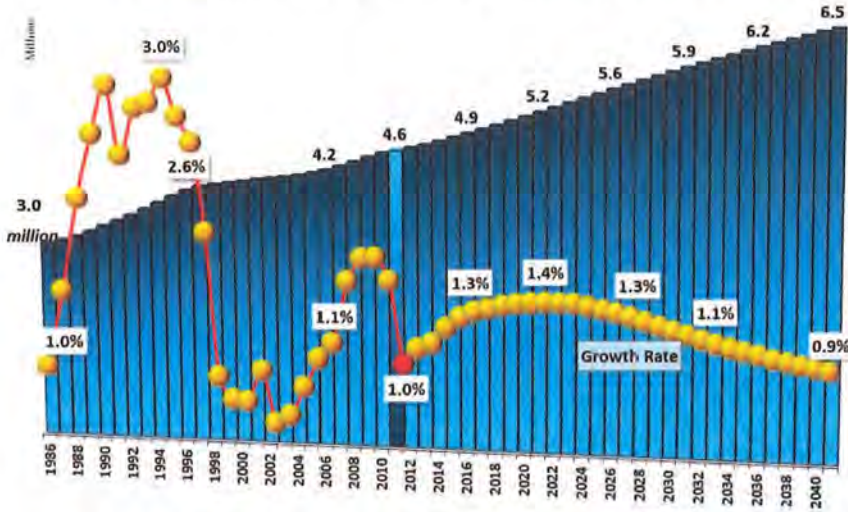
This report has been structured into four major sections. The next (Section II) provides an overview of projections of demographic change in British Columbia, followed by a more detailed presentation of changes in population, housing occupancy demand, and employment in the Regional District of Nanaimo between 2011 and 2041 (in Section III). Section IV presents these same changes for each of the RDN's three sub-regions. Finally, Section V presents a more detailed overview of the methodology used to develop the TAZ-level projections, with the appendix (in Sections VI and VII) including a summary of the output from the projection process in tabular format, as well as a selection of age profile charts for reference purposes. Data sources are listed in Section VIII.

II British Columbia's Growing and Changing Population

Over the past 25 years, the rate of population growth in BC has generally exceeded that of Canada (averaging 1.8 percent annually versus 1.1 percent annually at the national level) and has broadly moved

Figure 1

Total Population, British Columbia, 1986-2041



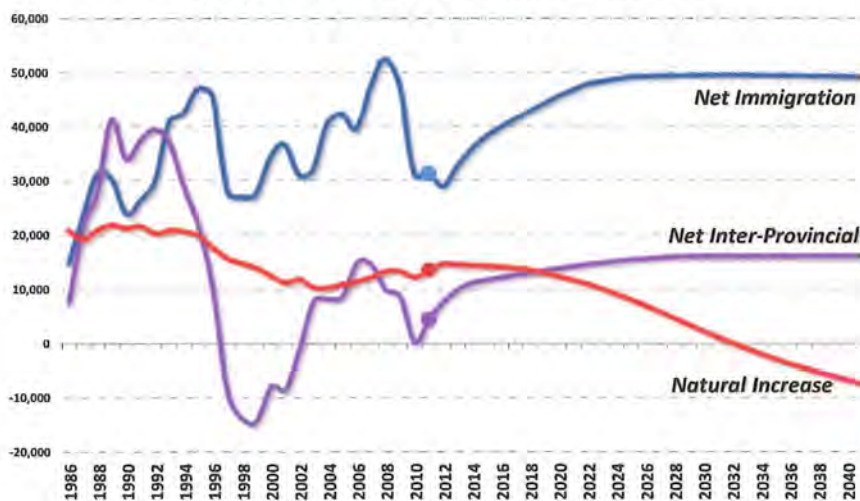
in tandem with economic cycles and the flow of migrants into and out of the province. For example, Figure 1 shows that annual population growth rates in British Columbia rose substantially through the late-1980s and early-1990s, peaking at 3.0 percent in 1994. This represented a period of provincial economic expansion, aided by slow economic growth in other Canadian regions and the influence of political and economic restructuring in Asia.

From the early-1990s' peak, however, provincial population growth slowed considerably, with rates falling to below one percent per year through 2004. More recently, growth rates have trended back above one percent, reaching 1.6 percent in 2007 and 1.7 percent by 2009. The most

recent estimates show that growth rates have again moderated, falling back towards 1.0 percent in 2011. The more recent pattern of change has been influenced by global economic conditions, as growth in BC's gross domestic product (GDP) fell from 4.1 percent in 2006 to a contraction of 2.1 percent in 2009, the consequence of the worldwide financial crisis.

Figure 2

Components of Population Growth, British Columbia Actual from 1986-2011; Projected from 2012-2041



by the end of 2033, as natural increase (the annual difference between births and deaths) is projected to become natural *decrease* in that year, with BC's population generating more deaths than births each year thereafter.

Looking forward, historical trends (both long-term and more recent) point towards a relatively stable total fertility rate, continued increases in life expectancy (albeit at a slowing rate), and increasing interprovincial and international migration to the province (Figure 2). With respect to migration, it is expected that annual additions through net immigration will be much greater than those through inter-provincial migration, with net immigration increasing from 31,100 today (2011) into the neighbourhood of 49,100 through 2041; meanwhile, net inter-provincial migration is projected to increase from its current 4,400 people to 16,000 over the long-term. Considered together, total net migration is expected to become the sole driver to population growth in the province

These trends, along with the aging of the province's current resident population, would see BC grow from 4.6 million people today (2011) to 5.2 million by 2021, and further to 6.5 million by 2041, representing 43 percent growth over the next three decades. On average, an estimated 65,500 net new residents would

Figure 3

Population Age Profile, British Columbia

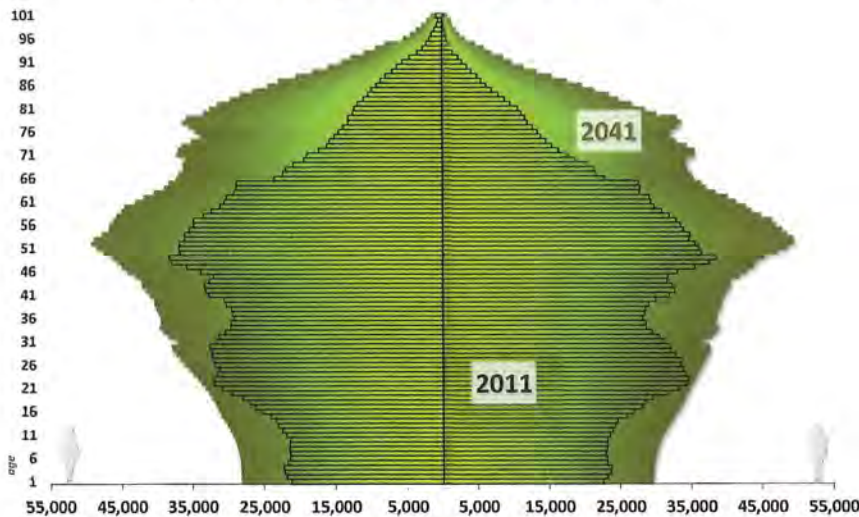
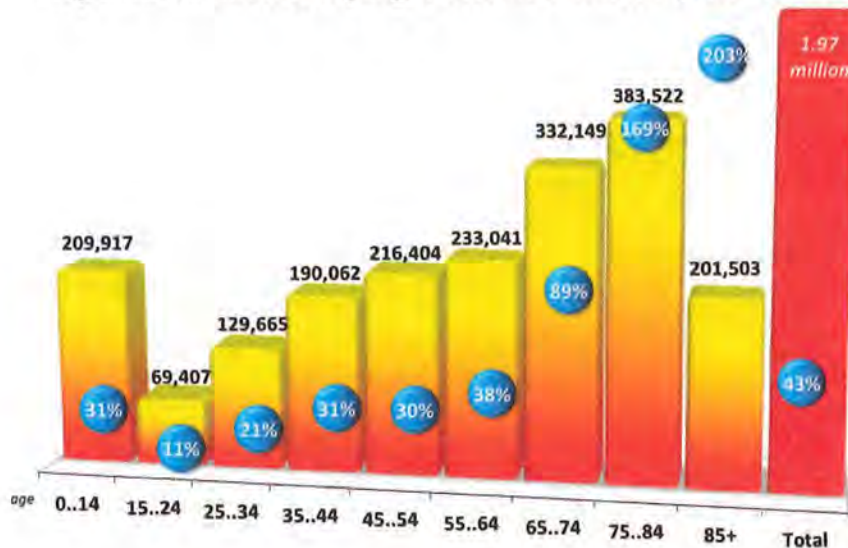


Figure 4

Population Growth by Age, British Columbia, 2011-2041



percent, and the 85-plus by 203 percent. As such, a significant shift in the province's demography will be seen in the years ahead, in large part driven by the aging of BC's 4.6 million residents today, 1.3 million of whom are currently between the ages of 46 and 65.

be added to the provincial population each year, close to the 62,200 that have been added annually over the past 25 years.

The coming three decades are projected to be characterized by a significant increase in the size of the province's older population. As roughly one-third of BC's population is currently between the ages of 46 and 65, their aging into the retirement stage of the lifecycle will shift the composition of the provincial population significantly by 2031. That being said, the youthful profile of migrants to the province will work to fill out BC's younger age groups, which are projected to grow more rapidly than at the national level. As such, migration will work to slow, but not stop, the aging of the provincial population in the coming years (Figure 3).

Figure 4 shows that, compared to the 43 percent growth projected for BC's population as a whole by 2041 (versus 28 percent nationally), the under-15 age group is expected to grow by 31 percent (19 percent Canada-wide), the 15 to 24 population by eleven percent (seven percent nationally), and the 25 to 34 population by 21 percent (eleven percent nationally).

While these younger age groups will grow more rapidly than the national average, the older age groups in BC are projected to experience greater absolute and relative growth over the next 30 years. For example, the 65 to 74 age group is projected to grow by 89 percent, the 75 to 84 group by 169

III The Regional District of Nanaimo

1 Demography

Over the next 30 years, the population in the Regional District of Nanaimo (RDN) is projected to grow from its current 150,405 residents to 182,257 by 2021, and further to 211,349 by 2031, before reaching 235,128 residents by 2041 (Figure 5). Annual growth in the RDN would peak around two percent before 2020, declining slowly towards one percent afterwards due to the aging of a large portion of the region's population out of the family rearing and into higher mortality stages of the lifecycle. It is worth noting that this projection represents a long-range outlook, with realized population growth fluctuating around the long-run trend presented in Figure 5 in the coming years, just as it has historically.

Figure 5
Total Population, Regional District of Nanaimo,
Actual from 1986-2011; Projected from 2012-2041

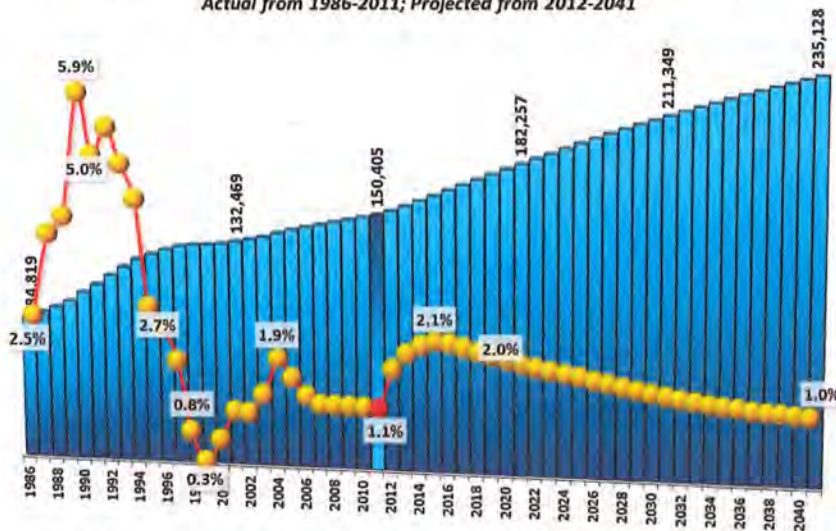
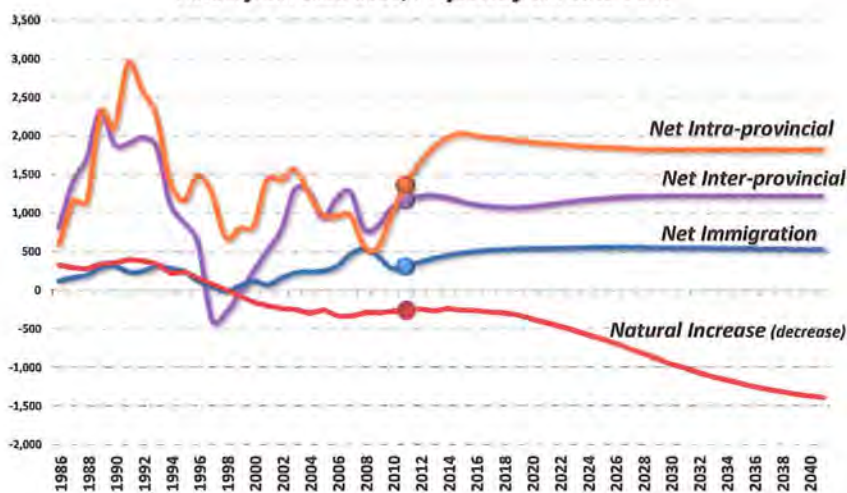


Figure 6
Components of Population Growth, Regional District of Nanaimo
Actual from 1986-2011; Projected from 2012-2041



On the basis of BC achieving almost 60,000 immigrants by 2041, it is expected that the proportion of BC's international migrants moving to the Region would return to its historical average, rising slightly from 1.0 percent in 2011 into the range of 1.3 percent by 2021, and remaining at this level through to the end of the projection period. With this increase in the RDN's share of BC's future immigration flow, net international migration to the Region (including changes in the number of non-permanent residents) would increase from 310 people today to 535 by 2041.

With a population that will continue to age into the higher mortality stages of the lifecycle over the coming decades, it should be noted that natural increase will actually take away more people from the Region's

Considering the longer-term drivers to these changes, net intra-provincial migration (movement between the Region and other provinces) is expected to continue to increase in the coming years, stabilizing in the range of just under 1,800 people being added to the RDN's population annually by 2041 (Figure 6). Over the coming decades, the RDN is expected to see its share of the province's inter-provincial migrants move back towards historical averages, declining from the current 4.8 percent towards 4.1 percent by 2019, and remaining at this level through to 2041. Combining this projected regional share of provincial migrants with the BC-wide migration outlook would see net inter-provincial migration to the RDN remain relatively constant, falling slightly from the current 1,165 people per year to just under 1,100 people annually by 2019, before increasing back towards 1,200 annual migrants over the longer-term.

Figure 7

Population Age Profile, Regional District of Nanaimo

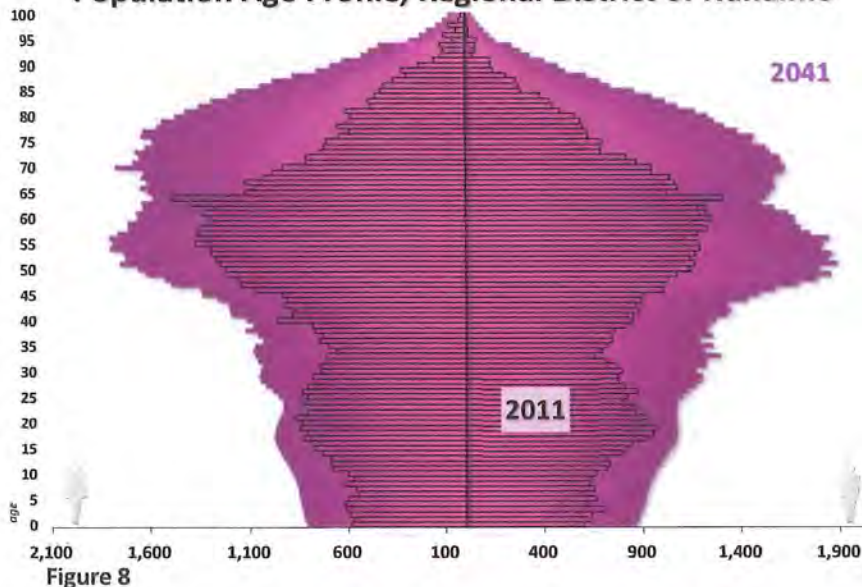
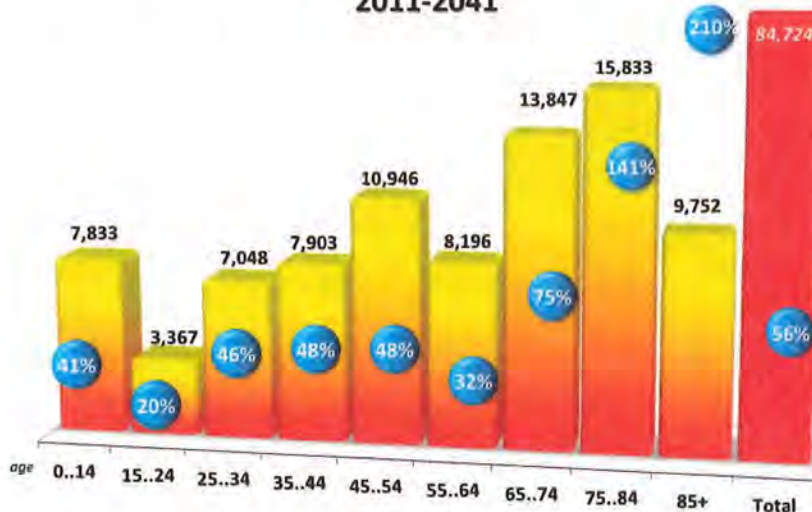


Figure 8

Population Growth by Age, Regional District of Nanaimo, 2011-2041



13,847-person growth in the 65 to 74 age group, followed by the 10,946-person increase in the 45 to 54 age group. Notably, for every one senior living in the Region today (34,424 people aged 65-plus) there would be 2.1 by 2041 (73,855 in total). As well, despite slower growth being projected for the under-65 segment of the regional population, the younger cohorts would still account for 53 percent of the RDN's overall growth as they add 45,292 people over the next 30 years.

As evidenced by the changes presented in Figures 7 and 8, it is the aging of today's existing residents that will largely frame tomorrow's demographic reality: more specifically, 77 percent of today's population would still be alive in 2031 (and potentially would still be living in the Region, albeit they would be 20 years older than they are today) and 62 percent would still be alive by 2041 (and they would be 30 years older).

population in the coming years than it has in the recent past. In fact, by 2041, the process of natural increase is projected to take away close to 1,400 people from the RDN's population each year as the projected number of deaths (3,034) will continue to outpace the projected number of births (1,636).

In terms of compositional changes to the Region's population, the greatest absolute and relative growth is projected to be in the older age groups (Figures 7 and 8). More specifically, a 210 percent increase in the number of people aged 85-plus is projected between 2011 and 2041, as well as a 141 percent increase in the number of residents aged 75 to 84 and a 75 percent increase in the 65 to 74 age group.

Conversely, the under-15 age group is projected grow by 41 percent. The 15 to 24 age group is projected to grow by less than this—by 20 percent—largely due to the magnitude of the outflow of residents from the RDN to other parts of BC and other provinces. Below-average growth is also projected for all the 25 to 64 age groups as the boomers age out of that age range and into retirement, and there being fewer people in the younger cohorts to replace them as they do.

On an absolute basis, the greatest increase in the RDN's population over the next three decades would be the 15,833 additional people in the 75 to 84 year old age group. The next largest increase would be the

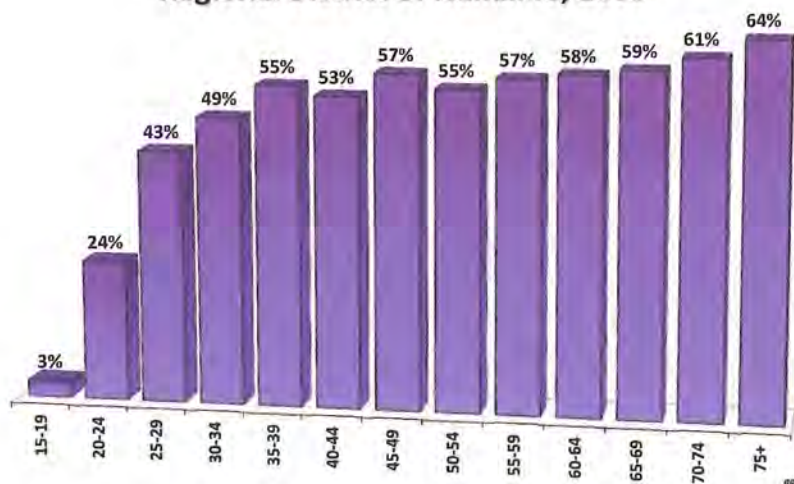
2 Future Housing Occupancy Demand

In developing projections of housing occupancy demand in the RDN over the next three decades, a demographically-based approach was adopted, combining the population projections presented in the previous section with age specific household maintainer rates, or the percentage of people in each age group who are considered to be primarily responsible for their household's finances.

Household maintainer rates are derived from the Census. In the Census questionnaire used to gather data on housing (among many other things), each group of people living together in a private dwelling unit (a household) is asked to indicate the age (and other attributes) of the household member they consider to be primarily responsible for the financial support of the household. This person is referred to as the primary household maintainer. Dividing the total number of people of a specific age who are household maintainers by the total number of people in that age group in the population yields the household maintainer rate for that particular age group.

Figure 9

**Age Specific Household Maintainer Rates,
Regional District of Nanaimo, 2006**



These age specific data can also be linked to other attributes of the household such as the structure type of the dwelling (ground oriented or apartment dwellings), tenure (owned or rented), household composition (family or non-family), and even mobility status (recently-moved or did not move).

Data from the 2006 Census¹ show that only three percent of people between the ages of 15 and 19 are household maintainers in the RDN (Figure 9). This is because most people in this age group (and all of those under the age of 15), are living in households maintained by someone else, usually their parents. Relative to this

youngest age group, a much greater share of people in the 20 to 24 age group have left the parental home to establish their own households, with almost one-quarter (24 percent) of the people in this age group identifying themselves as a primary household maintainer. This increase in the household maintainer rate continues as people age, going from the 24 percent in the 20 to 24 year old group to 43 percent in the 25 to 29 year old group, and further to 49 percent and greater for all of the 30-plus age groups.

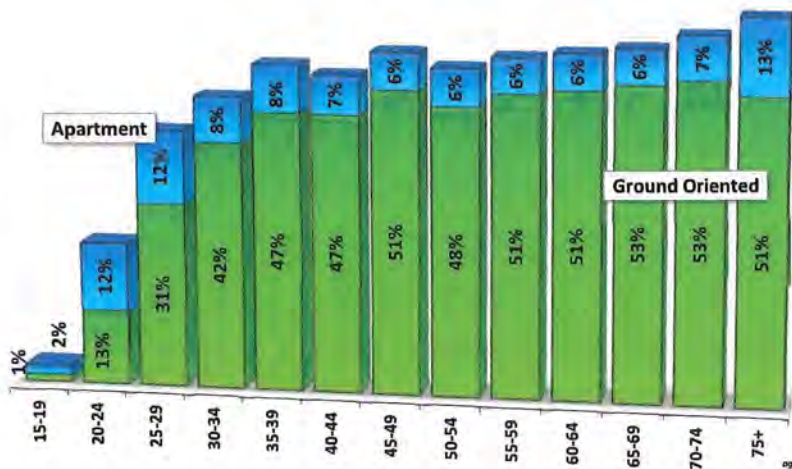
Although the percentage of household maintainers for this region peaked at 64 percent for the 75-plus age group, it should be noted that if more detailed age groups were examined, maintainer rates eventually decline for the oldest segments of the population as people shift from maintaining their own private dwelling to living in either a private household maintained by someone else (such as a family member) or some form of seniors' accommodation (a collective care facility), the latter of which is not considered to be private accommodation.

Among the range of housing forms, two structure type categories have been defined for the purposes of this report, as they generally correspond to both separate locational criteria and land use regulations: ground oriented (which includes detached, semi-detached and attached ground oriented units, plus up/down duplexes and detached houses with suites); and apartments (including units in buildings of both five or more, and less than five, storeys, as per the Census definitions). As shown in Figure 10, each of

¹ The most recent data on household maintainers are from the 2006 Census.

Figure 10

Household Maintainer Rates by Structure Type, Regional District of Nanaimo, 2006



these two structure types demonstrate a distinct lifecycle pattern. As with most other jurisdictions in Canada, a person in the RDN is generally more likely to maintain a household in a ground oriented home, a pattern that generally coincides with the family-rearing and empty-nester stages of the lifecycle. That said, apartments are an important housing form for the younger and older population, with apartment maintainer rates for the 75-plus age group increasing significantly, driven by financial, lifestyle, and/or physical limitations and choice.

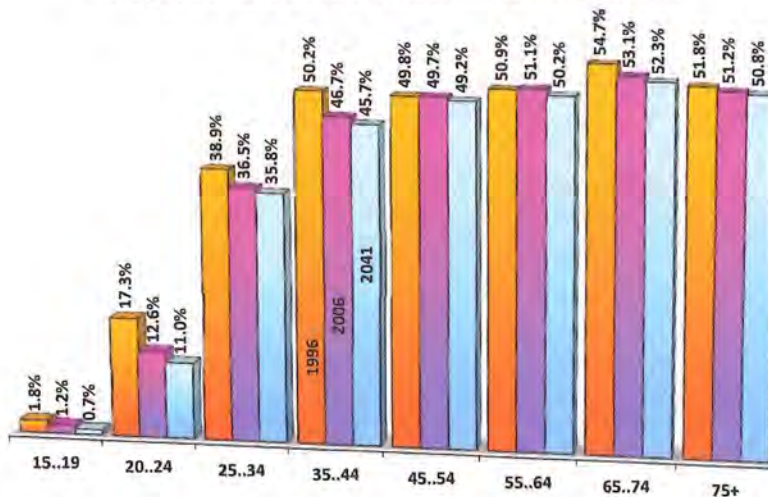
In the case of the RDN, the proportion of people maintaining households in ground oriented units exceeds that in apartments for all age groups, save for the 15 to 19

segment. The gap between rates for ground oriented and apartment begins to widen in the 25 to 29 age group, as the apartment maintainer rate begins a decline that continues through to the older stages of the lifecycle. The 70 to 74 age group marks a transition point, whereby apartment rates begin to increase, reaching a peak of 13 percent for the 75-plus group. Rates for ground oriented dwellings climb steadily through the family-formation and family-rearing stages of the lifecycle (ages 25 to 69), and then peak in the 70 to 74 age group, before falling slightly in the 75-plus group for reasons listed above.

Historical and Projected Changes in Maintainer Rates. As with the other behavioural variables, age specific household maintainer rates in the RDN have changed over time and are projected to continue to change as a result of a growing diversity of housing forms in the Region and changing behaviour with respect to family formation, labour force participation, education, and even the environment.

Figure 11

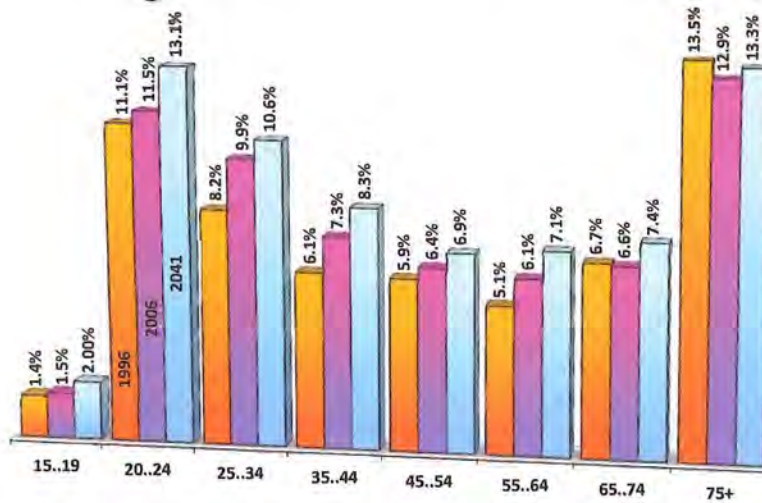
Ground Oriented Household Maintainer Rates Regional District of Nanaimo, 1996-2041



Comparing changes between the 1996 and 2006 Censuses reveals that ground oriented maintainer rates in the RDN have declined slightly, from 43.3 percent of people maintaining this form of dwelling in 1996 to 42.8 percent by 2006. Tracking this change on an age basis shows that the most significant shifts were seen in the younger age groups, with maintainer rates for ground oriented units falling by 0.6 percentage points for those between the ages of 15 and 19, 4.7 percentage points for the 20 to 24 age group, and 1.4 percentage points for those aged 25 to 34 (Figure 11). Balancing the declines for ground oriented accommodation in the younger population were increases in apartment rates, with apartment maintainer rates for the 15 to 19 population increasing by 0.1 percentage points and 0.4 percentage points for the 20 to 24 age group (Figure 12, next page).

Figure 12

Apartment Household Maintainer Rates Regional District of Nanaimo, 1996-2041



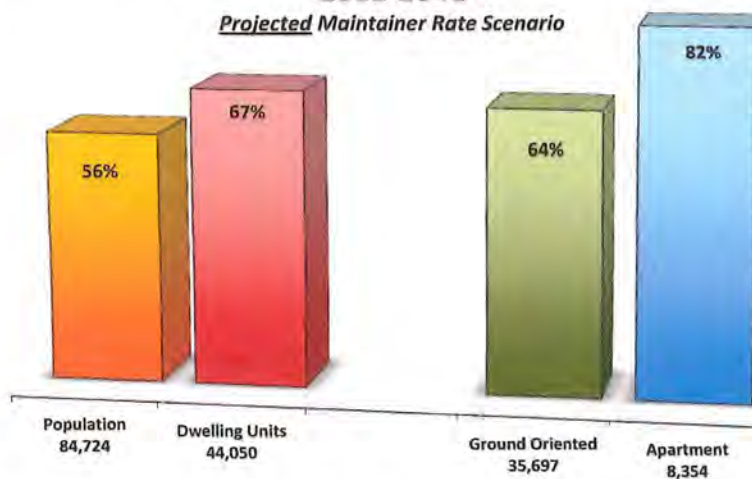
Looking forward, the most significant reductions in ground oriented maintainer rates are expected to be in the younger, market-entrant age groups. For instance, ground oriented rates are projected to fall from 1.2 percent to 0.7 percent for those aged 15 to 19 by 2041 (a 42 percent drop). In addition, the 20 to 24 age group is expected to see its ground oriented rate decline from 12.6 to 11.0 percent by the end of the projection period (Figure 11). Smaller reductions are expected for people in the older age groups who typically have more resources available to them to pursue a greater range of housing options (or, in many instances, remain in the ground oriented unit they brought their families up in).

On the apartment side, increasing rates are expected to characterize all age groups over the coming three decades. The most significant shifts are again expected for the younger segments of the population, particularly those aged 20 to 24 as apartment maintainer rates are expected to increase from 11.5 percent currently to 13.1 percent by 2041 (Figure 12).

Figure 13

Summary of Changes, Regional District of Nanaimo, 2011-2041

Projected Maintainer Rate Scenario



and change. Growth rates for the ground oriented segment of the market would be closer to the overall average increase, growing by 64 percent by 2041.

In terms of absolute growth, the number of additional ground oriented units required to house the projected population would outweigh the increase in apartments, with net additional ground oriented demand projected to be 35,697 units between 2011 and 2041, or more than four times the additional demand for apartment units (8,354 units).

With a relatively small base today, the greatest relative growth would be seen in the apartment segment of the market, growing by 92 percent over the coming three decades, as 8,354 new apartment units would need to be added to accommodate projected population growth

Over the short-term, ground oriented additions would continue to account for their current 63 percent share of additions to the dwelling stock each year. Over the longer-term of the projection period, however, this is expected to decline to 60 percent by 2028, and further to 58 percent by 2041. Thus, while continued population growth and change will support shifts at the margin towards other forms of housing as a result of accessibility, land values, and a growing diversity of the Region's residents, the projected outlook describes a future characterized by gradual change due to the inertia imposed by the large stock of housing that already exists throughout the Region.

3 Employment

The processes of demographic and economic change are deeply interconnected in the cycles of production and consumption within all regional, provincial and national economies. In one part of the cycle, the residents, as consumers, provide much of the demand for employment directly through their purchases, as well as those made on their behalf via expenditures of tax revenues. This, in turn, provides income to both public and private sector suppliers of the goods and services. Another portion of demand, commonly referred to as a region's economic base, is provided by residents of other regions purchasing goods and services that are locally produced and exported.

On the production side of the cycle are residents as providers of human resources and capital, forming the labour supply-side of a region's economy. The remainder of regional supply is provided by residents of other regions selling goods and services to this region's residents, creating the region's import sector. The inter-connectedness of supply and demand in the economic cycle means that, in addition to macroeconomic factors shaping export of goods and services, a region's economy is directly affected by changes in the character of the region's population through the number and productivity of the residents available to work in its labour force.

For purposes of this analysis each of the two sides of the cycle described above were considered individually before bringing together the projected supply of workers (the RDN's labour force) with the demand for workers (regional employment), to ensure a resolution between the outlooks for the Region's demography and its economy. This resolution is one area where a significant paradigm change will be seen in the coming years locally, provincially and nationally. As outlined in the previous sections, the record high level of births between 1946 and 1965 (the baby boom) has ensured a large supply of labour relative to the size of the population for the past 45 years. With the first post-war babies now having celebrated their 65th birthdays, finding employees to replace retirees will become an increasingly important factor in regional economics. This section considers the future size of the RDN's labour force, given the role of age and sex specific labour force participation and the nature and magnitude of demographic change presented earlier. The following section then considers the potential demand for their services (i.e. employment), before presenting a resolution between the Region's demography and its economy.

Labour Force Participation. Age specific labour force participation data for the RDN show that participation rates for males increase from a low of 66 percent in the labour force entry stage of the lifecycle (15 to 24 age group) to a relatively uniform rate of about 90 percent through the prime working

ages of 25 to 54. From here, participation rates for males decline with age, first to 62 percent in the 55 to 64 age group (reflecting early retirement), and further to 22 percent for those aged 65 to 74 and to five percent for those aged 75-plus (Figure 14).

Female labour force participation rates follow the same general lifecycle pattern as males, increasing from lows of 66 percent in the youngest age groups (15 to 24) to a peak range of 79 to 80 percent through the 25 to 54 year old age groups. The difference between male and female rates in this prime working stage of life (of up to ten

Figure 14

Male Labour Force Participation Rates, Regional District of Nanaimo

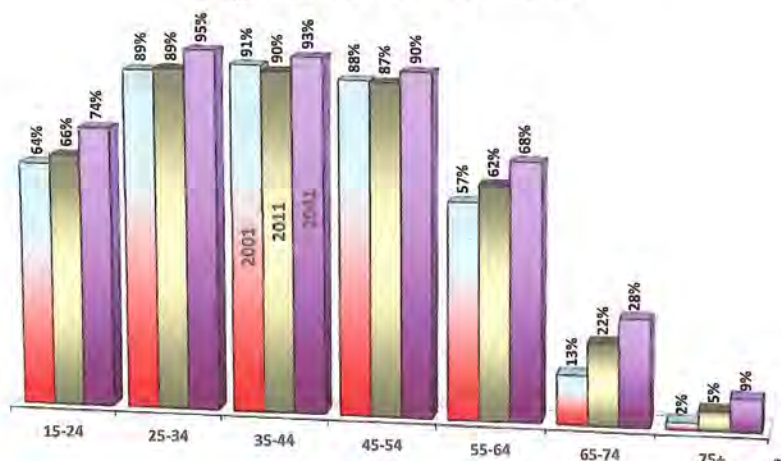
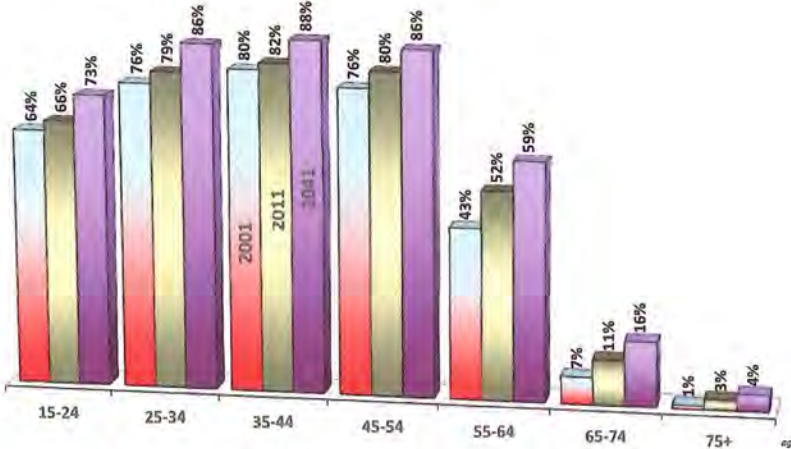


Figure 15

**Female Labour Force Participation Rates,
Regional District of Nanaimo**



percentage points) generally corresponds to the ten to 15 percent of women in their late-20s and early-30s who have a child each year. Similar to male rates, participation for females begins to fall once the age of 55 is reached, to 52 percent for the 55 to 64 age group, further to eleven percent for those 65 to 74, and to three percent for women 75 and older (Figure 15).

In looking forward, tightening of labour markets nationally would suggest that the most recent increases in labour force participation will continue for both males and females. A reasonable scenario for future male labour force participation in the Region would see increased participation rates for each age group over the coming

three decades, with more significant increases coming to the older age groups. In this case, the projection is for male participation rates to increase across all age groups: into the 90 to 95 percent range for the 25 to 54 age group; to 68 percent for the 55 to 64 age group; to 28 percent for the 65 to 74 group; and to nine percent for those 75 and older.

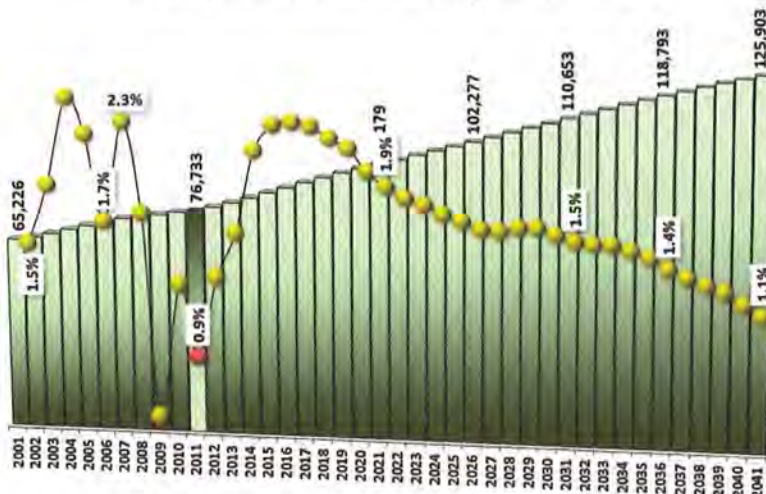
In the case of females, historical trends in participation (compounded by trends towards lower birth rates and the postponement of childbearing) also point toward increasing rates—slightly so in the younger age groups, and more substantially so in the older ones. By 2041, female participation rates are expected to be in the range of 86 to 88 percent throughout the 25 to 54 age group, and 59 percent in the 55 to 64 age group (seven percent above 2011's rate). For the 65 to 74 year old female population, rates are expected to continue to increase, with up to 16 percent of this age segment active in the labour force by 2041 (a five percent increase over 2011), as well as four percent of the 75-plus group (a one percent increase).

Projected Labour Force. While male and female labour force participation rates are expected to increase in the coming years, the lifecycle pattern of labour force participation declining through the older age groups

suggests that these increases in rates over time will only partially offset the loss of labour supply as the boom generation ages towards retirement.

Figure 16

**Total Labour Force, Regional District of Nanaimo,
Actual from 2001-2011; Projected from 2012-2041**



More specifically, in matching the projected regional population by age and sex with the corresponding projected labour force participation rates by age and sex over the coming three decades, an outlook for the RDN's labour force is achieved, accounting for both the changing demography within the region and people's changing behaviour with respect to participation in the labour force. The projection shows the regional labour force increasing from 76,733 people in 2011 to 125,903 by 2041, a 64 percent

(49,170-person) increase (Figure 16). Growth in the RDN's labour force would therefore average 1.6 percent per year over the next 30 years.

In the context of this research, this pattern of labour force growth will have implications for employment growth in the RDN. To the extent that there will always be some level of unemployment due to structural adjustments (a mismatch between the demand and supply of skills) and frictional adjustments (people simply moving between jobs), one can anticipate that employment growth in the RDN over the longer-term will be, to a large extent, limited by the rate of growth in the RDN's labour force. By extension, given the relationship between the labour force and population, employment growth may ultimately be limited by the rate of anticipated growth in population. This is examined more closely in the following sections.

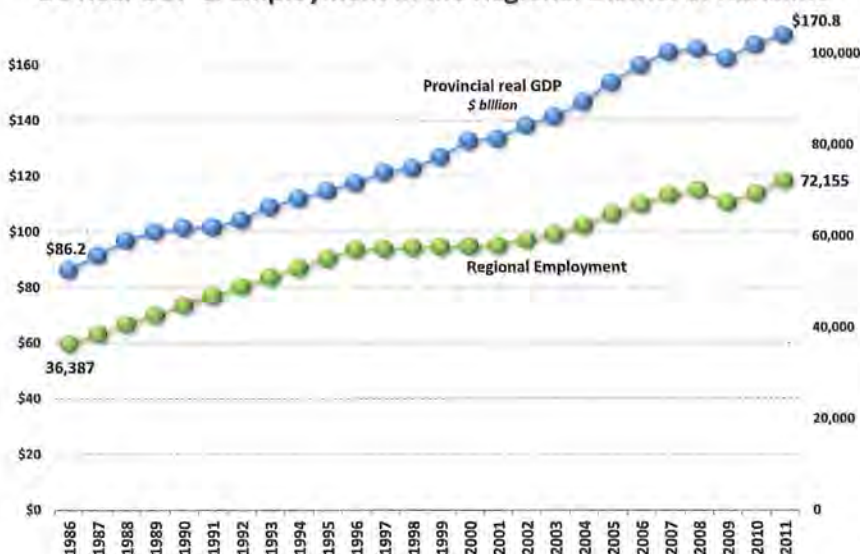
Historical Changes in Economic Activity and Employment. The general approach used to develop the first iteration of the employment projections for the RDN was based on the historical correlation of changes in regional employment and provincial GDP and a long-range projection of provincial real GDP to 2041. Given this methodological approach, the employment projections are developed around two fundamental assumptions. The first is that historical changes in the relationship between employment and real GDP (such as increasing labour productivity) will be representative of future shifts. The second is that real GDP provides a reasonable representation of the provincial economy's ability to generate jobs over the coming three decades.

Annual employment for the Region was estimated using employment and unemployment data from the 1986 to 2006 Census counts for the Regional District of Nanaimo and annual employment data up to 2011 from Statistics Canada's Labour Force Survey for the Vancouver Island/Coast Development Region (net of the Victoria CMA). With the most recent employment counts for the Region currently only available from the 2006 Census, the 2011 estimates presented here can be compared to the new employment counts from the 2011 Census once these data become available through the middle of 2013. These data show that since 1986 employment in the region has grown by 98 percent (from 36,387 jobs to an estimated 72,155) as the provincial economy grew by 98 percent (from \$86.2 to \$170.8 billion, Figure 17).

Before presenting projections of future employment, we can consider the levels of employment that this methodology would have produced historically, and how this back-casting compares to actual employment counts for the past 25 years. While a good correspondence between model estimated and historical

Figure 17

BC Real GDP & Employment in the Regional District of Nanaimo



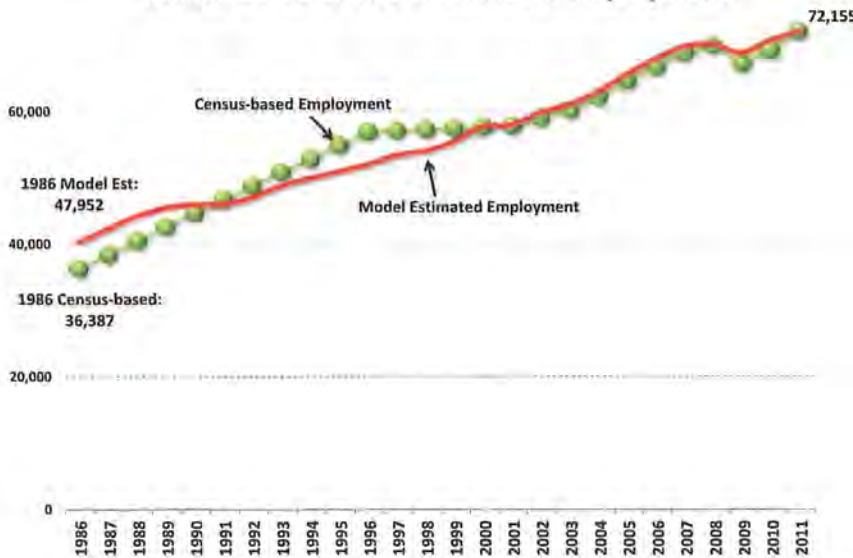
Census-based employment is seen in Figure 18, the differences that are seen between actual and estimated employment warrant a few comments.

First, actual employment in any one year may represent a short-term high (or low) point for the provincial economy. In future years, it would be expected that employment would grow at rates more consistent with the long-term trend and move estimated employment levels back towards the actual counts.

Second, if a decline in economic activity historically was severe enough to pull employment down beyond where it would be under normal economic conditions

Figure 18

Census-based & Model Estimated Employment



(such as in 2009 and 2010), the impact of including these points in the historical data series (upon which projected employment is based) would be to push the model estimated values towards below-average employment levels during normal economic periods. The same is also true when short-term economic activity exceeds what would be expected under more normal conditions (such as the 6.2 percent growth in BC's real GDP in 1987). From a long-range modeling perspective it is important to include both sets of circumstances from the historical database upon which the projections are based (as they are for this projection series).

Finally, the fundamental relationship between BC's real GDP and the RDN's

employment structure may change over time. As such, relying on the long-run historical time series of GDP and employment may not fully describe emerging trends in the relationship between these variables. While short-term data might represent the direction of emerging trends, until there are enough data points depicting such trends, it is not possible to identify whether these data merely represent short-term blips on the economic radar or fundamental paradigm shifts in the relationship between regional employment and economic output.

Given the long-run nature of these projections, it will be important to continue to monitor employment changes in the RDN in the coming years to assess the degree to which short-term variations become longer-term trends. This will be particularly pertinent as the 2011 Census data on employment become available in late 2013.

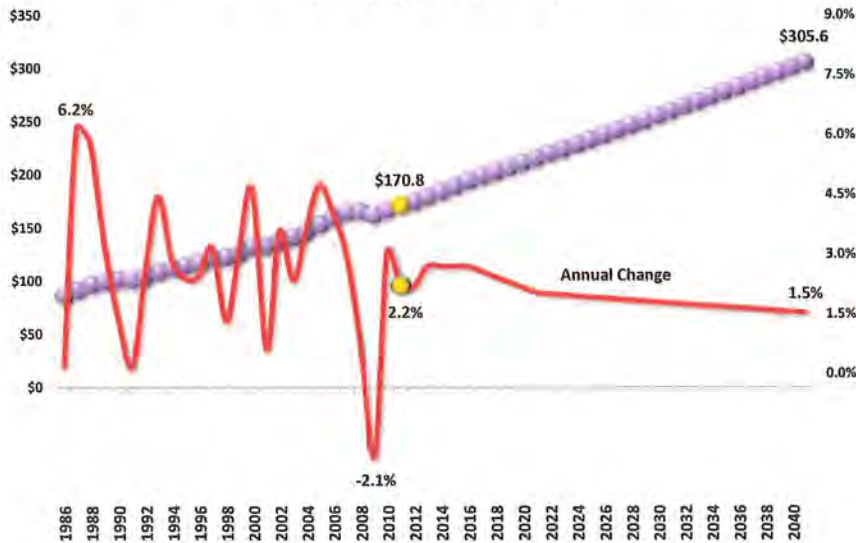
Future Changes in Economic Activity and Employment. As future real GDP forms the independent variable in the mathematics of this projection methodology, it is necessary to establish a long-run projection of real provincial GDP. The province's Ministry of Finance, through its economic update and outlook, provides short-term estimates of economic activity in BC, with current assessments anticipating annual economic growth in the range of 2.2 to 2.7 percent through to 2016. Beyond this short-term assessment, however, few long-range projections of economic activity exist.

The fact that much of GDP consists of factors that are population-dependent (for example, consumption, government spending, and imports) implies that the slower population growth projected in the coming years could also contribute to a slowing in the annual rate of growth in provincial economic activity. This suggests two things for BC's (and Canada's) economy. First, long-term growth in real GDP may not continue at rates consistent with recent history, and second, the relationship between GDP and employment observed in the past may change, moving in the direction of fewer jobs per unit increase in GDP (in other words, increases in productivity that are in excess of what has been observed historically).

Considering these factors, long-range growth in BC's real GDP is projected to slow from the Ministry's estimates of 2.2 to 2.7 percent over the short-term to 2.0 percent by 2021 and further to 1.5 percent by 2041 (Figure 19). The result would be BC's real GDP growing from an estimated \$170.8 billion in 2011 to \$305.6 billion by 2041. Relative to the past two and a half decades when the province's economy expanded at an average annual rate of 2.8 percent, the coming three decades would see growth average 2.0 percent per year.

Figure 19

Real Gross Domestic Product, British Columbia
billions of chained 2002 dollars



Given this projected level of economic growth, the historical relationship between BC's GDP and employment in the RDN would result in continued employment growth in the Region in the coming years. Recognizing the constraints imposed by growth in the Region's labour force, however, total employment in the RDN is projected to increase from 72,155 jobs in 2011 to 120,867 jobs by 2041, a 48,713-job, or 68 percent increase.

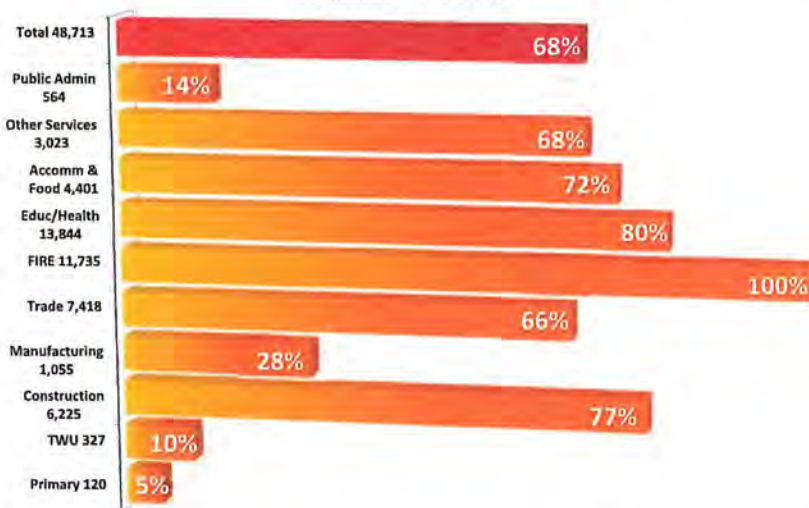
In rationalizing the regional employment projection with available supply of labour in the region, the assumption was made that the regional unemployment rate would fall back towards four percent over the long-term, a level that is consistent with what is commonly considered to be full

employment. That said, it is important to note here that these long-range projections are more concerned with orders of magnitude and time periods than with specific values and dates. As such, annual variations are expected to characterize the coming years, with peaks and troughs in economic activity around the baseline projection of employment growth being experienced.

Projected Employment by Industry Sector. The approach used to develop projections of regional employment by sector was based on correlating historical changes in sectoral employment within the Region to changes in provincial real GDP (similar to the approach used to estimate total future regional employment). As indicated above, this approach not only accounts for the absolute level of employment in each industry sector (i.e. the number of jobs), but also shifts in the overall industrial composition of the regional economy and any gains in productivity that particular sectors may have experienced historically.

Figure 20

Employment Growth by Industry, Regional District of Nanaimo,
Projected 2011-2041



Following this initial projection run, the long-run patterns of sector-specific change that resulted were modified based on consideration of a broad set of parameters to recognize particular changes that might not be accounted for within the historical database. Considerations such as the number of health care workers per resident population over the age of 65, and the number of educators per resident aged five to 19—as a couple of examples—formed the basis for such sectorial modifications.

The results from this approach show the most rapidly-growing industry sector in the Region over the coming 30 years would be Finance, Insurance, and Real Estate (FIRE) sector, which would add 11,735 jobs (100 percent growth) by 2041.² While growth of

² This category includes: Finance, Real Estate, Insurance & Leasing; Professional, Scientific and Technical services, as well as Administrative services.

this magnitude would be significant relative to other sectors, this outlook would see the number of FIRE workers per 100 residents in the Region increase from eight per 100 currently to ten per 100 over the course of the projection period. Employment in Education & Health (80 percent growth, 13,844 additional jobs), Construction (77 percent growth, 6,225 additional jobs), and Accommodation and Food Services (72 percent growth; 4,401 additional jobs) are also projected to grow at above-average rates. All other sectors would grow at or below the overall average of 68 percent (Figure 20).

More specifically, the Other Services sector (which includes a range of personal and business services, from taxi drivers to barbers to janitorial occupations) would grow by the regional average of 68 percent (3,023 new jobs), followed by Trade (66 percent growth; 7,418 additional jobs).

The slowest-growing sector would be Primary, which is projected to grow by five percent as it adds only 120 jobs due to continued technological change and rationalization within this sector serving to constraint employment growth.

IV Sub-regions

Having provided an overview of regional trends in population, housing, and employment in, this section presents brief summaries of these dimensions of change for three sub-regions within the RDN³: the City of Nanaimo, the District of Lantzville, and the Rest of RDN geography.

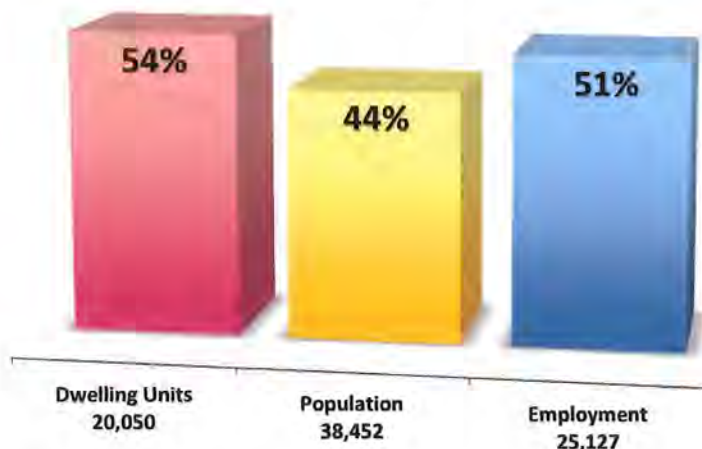
1 The City of Nanaimo

Housing. Between 2011 and 2041, the City's occupied dwelling stock is projected to grow by 54 percent as the number of occupied dwellings would grow by 20,050 units, going from 37,374 in 2011 to 57,424 by 2041 (Figure 21).

While ground oriented units will continue to represent the vast majority of the dwelling stock, their share of all dwellings is projected to decline from the current (2011) 76 percent to 72 percent by 2041, as the ground oriented stock grows by 45 percent (adding 12,860 units).⁴ Just as they have in the past, apartment dwellings will continue to grow at a faster pace than ground oriented ones over the course of the projection period, at 81 percent (versus 45 percent in ground oriented), growing to represent 28 percent of the City's dwelling stock by 2041 (7,190 new units).

Figure 21

**Summary of Changes, City of Nanaimo
2011-2041**



Demography. Based on the projected growth and change in its dwelling stock over the coming three decades, the City of Nanaimo sub-region would see its population grow by 44 percent over the same period as it adds 38,452 new residents, growing from 87,028 people in 2011 to 125,480 by 2041 (Figure 21).⁵ As such, the City of Nanaimo is expected to grow at a slower rate than the RDN as a whole (56 percent growth in total population over the same period). The annual rate of growth in the City's population would average 1.2 percent over the projection period, similar to what was experienced over the previous

decade (2001 to 2011); however, this rate of growth would equate to an average of 1,280 people being added to the City annually over the coming 30 years compared to only 1,005 annually over the previous ten.

3 Five sub-regions were considered in the report prepared by Urban Futures titled "Historical Review of Trends in Population, Housing, and Employment in the Regional District of Nanaimo and for the City's Administrative Areas & Transportation Planning Study Area" that serves as background to this document. This was done in the anticipation of developing demographic and economic projections for five separate sub-regions within the RDN; however, based on a number of factors, including the availability of small-area data, projections were ultimately developed for three broad sub-regions within the RDN: the City of Nanaimo (which corresponds to the City of Nanaimo administrative area presented in the previous report), the District of Lantzville (which corresponds to the District of Lantzville administrative area), and the Rest of RDN geography (which is the aggregate of the RDN A, RDN C, and All Other RDN administrative areas).

4 At the time this report was written no Census data had yet been released detailing the structural composition of the City's dwelling stock in 2011. As such, the 2011 numbers represent Urban Futures' estimates.

5 Note that the 2006 undercount-adjusted population of 81,609 is 3.5 percent lower than Urban Futures' previous estimate of the City's 2006 population of 84,609, as presented in *Population and Housing Projections for the City of Nanaimo, 2006 to 2031*, which was produced for the City's 2006 Official Community Plan Review. The reason for this is that the previous estimate was made midway through 2006, prior to the release of the 2006 Census counts, while the current estimate for 2006 represents a Census undercount-adjusted figure.

During the 2001 to 2011 period the under-20 age group and the 30 to 44 group experienced declines in the City (of seven and nine percent, respectively), while all other age groups grew, with the oldest ones experiencing the fastest growth. Looking forward, the older age groups are expected to continue to grow more rapidly than the younger ones (refer to Section VII for a comparison of the 2011 and 2041 age profiles). For example, in terms of the younger cohorts, the under-20 population is expected to increase by nine percent between 2011 and 2041 as 1,542 new residents are added to the City. While those aged 20 to 44 are projected to grow by ten percent (a 2,663-person increase), within this group the number of people aged 20 to 24 is projected to decline (by six percent). In comparison, the 45 to 64 group is projected to grow by 39 percent (10,097 additional residents), while the 65-plus group would more than double in size, growing by 145 percent (adding 24,150 people).

As a result of these changes the 65-plus group's share of total population would grow from 19 percent today (2011) to 32 percent by 2041. While the age of the most typical City resident would increase, the younger-than-average profile of migrants to the City would serve to mitigate the natural process of aging within the existing population, with the most typical resident going from 54 years old in 2011 to 56 years old by 2041. Given the size of the City within the broader region, the age composition of the City of Nanaimo's and the RDN's population would be very similar by 2041, with the RDN's most typical resident also being 56 years old and the 65-plus age group representing 31 percent of the region's population in that year.

Employment. Employment in the City is projected to grow by 51 percent by 2041 as 25,127 new jobs are added. Similar to what was experienced historically, the fastest-growing sectors are projected to be the Finance Insurance and Real Estate sector (FIRE, 81 percent growth; 6,442 new jobs), Construction (61 percent growth; 2,874 new jobs), and Health & Education (58 percent growth; 7,286 new jobs). Accommodation and Food Services (55 percent, 2,100 new jobs), and Other Services (52 percent, 1,475 new jobs) are the other sectors that are expected to grow faster than the overall average for the City. Consequently, the remaining sectors would all grow at a below-average pace City-wide, although none is projected to decline. Manufacturing would grow most slowly at five percent, followed by Trade, Warehousing & Utilities and Public Administration as they would grow by only eight and nine percent, respectively.

2 The District of Lantzville

Housing. Despite a decline in total population over the past decade, the total number of occupied dwellings actually increased due to shrinking household sizes: from 1,527 occupied units in 2001, the stock grew to 1,583 by 2011. Looking forward, the District's dwelling stock is expected to grow by 52 percent by 2041 as 819 dwelling units are added. The vast majority of these additional units would be in ground oriented formats (799 units), with a small segment being in apartment formats (accounting for 20 additional units). Thus, apartments would continue to represent about one percent of the total dwelling stock in Lantzville over the course of the projections period.

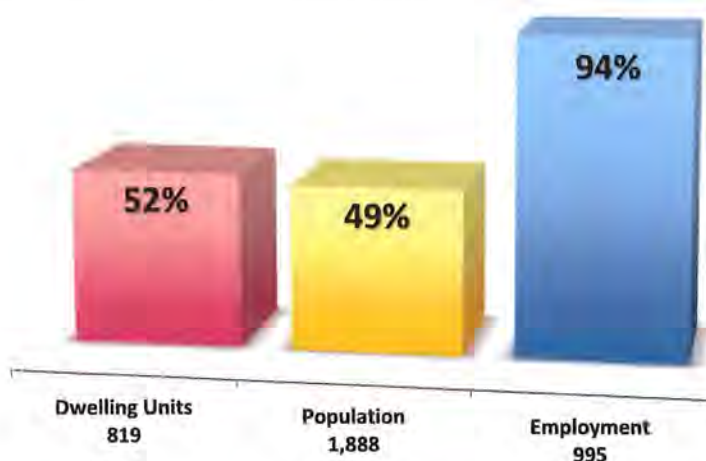
Demography. Between 2001 and 2011, the District of Lantzville sub-region saw its population decline by 2.4 percent, going from 3,963 to 3,867 residents.⁶ This trend in population decline resulted in the District's share of the regional population falling from 3.0 percent in 2001 to 2.8 percent by 2006, and further to 2.6 percent by 2011.

Contingent on the District implementing adequate servicing throughout the municipality over the longer-term, the coming 30 years would see Lantzville's population grow by 49 percent (slower than the 56 percent projected RDN-wide), as 1,888 new residents are added to the District by 2041. On an age specific

⁶ The District of Lantzville incorporated in 2006. In order to consider trends further back in time, data for 2001 were obtained for the area represented by its current municipal boundaries.

Figure 22

Summary of Changes, District of Lantzville 2011-2041



basis, the District's under-20 population is expected to grow by eleven percent (adding 83 people), while the prime working aged-group—those between 20 and 64—would grow by 18 percent (429 additional people). As at the regional level, the fastest-growing group would be the 65-plus segment, projected to almost triple in size (growing by 199 percent) as this age group grows by 1,376 people. This would take the older segment's share of total population in Lantzville from 18 percent in 2011 to 26 percent by 2041.

These changes in the composition of Lantzville's population would see it go from being younger than the RDN as whole in 2011 (18 percent of residents aged 65-plus

locally versus 23 percent regionally) to being older by 2041 (36 percent aged 65-plus versus 31 percent).

Employment. Over the next three decades, employment in the District is expected to grow by 94 percent, reaching 2,051 jobs by 2041 (995 more than in 2011). On an industry basis, six sectors are projected to grow faster than the overall average. The fastest four growing sectors would be: Accommodation and Food Services (185 percent growth, 87 new jobs), Construction (117 percent growth, 137 new jobs); FIRE (113 percent growth, 241 new jobs); and Health and Education (106 percent growth, 283 new jobs). Relatively robust growth in both FIRE and Education and Health will see these two broad sectors remain the largest in the District over the coming decades, accounting for 22 and 27 percent of all jobs in Lantzville, respectively, in 2041 (up from their respective 20 and 25 percent in 2011).

The Primary sector (five percent growth), Transportation, Warehousing & Utilities (13 percent), Manufacturing (33 percent), and Public Administration (31 percent) are industries projected to grow below the District-wide average, as their combined contribution to future employment in this sub-region would only add 29 jobs over the next three decades.

3 Rest of RDN

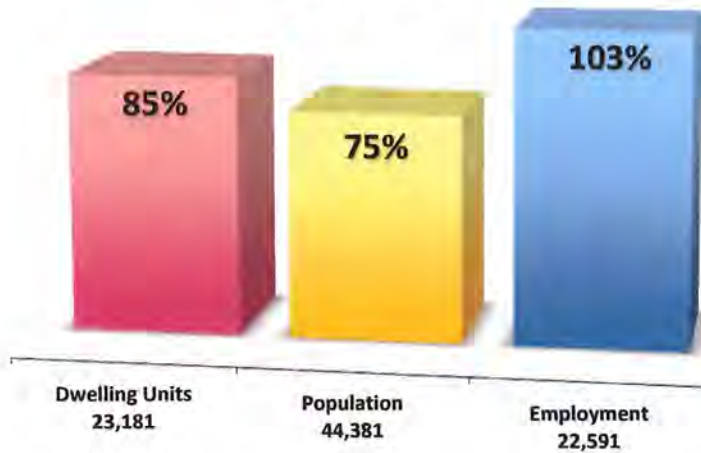
Housing. The total occupied dwelling stock in this broad sub-region that includes the Town of Qualicum Beach, the City of Parksville, and all unincorporated parts of the RDN, is projected to increase by 85 percent as 23,181 units are added over the next 30 years. This would see the total number of dwelling units increase from 27,211 units in 2011 to 50,392 units by 2041. Ground oriented accommodation would continue to dominate the residential additions, representing 95 percent of all net new additions (22,037 additional ground oriented units) versus only five percent in apartment formats (1,144 additional units).

Demography. Over the next three decades, the number of people living in the RDN but outside of the City of Nanaimo and the District of Lantzville is projected to grow by 75 percent. This represents a faster rate of growth than what is being projected for the Region as a whole (56 percent), as well as for the City (44 percent) and the District (49 percent). It is important to note that this pattern was also seen historically (the rest of RDN has grown by 15 percent since 2001 while the Region-wide population grew by 14 percent).

Between 2011 and 2041 the Rest of the RDN sub-region would add 44,381 people to its current population of 59,510 residents, reaching a total population of 103,891 by 2041. In terms of net additions, the Rest of the RDN sub-region is projected to accommodate 52 percent of the growth in the regional population (44,381 of 84,724 new residents).

Figure 23

Summary of Changes, Rest of RDN 2011-2041



As with the other sub-regions and the RDN as a whole, the age composition of the Rest of RDN sub-region's population would change significantly in the coming years, the result of both the aging of existing residents and the immigration of new (younger) ones. However, unlike the other regions, the fastest growth would be seen in the under-20 group, which is projected to grow by 84 percent by 2041 (adding 7,902 people), the result of significant additions to the sub-region's ground oriented dwelling stock, which will serve to attract both larger and younger households than the City of Nanaimo. The oldest demographic segment—those aged 65-plus—would also experience above-average growth due to aging, at 81 percent (13,904 additional residents), while the 20 to 64 group would grow by 69 percent (22,575 new people).

These changes would see the already-older sub-region age over time, however not to the degree seen in the other parts of the RDN due to the significant increase in the sub-region's ground oriented stock (the Rest of RDN is projected to add 10,000 more ground oriented units than the City by 2041, for example), with the share of population aged 65-plus increasing only marginally, from 29 to 30 percent between 2011 and 2041.

Employment. Employment in the Rest of the RDN sub-region is projected to more than double by 2041. That said, while the rate at which employment is expected to grow in this sub-region is above the rate expected for the City of Nanaimo (51 percent growth) and the District of Lantzville (94 percentage growth), the absolute job additions for this sub-region (at 22,591) would be below the 25,127 additional jobs created in the City of Nanaimo over the same period.

In terms of the composition of employment growth in this sub-region, FIRE is expected to grow the fastest (at 142 percent), followed closely by Health and Education (138 percent growth). Trade is projected to be the third-fastest growing sector (122 percent growth). All other sectors are expected to grow below the 103 percent average. The slowest-growing sectors would be those exhibiting slow growth at the regional level, as well as in Nanaimo and Lantzville: the Primary sector (six percent growth), Transportation, Warehousing & Utilities (19 percent), Public Administration (28 percent), and Manufacturing (29 percent).

Looking at this sub-region's projected employment growth in absolute terms, the Health and Education (6,274 new jobs, 28 percent of total employment growth), FIRE (5,052, 22 percent), Trade (3,521, 16 percent), and Accommodation and Food Services (2,214, ten percent) sectors are expected to account for almost 76 percent of all employment additions by 2041.

V TAZ-level Projection Methodology

Based on the projections of population, housing, and employment for the RDN and its three sub-regions (the City of Nanaimo, the District of Lantzville, and the Rest of RDN geography), small area estimates of these same dimensions were produced for 229 traffic analysis zones (TAZs) within the Region, plus two additional TAZs in the Cowichan Valley Regional District. The general approach to developing these projections was to recognize both the historical patterns of change in population, housing, and jobs within specific TAZs and, to the extent it was possible, future changes that could be accommodated given various land-use and zoning parameters specific to each of the 229 TAZs.

From a population perspective, TAZ-level estimates were produced using a cohort survival model to describe the demographic consequences of aging, natality, mortality by age for each zone. Future net migration for each TAZ was in part derived from the historical patterns of change in housing development seen within each sub-region and in part by each zone's capacity to accommodate specific types of dwelling unit additions.

Similarly, the zone-level employment projections were developed in part based on trends in each TAZ's historical share of its parent sub-region's growth in employment, and in part based on the land use constraints or policies for a variety of non-residential land uses. In order to consider the land-using dimension of employment, it was necessary to convert employment (which was tabulated for industry sectors commonly used in transportation modelling) to three general land use categories: commercial and mixed use; public and institutional; and industrial. This was done using a detailed occupation by industry matrix for the RDN from the most recent Census whereby specific occupations within industry groupings could be allocated to different land uses (for example occupations in financial services related to the manufacturing industry).

As such, the small area projections were developed to reflect land use policy in the projection process. The projections were developed using a mathematical rules approach that was applied uniformly to all TAZs within the Region (and each sub-region). Therefore, specific instances of change in land use or recent development may not be reflected in current land use policy and may not have been represented at the individual TAZ level as part of the initial, land use-based projection run. As such, an initial projection run derived using the mathematical rules approach was reviewed by staff at the City of Nanaimo, the District of Lantzville, and the Regional District of Nanaimo to account for more recent development or policy directions, with TAZ-specific amendments (of future housing or employment growth) being made to arrive at the final allocation of population, housing, and employment across all TAZs.

1 Model Framework

As the availability of housing will, in large part, determine where future population is accommodated within the RDN, housing provides the functional link between the sub-regional and TAZ population projections. As such, the sub-regional outlook yields the supply of net new housing additions that are to be allocated to each sub-region's TAZs. From this sub-regional total, allocations of additional housing to TAZs commences with each zone's share of sub-regional housing growth by structure type over the previous five-year period. For the first five-year projection period (2011 to 2016), each zone is initially allocated the same positive share of the sub-region's growth in housing by type seen over the previous five-year period (in this case based on the changes seen between 2006 and 2011).

This is, however, a constrained allocation process as per the current landscape of zoning and land uses within each TAZ. Land use constraints are based on the availability and density of land in each TAZ that is currently zoned for residential uses, as measured by current municipal zoning supplied by the City of

Nanaimo and the RDN. Municipal zoning was grouped into broad land-use categories, including residential uses for ground oriented and apartment housing, net of undevelopable lands such as roadways and rights of way. The allocation of additional dwelling units was therefore subject to the following constraints

1. **Availability:** there must be land within a particular TAZ that permits the specific form of residential development;
2. **Density:** the density of residential land use (dwelling units per hectare) on eligible land cannot exceed a sub-region specific maximum density, which is calculated by excluding zones with very small areas zoned for the use, or where densities become very high and do not reflect reasonable development densities for the sub-region;
3. **Diminishing maximum growth rates:** growth in TAZs that experienced relatively robust increases (in housing) over the previous time period are reduced over time to isolate the effect of large development projects being completed in specific TAZs;
4. **Slowing growth in very dense zones:** the share of growth allocated to TAZs that are approaching the maximum density within a sub-region is reduced to isolate the effect of TAZs approaching build-out; and
5. **Incremental development:** historically, a TAZ may have experienced no growth, or negative growth. In the approach of first carrying forward historical trends, this would result in these TAZs never accounting for a positive share of sub-regional growth in future years, even if suitable land were available. To provide the opportunity for such TAZs to share in projected future growth within a sub-region, these TAZs are allocated a small number of dwelling units, subject to underlying land uses and the TAZ not exceeding the maximum density constraint.

Based on these parameters, as well as on detailed input from City Nanaimo staff regarding the future expected spatial distribution and timing of new development, the resultant number of additional units allocated to each TAZ is then populated using RDN-specific persons-per-unit occupancy ratios and occupants' age and sex distribution for each structure type (derived from a custom tabulation from the most recent Census data). The resultant population vectors represent the net migration inputs that are added to the demographic modeling of each zone's existing resident population (aging, deaths, and births).⁷

In terms of modeling demographic change for each TAZ's existing residents, the model uses the 2011 population by five year age group and sex in each zone as its base, with the first step being modelling their aging and mortality over the next five-year period given prevailing regional age and sex specific mortality rates. The next step is to apply age specific birth rates to the female population to estimate the number of births that would occur in each zone for that five-year period based on resident demography. The result is a projection of natural change (accounting for aging, deaths, and births) in each TAZ's resident population. Added to these residents is the number of net migrants from the housing allocation process, which produces projected TAZ populations by age and sex between 2011 and 2041 based on five-year projection increments.

The employment approach is structured along the same lines as the demography, with future employment allocations based in part on historical growth trends, in part on existing land use policy as represented by land use zoning, and in part on the future pattern of growth anticipated by City of Nanaimo staff.⁸ Sub-regional employment growth by industry sector (office; retail; service; industrial; education; and health) is allocated to component TAZs on the basis of each zone's historical share of sub-regional growth in employment, subject to the same constraints of availability of land with appropriate zoning and density.

⁷ Note that housing projections for the two TAZs in the Cowichan Valley Regional District (TAZs 3301 and 3302) were developed using RDN-level growth rates for ground oriented and apartment housing over the 2011 to 2041 period.

⁸ Note that as with projected housing growth, future employment in TAZs located in the Cowichan Valley Regional District has been projected to follow RDN-level trends.

As indicated earlier in this report, this process requires the transposition of employment from industry classifications into occupation classifications and three general non-residential land uses (commercial and mixed use; public and institutional; and industrial). The result of this process is a projection of employment by industry between 2011 and 2041 based on five-year projection increments. (Note that the most recent employment data are from the 2006 Census; as such, 2011, while representing the base year for the employment projection, is itself an estimate.)

VI Appendix - TAZ-level Projection Summary

Table A-1: 2011 Estimates

AG03_SUPERZONES	Pop_0-24	Pop_25-44	Pop_45-64	Pop_65-74	Pop_75+	POP11	GO_Hous	APT_Hous	HOUS11	Office	Retail	Service	Industrial	Education	Health	EMP11
North Slope / Dover	3,371	2,425	4,173	1,481	1,444	12,895	4,326	533	4,859	1,475	2,066	729	1,182	351	518	6,322
Hammond Bay / Linley Valley	1,536	1,263	2,122	790	457	6,168	2,259	280	2,539	714	38	73	283	68	83	1,258
Rutherford / Pleasant Valley	2,035	1,893	2,587	1,302	1,670	9,487	3,481	751	4,232	1,264	1,486	803	1,135	159	390	5,238
Long Lake	1,865	1,743	1,741	446	632	6,427	2,149	783	2,932	1,831	566	542	581	230	422	4,173
Westwood	1,000	798	1,327	360	254	3,739	1,409	34	1,444	151	4	45	152	39	65	456
Harewood / South End	2,916	2,568	2,674	655	586	9,399	3,100	732	3,831	517	174	267	824	243	306	2,331
Diver Lake	1,393	1,302	1,200	318	234	4,446	1,546	164	1,710	1,707	854	733	2,045	112	219	5,670
Departure Bay	1,415	1,176	1,682	641	531	5,446	1,850	510	2,361	524	121	280	203	75	163	1,365
Hospital / Townsite	3,548	3,696	3,668	1,080	1,185	13,178	3,465	2,836	6,301	1,614	512	853	1,959	358	3,619	8,915
University	2,074	1,784	1,574	461	376	6,268	2,175	616	2,790	465	269	303	366	1,721	76	3,201
Downtown	1,087	1,532	1,676	484	600	5,379	1,267	1,590	2,857	3,388	742	1,469	1,478	116	955	8,148
Sandstone / Cinnabar Valley	1,122	1,059	1,129	327	266	3,903	1,404	5	1,409	176	64	54	1,570	96	63	2,024
RDN A/C / Cedar	2,961	2,427	4,054	1,186	584	11,212	4,650	29	4,679	675	172	408	1,490	191	95	3,032
Lantzville and Jingle Pot	1,513	1,035	2,082	551	358	5,538	2,136	25	2,161	410	110	155	572	207	143	1,598
Rest of RDN	9,058	7,456	17,422	8,714	6,875	49,526	21,912	1,256	23,167	5,488	2,045	3,203	5,510	1,147	1,749	19,142

Table A-2: 2021 Projections

AG03_SUPERZONES	Pop_0-24	Pop_25-44	Pop_45-64	Pop_65-74	Pop_75+	POP21	GO_Hous	APT_Hous	HOUS21	Office	Retail	Service	Industrial	Education	Health	EMP21
North Slope / Dover	2,961	2,908	4,234	2,186	1,678	13,966	5,138	665	5,803	1,648	2,301	871	1,250	404	616	7,091
Hammond Bay / Linley Valley	1,546	1,574	2,079	1,229	849	7,276	2,791	387	3,177	776	42	80	293	75	91	1,356
Rutherford / Pleasant Valley	2,415	2,477	3,272	1,485	1,682	11,331	4,292	1,441	5,733	1,442	1,703	1,004	1,382	188	467	6,185
Long Lake	1,939	1,983	2,467	918	606	7,913	2,734	1,000	3,734	2,094	650	635	601	254	459	4,693
Westwood	886	937	1,348	679	403	4,253	1,672	43	1,716	208	5	65	263	57	97	696
Harewood / South End	2,811	3,057	3,417	1,344	802	11,431	3,857	919	4,776	587	198	326	1,008	308	364	2,790
Diver Lake	1,331	1,368	1,583	540	362	5,183	1,830	203	2,033	2,016	1,002	793	2,722	135	265	6,933
Departure Bay	1,082	1,159	1,559	809	682	5,290	1,906	536	2,442	584	141	343	203	84	183	1,538
Hospital / Townsite	3,255	4,163	4,178	1,736	1,303	14,634	3,769	3,433	7,202	1,938	639	1,091	2,299	420	4,152	10,538
University	1,936	2,284	1,994	783	538	7,534	2,603	746	3,349	511	314	366	389	2,062	96	3,739
Downtown	1,202	1,676	1,811	857	601	6,148	1,476	1,880	3,356	3,885	899	1,834	1,592	124	1,070	9,404
Sandstone / Cinnabar Valley	1,348	1,117	1,727	617	402	5,211	1,984	63	2,047	213	72	70	1,983	129	86	2,554
RDN A/C / Cedar	2,962	2,949	4,091	2,069	1,390	13,460	5,473	30	5,503	825	201	519	1,683	245	115	3,588
Lantzville and Jingle Pot	1,318	1,392	2,170	980	604	6,464	2,481	25	2,506	491	153	236	665	231	176	1,952
Rest of RDN	12,312	12,955	17,500	11,424	11,129	65,321	29,159	1,635	30,794	7,206	3,002	4,879	7,542	1,625	2,477	26,731

URBAN FUTURES

Strategic Research to Manage Change

Table A-3: 2031 Projections

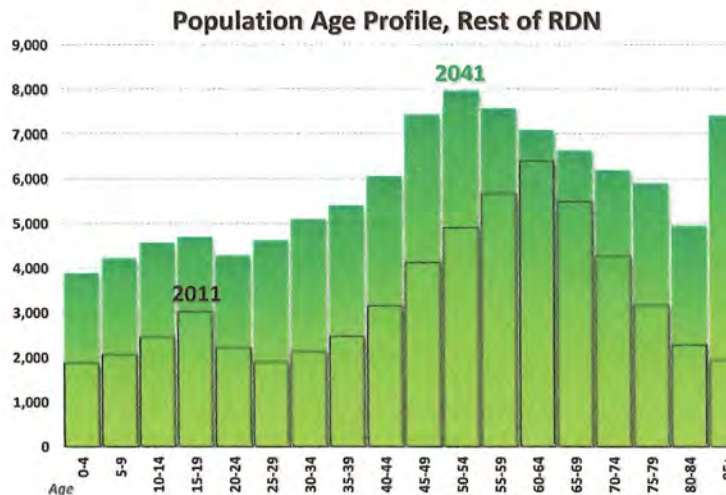
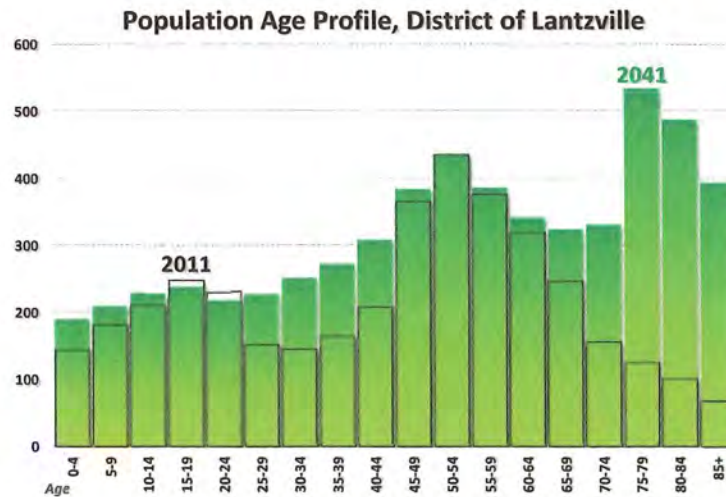
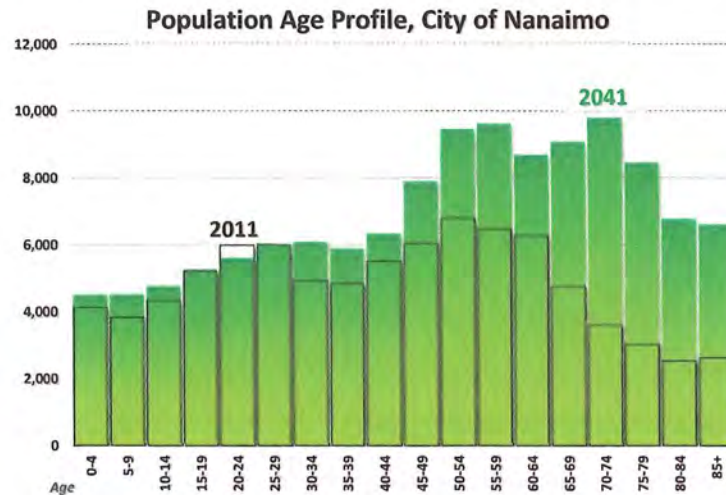
AG03_SUPERZONES	Pop_0-24	Pop_25-44	Pop_45-64	Pop_65-74	Pop_75+	POP31	GO_Hous	APT_Hous	HOUS31	Office	Retail	Service	Industrial	Education	Health	EMP31
North Slope / Dover	2,858	3,368	3,606	2,404	2,422	14,658	5,490	796	6,287	2,008	2,568	944	1,225	479	762	7,986
Hammond Bay / Linley Valley	1,588	1,741	2,030	1,220	1,338	7,918	3,099	474	3,573	870	46	83	289	81	99	1,467
Rutherford / Pleasant Valley	2,550	2,816	3,349	1,887	1,847	12,449	4,489	2,121	6,610	1,851	1,982	1,169	1,405	225	579	7,211
Long Lake	1,935	2,025	2,634	1,318	1,004	8,916	2,977	1,138	4,115	2,529	706	643	556	276	509	5,219
Westwood	930	1,034	1,125	815	725	4,630	1,867	51	1,918	270	6	90	361	94	158	980
Harewood / South End	2,917	2,962	3,794	1,928	1,452	13,052	4,343	1,043	5,386	718	224	360	1,018	426	463	3,210
Diver Lake	1,294	1,284	1,687	880	592	5,738	1,970	240	2,210	2,426	1,126	859	2,809	173	330	7,723
Departure Bay	1,013	1,136	1,229	867	891	5,136	1,942	548	2,490	708	164	379	198	95	210	1,755
Hospital / Townsite	3,489	3,357	4,607	2,326	1,942	15,722	3,979	3,747	7,726	2,517	759	1,245	2,354	518	4,790	12,183
University	2,225	2,216	2,684	1,246	901	9,272	3,090	945	4,035	611	360	414	381	2,422	125	4,312
Downtown	1,627	1,493	2,389	1,150	975	7,635	1,895	2,188	4,083	4,620	1,029	2,056	1,574	133	1,202	10,613
Sandstone / Cinnabar Valley	1,865	1,871	2,735	1,148	774	8,394	2,949	380	3,328	317	86	103	2,474	195	142	3,317
RDN A/C / Cedar	3,021	3,257	3,498	2,165	2,442	14,383	5,971	32	6,003	996	224	570	1,698	322	142	3,952
Lantzville and Jingle Pot	1,395	1,617	1,675	1,434	1,121	7,242	2,817	35	2,852	622	193	302	724	263	221	2,325
Rest of RDN	16,296	16,874	20,699	10,729	15,217	79,814	36,353	2,013	38,366	9,669	3,921	6,042	8,835	2,251	3,431	34,148

Table A-4: 2041 Projections

AG03_SUPERZONES	Pop_0-24	Pop_25-44	Pop_45-64	Pop_65-74	Pop_75+	POP41	GO_Hous	APT_Hous	HOUS41	Office	Retail	Service	Industrial	Education	Health	EMP41
North Slope / Dover	2,967	2,918	4,147	2,124	3,057	15,212	5,784	968	6,753	2,273	2,787	1,003	1,229	552	907	8,752
Hammond Bay / Linley Valley	1,745	1,697	2,212	1,423	1,649	8,726	3,454	578	4,031	948	49	86	292	88	107	1,570
Rutherford / Pleasant Valley	2,813	2,928	3,813	2,048	2,583	14,185	4,742	2,887	7,630	2,247	2,272	1,329	1,439	260	702	8,249
Long Lake	1,888	1,935	2,754	1,468	1,635	9,681	3,164	1,308	4,472	2,874	754	661	544	289	560	5,683
Westwood	1,011	946	1,336	710	1,020	5,023	2,088	60	2,149	298	7	107	412	121	204	1,149
Harewood / South End	2,807	2,814	4,203	2,225	2,337	14,386	4,714	1,181	5,895	827	252	396	1,033	568	573	3,649
Diver Lake	1,255	1,256	1,730	943	1,051	6,236	2,116	286	2,402	2,772	1,252	941	2,898	225	416	8,505
Departure Bay	947	918	1,386	726	1,134	5,111	1,989	561	2,550	810	189	409	198	106	234	1,946
Hospital / Townsite	3,249	3,013	5,263	2,412	2,881	16,818	4,283	4,021	8,304	3,065	883	1,386	2,408	631	5,465	13,837
University	2,137	2,051	3,164	1,625	1,537	10,514	3,387	1,015	4,403	693	408	459	383	2,703	157	4,803
Downtown	1,646	1,524	2,786	1,416	1,470	8,841	2,125	2,475	4,600	5,233	1,155	2,272	1,577	138	1,291	11,665
Sandstone / Cinnabar Valley	2,126	2,243	2,799	1,766	1,452	10,387	3,446	682	4,127	441	144	146	3,137	326	228	4,421
RDN A/C / Cedar	3,211	3,198	3,790	2,359	2,835	15,393	6,550	33	6,584	1,130	246	622	1,719	388	160	4,265
Lantzville and Jingle Pot	1,546	1,505	2,131	1,000	1,851	8,032	3,181	45	3,226	733	224	357	772	288	257	2,631
Rest of RDN	19,092	18,639	26,715	10,501	15,549	90,496	42,504	2,400	44,904	11,961	4,739	7,077	9,921	2,826	4,308	40,832

VII Appendix - Auxiliary Figures

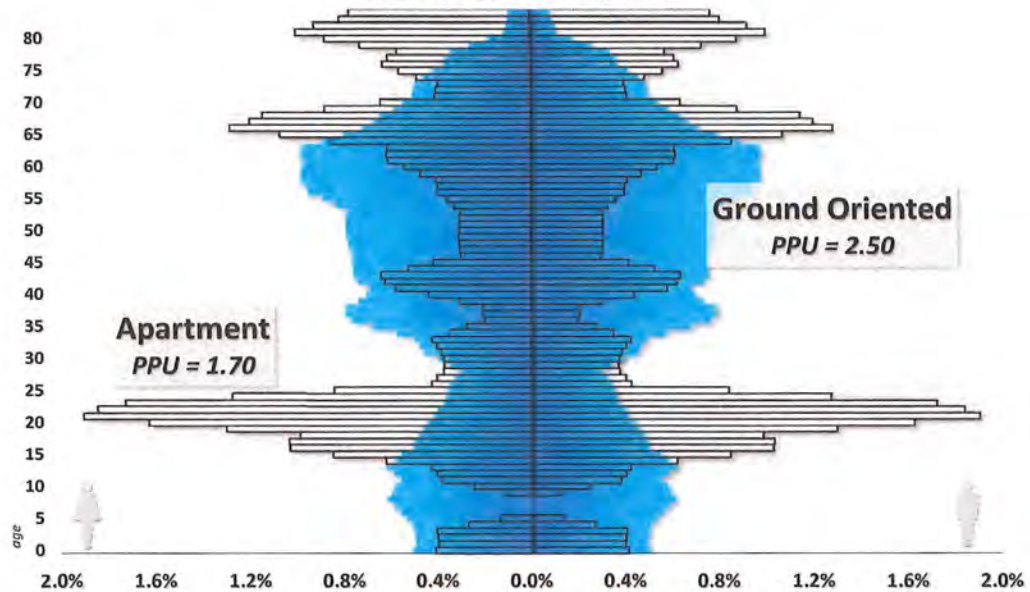
Population Age Profiles



In-Mover Age Profiles

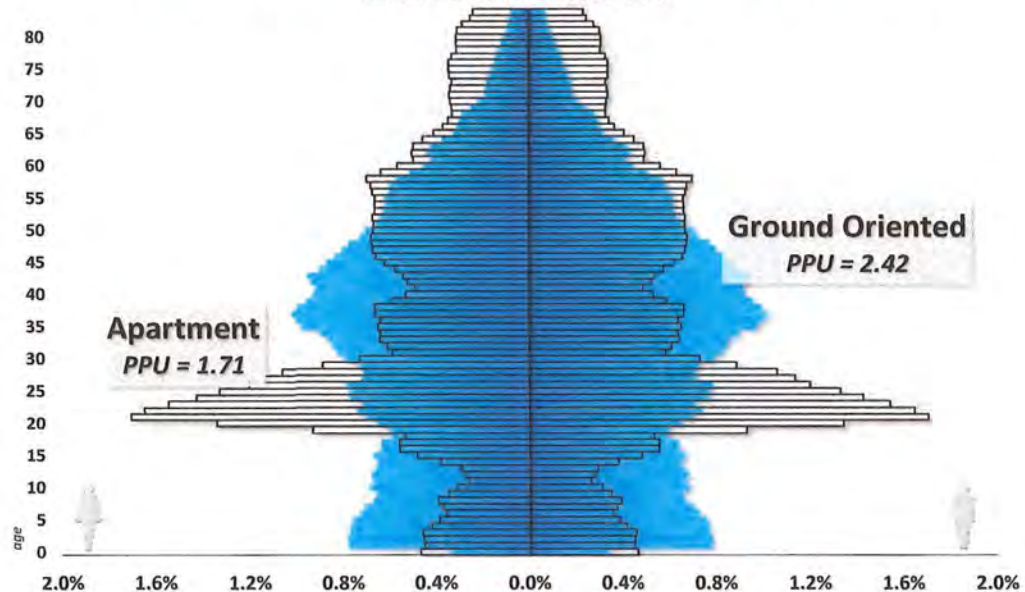
Population Age Profile, In-movers, New Units, RDN

Based on 2006 Census data



Population Age Profile, In-movers, Existing Units, RDN

Based on 2006 Census data



VIII Data Sources

The following data sources were consulted in preparing the historical estimates of population, housing, and employment for the Regional District of Nanaimo, its three sub-regions, and each of the 229 TAZs:

Statistics Canada, Census of Canada, 2011

Population by age and sex; Total occupied private dwellings

Statistics Canada, Census of Canada, 2006

Population by age and sex; Occupied private dwellings by structure type;

Employment by Place of Work and Residence by Industry

Statistics Canada, Census of Canada, 2001

Population by age and sex; Occupied private dwellings by structure type;

Employment by Place of Work and Residence by Industry

Statistics Canada, Demographic Estimates Compendium, 2011

Statistics Canada, Labour Force Survey, 2011

City of Nanaimo

Number of Employees by Major Employer

Commentary on, and input provided for, the direction and magnitude of change in population, housing, and employment in the study area TAZs