Demographic/Housing Context Evaluation & Economic Impact Assessment

Oakridge Centre Redevelopment

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Prepared for

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by

URBAN FUTURES
Strategic Research to Manage Change

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Introduction & Overview

Urban Futures has been retained by Brook Pooni Associates to produce a multi-dimensional analysis that relates to the proposed Oakridge Centre redevelopment in the City of Vancouver. As such, this report details the demographic and housing contexts for changes at the Oakridge Centre site, as well as describes the economic impacts that the redevelopment could have, both of which are hoped to provide insight and information that will assist the project proponents, City planning staff, and City council in making effective project-related decisions.

In the following pages a demographic overview and long-range projection of housing demand is presented for the City of Vancouver over the coming two-plus decades. As changes in housing demand and consumer spending are driven by both population growth and changes in age structure, it is important to recognize how the City of Vancouver's population is expected to grow (and change) in the coming years.

Projections are also presented for the Greater Vancouver region, within which the City of Vancouver shares a common labour force, transportation network, and consumer spending marketplace with other member municipalities. These projections provide insight into the factors that will shape the City-wide and regional demography and dwelling stock in the coming decades.

The economic impacts associated with the redevelopment of Oakridge Centre are measured in terms of how the physical changes (expansion and densification) at the site could tangibly affect municipal and regional revenues, as well as levels of employment, income, and spending within the local (and broader) economy.

This report has two major sections. *The Regional and City-wide Context: Population and Housing* begins on page 2, while the *Economic Impact Assessment* begins on page 19.

Summary of Major Findings

Regional & City-wide Context: Population & Housing

Greater Vancouver

- **Total Population:** Over the next 24 years Greater Vancouver's resident population is projected to grow from 2.43 million residents (2012) to 3.40 million by 2036. The region would add 970,656 net new residents over this period (40 percent growth), an average of 40,300 new residents each year.

- **Population Composition:** Relative to this 40 percent growth in total population, the number of residents 65 years of age and older would grow by 126 percent, adding 414,241 people by 2036. By the end of the projection period, seniors would represent 32 percent of Greater Vancouver's population, up from 14 percent today. The 20 to 64 age group is expected to see its prominence wane, falling from two-thirds of the regional population today (66 percent) to 59 percent by 2036. This would be the result of this segment growing by only 25 percent (413,108 additional people). The under-20 segment would also grow relatively slowly, increasing by 29 percent as it adds 149,292 people.

- **Housing Demand:** Total housing occupancy demand is projected to grow by 49 percent between 2012 and 2036 (460,042 additional dwelling units). The demand for ground oriented units would increase by 46 percent (255,390 new units), while the demand for apartments would grow much faster in relative terms, at 55 percent as 208,861 additional units would be demanded.

Vancouver/UEL

- **Total Population:** Vancouver/UEL's population is projected to increase by 19 percent by 2036, growing from 651,631 residents (in 2012) to 775,338 by 2036. Adding 123,707 net new residents would see an average of 5,154 people added to the City each year.

- **Population Composition:** As at the regional level, the seniors' population is projected to grow more rapidly than other population groups: the 65-plus population is projected to grow by 64 percent as it adds more than 54,000 people by 2036. In contrast, the City's working- and school-aged segments would see relatively slow growth, increasing by 12 percent (53,834 additional people) and seven percent (15,060 additional people), respectively. Interestingly, when compared to the region as a whole in 2012, the City has a much larger proportion of its population in the 20 to 39, early family-formation / working age group (36 percent in the City versus 30 percent region-wide), largely a function of the predominance of both apartments and students living in Vancouver/UEL. That said, the City also had a smaller proportion of youth, indicating a much lower fertility rate in the City. Again, a potential consequence of the types of housing that have been added to the City in the past decade.

- **Housing Occupancy:** Total housing occupancy in Vancouver/UEL is projected to increase by 23 percent by 2036, as 68,458 net new units are added in the City. Apartment units would account for the greatest number of net additions (55,611), with the apartment stock increasing by 35 percent. The number of ground oriented units, on the other hand, is projected to increase by only 12 percent, as 13,113 units are added. Over the anticipated eight-year construction timeline for the redevelopment of Oakridge Centre, the City is projected to add a total of 26,883 dwelling units; thus, the number of dwelling units expected to be added at the Oakridge site equates to ten months of net additions to Vancouver/ UEL's housing stock, or approximately one-tenth of the annual additions expected over the eight-year period.

Economic Impact Assessment: Oakridge Centre Redevelopment

Fiscal Impacts

- The proposed redevelopment of Oakridge Centre would generate $45.7 million in up-front development cost charges and levies. Upon project completion, property tax revenues associated with the expanded office, retail, and residential space would be $13.7 million per year in perpetuity.

- As a result of these fiscal impacts, 464 jobs would be created (or supported) due to the DCCs and DCLs, and a further 181 jobs would be created (or supported) annually upon project completion due to the net increase in property tax being paid to the City of Vancouver.

Economic Impacts

- With redevelopment costs estimated to be in the neighbourhood of $2 billion, 2,600 construction and development-related jobs (full-time equivalent, FTE) would be created annually over the course of the eight-year project development timeline. Of these jobs, 1,593 would be generated directly (with most of these jobs locating on-site during the redevelopment) and 1,008 would be generated in other industries as a result of the redevelopment (the indirect or spin-off employment effects).

- The 1,593 direct jobs generated by the proposed redevelopment activity would generate $93.8 million in annual employment income during the eight-year construction timeline, of which $73.2 million would be spent on goods and services each year.

- Once the proposed redevelopment is completed, employment locating on-site in the expanded office and retail space would equate to 3,205 jobs (FTE). Of these, 994 would be in the new office space and 2,211 would be new retail jobs. It is estimated that these 3,205 jobs would generate $166.0 million in employment income annually, of which $129.7 million would be spent on goods and services each year.

- Upon project completion, annual non-wage, non-salary spending on the part of businesses locating in the expanded office and retail space has been estimated to be $75.7 million. This non-wage, non-salary spending would generate 1,463 jobs (FTE) each year throughout BC.

- It is estimated that the 2,818 new apartments that would be added as part of the redevelopment would yield a permanent resident population of 6,241 people at build-out and full occupancy. These residents would earn an estimated $272.8 million in total annual income, of which $213.1 million would be spent throughout BC.

Regional & City-wide Context: Population and Housing

Oakridge Centre Redevelopment

I Projected Population & Housing in the City of Vancouver & the Region

As noted in the introduction to this report, along with an assessment of the economic impacts associated with the proposed changes at the Oakridge Centre site (presented later in this report, on page 17), Urban Futures was asked to provide a demographic overview and long-range projection of housing demand in the City of Vancouver over the coming decades.[1] The long-run outlook for housing change can serve as context for the redevelopment of Oakridge Centre, which would include both a significant residential component (in addition to a commercial and office expansion).

As changes in housing demand and consumer spending are driven by both population growth and changes in age composition, it is important to recognize how the City of Vancouver's population is expected to grow (and change) in the coming years. Further, as the City is part of a much larger functional region, projections for the City need to reflect the broader regional context in terms of population growth and its implications for future housing and retailing, as well as the diversity of land uses and land use policies throughout the region. These projections provide insight into the factors that will shape the City-wide and regional demography and dwelling stock in the coming decades.

1 Projection Methodology

In developing City-specific projections of population and housing change, Urban Futures has adopted a community lifecycle modeling approach, which builds on a range of demographic and housing data from the 2011 (and previous) Census counts, Canada Mortgage and Housing Corporation (CMHC), and the City of Vancouver planning department. Within this community lifecycle approach, the first step in developing the projections was to recognize the demographic and economic contexts for the City, from the demographic and economic outlook for Greater Vancouver through to similar projections for the province of British Columbia and for Canada as a whole. Explicitly recognizing these broader contexts acknowledges the fact that the City is an integral part of a large and diverse functional region and that this functional region—along with others in Canada—will all be influenced by future levels of migration amongst our communities and immigration of new residents from outside our borders.

With these broader contexts in mind, the modelling approach for the City begins by accounting for vital changes (births, aging, and deaths) within the City's existing population. Next, the demographic consequences of mobility—namely, residents moving out of, and into, the City each year—are considered, accounting for the turnover of existing dwelling units (i.e. the process by which households move out of the community and thereby vacate units into which new households can move) and their re-occupancy by households moving into the community. For each of these mobility groups, demographic characteristics are derived from the most recent Census data, which describe household mobility status by characteristics such as age and sex, dwelling structure type, and dwelling period of construction.

To determine the future scale and mix of new residential construction for the City in coming years, it is necessary to consider the regional context for net changes in housing occupancy. The projected level of residential construction in the City (and in all other parts of the region) will in part be a function of future regional housing occupancy demand that recognizes the changing composition of the region's population and trends in the types of housing that are maintained by the region's residents. It will also be in part a function of historical trends in regional development patterns and major plans and policy objectives of the region's municipalities. Therefore, historical patterns of development are used along with the collection of municipal plans and policies as reflected through the Official Community Plans to allocate increments of additional dwelling units throughout the region.

1 All the references to the City of Vancouver (or the City) throughout this report pertain to the aggregate of the City of Vancouver and the University Endowment Lands (UEL).

These incremental changes in the dwelling stock for each part of the region are then populated (essentially "filled-up") based on a custom tabulation of the most recent (2006) Census data on household characteristics. Once units become occupied, the occupants become part of the base population, described by age, sex, and type of dwelling, for use in the next annual iteration of the community lifecycle model.

In adopting this forecasting framework, the baseline projections of population and housing change for the City of Vancouver represent a step-down, trend-based approach to estimating future growth and change. The projection series is therefore built on a foundation of empirically-observed long-run historical trends in Canada, British Columbia, Greater Vancouver, and the City of Vancouver—extended into the future in a manner that acknowledges both long-run patterns and more recent evidence of change that may signal future deviations in long-run trends. As such, the projections presented in the following pages are considered to be *trend-based* in nature.

The use of trend-based projections will be of particular relevance in the context of this analysis, as demographic change alone will ensure that Vancouver's future is not a simple extension of its past. The dominant demographic theme observed within the City—and within the larger regional, provincial and national contexts—is that of an aging population, with most communities throughout Canada experiencing rapid growth in their older population in the years to come. This will be contrasted by relatively slow growth (and even some declines) in the number of people in the younger cohorts for some communities, with the demographic shift having profound implications for a wide range of issues from the labour force and health spending, to housing and land use change, and further to the magnitude and nature of household spending.

It is important to note that while the projections presented in the following pages document a great deal of information, the level of detail presented in the numbers themselves should not be interpreted as being indicative of any specific level of precision. While it has become common practice in many statistical reports to round numbers so as not to impart what is deemed to be an unnecessary degree of precision on the reader, this practice ensures that any subsequent analysis by the reader will be hindered by the fact that the numbers will not, as a result of rounding, add up. With a view to facilitating further analysis, the numbers presented in the text and figures on the following pages have not been rounded.

II The Regional Context for Demographic & Housing Change in the City

In developing projections for a City and its region it is important to note that population mobility (migration) effectively occurs between large, functional regions. For example, a migrant does not move from Ontario to British Columbia, but rather from the Toronto region to the Greater Vancouver region. What attracts migrants to a region is the range of opportunities offered, typically with respect to schooling, employment, and quality of life. When they actually arrive in their new region, the determinants of where they will ultimately situate within the region are largely a function of housing availability and, by extension, housing policy.

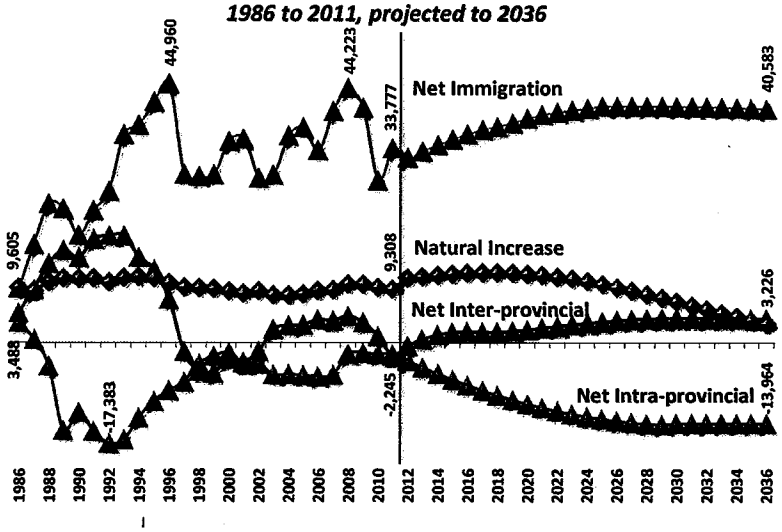
This reality means that the process of developing projections for a geography (such as Vancouver/UEL) within a larger functional region (Greater Vancouver) is much more complex than developing projections for British Columbia or for Canada. At the most fundamental level, this complexity requires a projection of demographic and economic growth and change for the functional region as a whole to be completed before the municipality itself can be considered, as it is the diversity of economic and social opportunities offered within the functional region that will determine the demographic and housing contexts for each of its member municipalities. Therefore, an added level of complexity results from considering all other municipalities within the functional region, a step that was briefly described above and considered through the spatial distribution of new housing throughout the region. With these considerations in mind, the following section explores demographic and housing-related changes for the Greater Vancouver region as a whole before considering the implications for Vancouver/UEL.

1 The Region's Population: Past, Present and Future

Over the past 26 years, the Greater Vancouver region (or metro Vancouver, formerly the Greater Vancouver Regional District, GVRD) has grown by over 988,000 people (68 percent growth), going from 1.64 million residents in 1986, to 2.19 million by 2006, and further to an estimated 2.43 million people today (in 2012; Figure 2, next page). The region has grown continually over this period, albeit at a variable annual rate, from highs of 3.2 percent annual growth in the mid-1990s to lows of 0.9 percent through the early-2000s. The annual rate of population growth inched back towards 2.0 percent in 2009 before bouncing between 1.4 percent in 2011 and 1.7 percent in 2012.

Figure 1

Components of Change, Greater Vancouver
1986 to 2011, projected to 2036



The predominant driver to this change in the region has been net immigration. From lows of under 10,000 net immigrants in the mid-1980s, net immigration to the region increased to more than 44,000 by the mid-1990s before falling back into the range of 28,000 to 35,000 annually from 1997 to 2006 (Figure 1). In 2008 net immigration increased once again into the 44,000-person range before falling back towards 30,000 in the following years, largely the result of the 2008/2009 financial crisis and accompanying recession.

While net intraprovincial migration (those moving within the province of BC) has historically seen more people move from Greater Vancouver to other parts of the province than those moving in the other

Figure 2

Total Population, Greater Vancouver

Actual 1986 - 2012; Projected to 2036

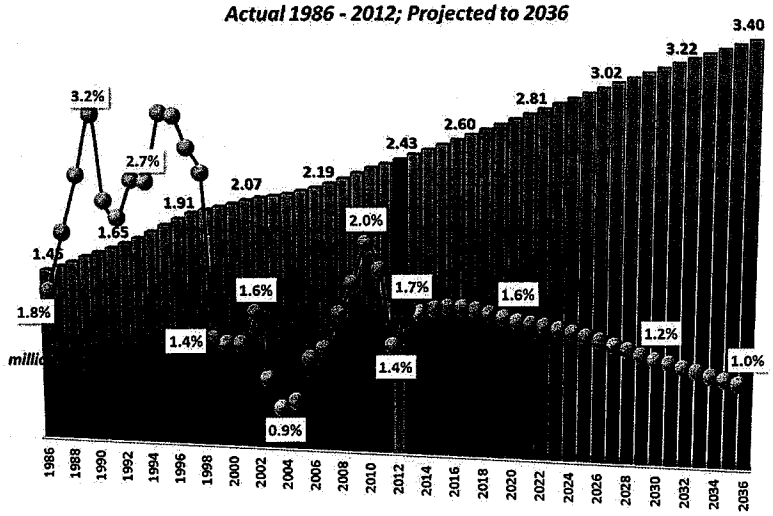
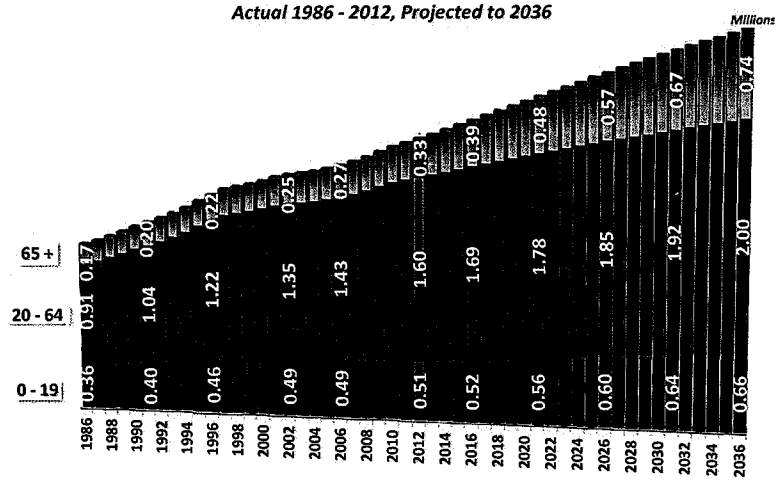


Figure 3

Total Population by Broad Age Groups, Greater Vancouver

Actual 1986 - 2012, Projected to 2036



direction each year, throughout the early-1990s and mid-2000s net interprovincial migration added people to the Greater Vancouver region.

The most recent data show that interprovincial migration has moved back into negative territory as more residents moved from the region to other provinces in Canada than came here from them, likely the result of a relatively strong job market in Alberta.

In looking forward, net immigration is expected to remain the predominant driver to population growth in the Vancouver region. The most significant change that can be expected is the slow decline in the contribution of natural increase, or the annual difference between births and deaths. By 2036 natural increase is expected to add only 3,200 people to the region, significantly below the 9,300 added today. (As a side note, natural increase is projected to become negative in 2041, as there will be more deaths than births annually beginning in that year.)

The composition of the region's current population, when combined with trends in migration, mortality, and fertility, and the inevitable process of aging, would see Greater Vancouver's population grow from 2.43 million residents in 2012 to 2.81 million by 2021, pass the three million mark by 2026 and reach 3.40 million people by 2036. The region would therefore add an average of over 40,300 new residents each year over this period as it grows by 40 percent.

Relative to this 40 percent increase projected for the population as a whole between 2012 and 2036, Greater Vancouver's 65-plus segment would grow at a much faster pace. From 328,826 residents in 2012, the population 65 and older would grow to more than 743,067 by 2036, a 126 percent (414,241-person) increase over the next two and a half decades (Figure 3). As a result, the segment of the population aged 65 and older would grow significantly as a share of the total regional population: by 2036 seniors will represent 32 percent of Greater Vancouver's population, up from only 14 percent today.

In comparison, the 20 to 64 age group is expected to see its prominence wane, falling from two-thirds of the regional population today (66 percent) to 59 percent by 2036. This would result in this age group growing by 25 percent over the next 24 years (413,108 additional people), from 1.6 million today to just over two million by 2036. Given the pattern expected for natural increase, the population 19 and under is also expected to grow relatively slowly, as they would only account for 15 percent of the growth expected by 2036. This group is expected to grow by 29 percent between 2012 and 2036, adding 149,292 more

youth by 2036. It is the aging of the region's existing population that will frame much of tomorrow's demographic change, with growth in the retirement-aged population exceeding both that of the working-aged and younger segments of the population. For every senior in the region today there would be 2.4 by 2036, while for every person in the labour force today (aged 20 to 64) there would be only 1.3 by 2036.

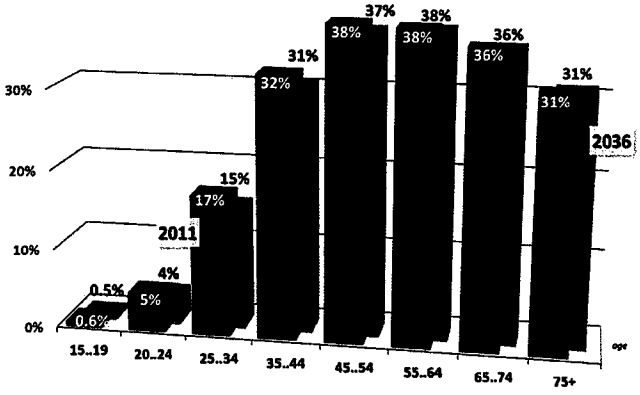
2 Housing Occupancy Demand in Greater Vancouver

While the region's growing and changing population will influence the type of housing required across Greater Vancouver, the distribution of that housing within the region will determine where people ultimately reside. Thus, the next step towards generating a projection of population and housing for Vancouver/UEL is estimating the scale and mix of future regional housing demand that would accompany growth and change in the region's projected population.

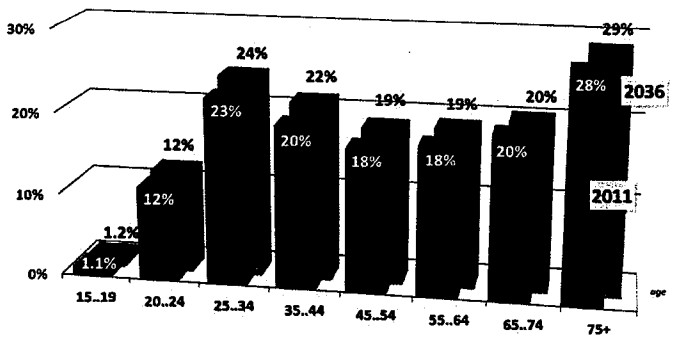
The link between housing occupancy and demography can be described by the percentage of people in an age group who are classified as being "household maintainers". In the Census questionnaire, each group of people living together in a private dwelling unit (a household) is asked to indicate the age and other attributes of the household member they consider to be primarily responsible for the financial support of that household. This person is referred to as the (primary) household maintainer. Dividing the total number of people of a specific age who identified themselves as being household maintainers by the total number of people of that age determines the age specific ***household maintainer rate***. The pattern of age and structure type specific maintainer rates describes the way in which households, given their physical ability and resources, and constraints of both prices and availability, would accommodate themselves within in the region.

Figure 4

Ground Oriented Household Maintainer Rates
Greater Vancouver
2011 Estimate; Projected to 2036



Apartment Household Maintainer Rates
Greater Vancouver
2011 Estimate; Projected to 2036



The lifecycle pattern of maintainer rates for ground oriented dwellings (including single detached, row houses, and garden suites) and apartment dwellings shows that only a small proportion of people between the ages of 15 and 19 are primary household maintainers for either structure type (Figure 4)[2]. This is consistent with the fact that most people in the 15 to 19 age group (and all of those under the age of 15) live in households maintained by someone else, generally their parents. As people begin to leave the parental home to establish households of their own, maintainer rates begin to rise, as shown by the five percent of 20 to 24 year olds maintaining ground oriented households and 12 percent maintaining apartment households. With respect to the 25 to 34 age group, 17 percent of people of this age maintained

2 Note that as household maintainer data from the 2011 Census will not be available until late 2013, estimates have been developed based on the 2006 Census data on household maintainers and the 2011 Census count of occupied private dwellings for the region.

households in ground oriented units and 23 percent maintained households in apartments, an increase that is driven by entry into the family-formation and career stages of the lifecycle.

In the 35-plus age groups the lifecycle pattern of maintaining a household in each structure type diverges somewhat, with ground oriented maintainer rates increasing and remaining prominent through the family-rearing stages, while apartment maintainer rates decline. It is only through the later stages of the lifecycle that the propensity to maintain a household in an apartment increases, from 18 percent in the 45 to 64 age group to 28 percent in the 75-plus age group. Throughout these older age groups, maintainer rates in ground oriented accommodation decline, falling from 38 percent in the 45 to 64 age group to 31 percent in the 75-plus age group.

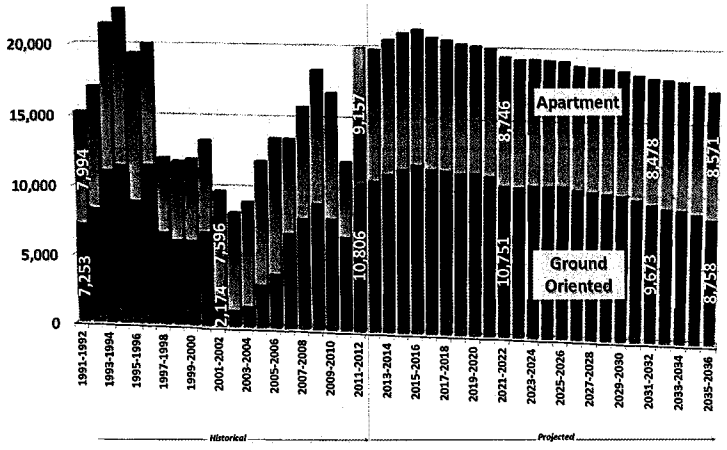
In looking forward, historical trends in maintainer rates would be expected to continue to move rates for households in ground oriented units in Greater Vancouver downwards, into the 31 to 38 percent range through the family-rearing stage of the lifecycle and towards 31 percent through the later stages of the lifecycle by 2036. Declines in ground oriented maintainer rates are expected across all 15 to 54 age groups, with those aged 25 to 34 experiencing the largest relative decline from 17 to 15 percent.

As has been seen historically, declines in age specific ground oriented maintainer rates are expected to be offset by continued increases in the propensity to maintain apartments (Figure 4; right panel). The increase in apartment maintainer rates would be driven by both the "push" of affordability and the "pull" of the lifestyle choices such as proximity to amenities and entertainment.

By combining these changing lifecycle patterns of maintaining a household with the projected changes in the region's demography, a projection of the number of dwelling units required to accommodate Greater Vancouver's changing and growing population by 2036 is achieved.

Figure 5

Net Additional Units by Structure Type, Greater Vancouver
1992 - 2011, Projected to 2036



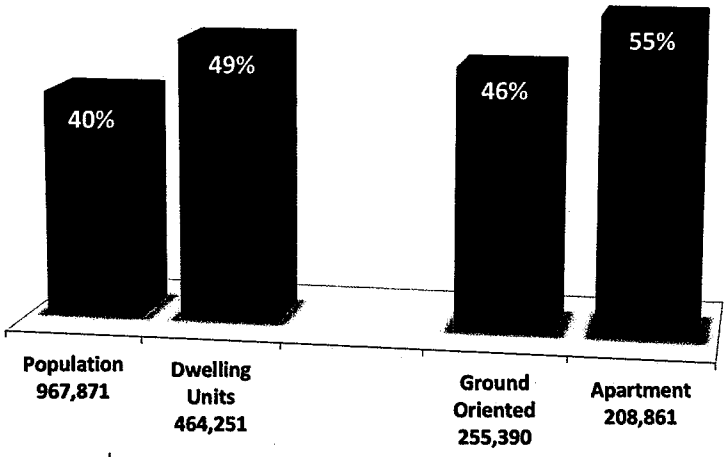
Over the next two and a half decades, while ground oriented housing is expected to continue to account for the majority of additional demand (averaging 10,500 units annually versus 8,575 apartments, Figure 5), occupancy demand for apartments will grow more rapidly than for ground oriented units: a projected 49 percent growth in total occupancy demand would be the result of a projected 46 percent growth in the ground oriented segment and 55 percent growth in apartment occupancy demand.

Further to this, while the ground oriented segment is expected to increase in the short- and medium-terms, the ground oriented share is expected to fall over the longer-term, from representing 54 percent of net additions today to 51 percent by 2036. Thus, apartment forms would see their regional prominence grow (albeit slowly), with their share of net additional demand increasing toward 49 percent from a current 46 percent share.

In summary, the projected 40 percent growth in population (970,656 more residents) between 2011 and 2036 would be accompanied by a 49 percent increase in total household occupancy demand (Figure 6). Thus, a total of 460,042 net additional dwellings units would need to be added in the region over the coming

Figure 6

Summary of Projected Changes, Greater Vancouver
2012 - 2036

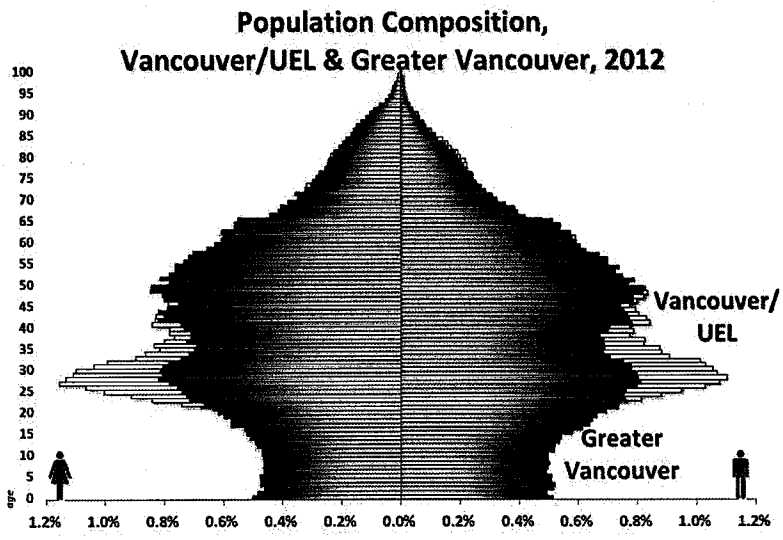


three decades in order to accommodate future population growth and change. The apartment segment of the market is projected to grow the fastest, by 55 percent, with 208,861 net additional apartment units being required to accommodate projected demand by 2036. Even with expectations of declining ground oriented maintainer rates (and increasing apartment rates), ground oriented accommodation is expected to grow significantly, with 255,390 new units required over the next 24 years.

Of the projected 1.4 million units that will make up the region's housing stock by 2036, 42 percent are expected to be apartments (589,658 apartment units)—an increase from the 40 percent today. This projection, therefore, illustrates a picture of gradual change in the composition of the region's dwelling stock, acknowledging the inertia associated with the large stock of existing housing in the region in 2012. Recognizing these issues, it will be scale, market, and environment that will gradually but inevitably see the development of more compact forms of housing within the region.

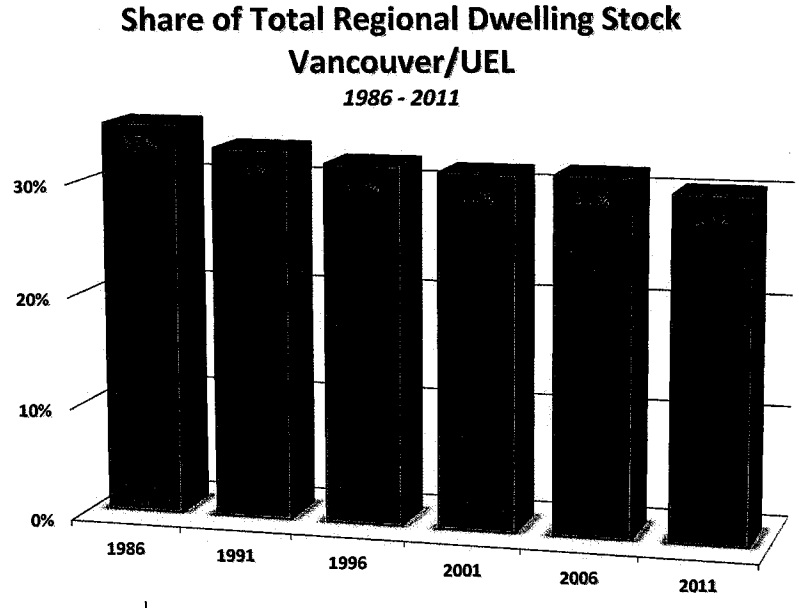
III People & Housing in the City of Vancouver

Figure 7



Vancouver/UEL's unique population composition will influence how this geography will move along its own demographic path over the coming years, particularly with respect to patterns of housing occupancy. As shown in Figure 7, the City is home to a much larger concentration of post-secondary students and younger people of working-age than the region as a whole. For instance, with respect to the 20 to 40 year old population, this segment represents 38 percent of the City's residents versus only 31 percent for the region as a whole. Conversely, Vancouver/UEL has a slightly smaller share of population between the ages of 41 and 70 (38 percent) compared to the 39 percent seen region-wide. It is interesting to note that although the City has a far greater share of its residents in the family formation stages of the lifecycle, the City's population share under the age of five is smaller than the region as a whole (six percent versus five percent in the City).

Figure 8



These distinguishing demographic characteristics are in part a function of the unique composition of Vancouver/UEL's housing stock in which apartment units predominate. For instance, Vancouver/UEL accounted for only 20 percent of the region's ground oriented stock in 2011 (108,160 units out of a regional total of 533,510), but represented 45 percent of the region's total apartment stock (or 161,445 units out of the Metro Vancouver's 357,835 apartments). Historical trends in the composition of housing additions between 1996 and 2011 show that apartment units accounted for 89 percent of net additions in the City (43,190 apartment units out of 48,420 total net additions), while the net additions in ground oriented formats only accounted for eleven percent of the new units added since 1996 (5,230 additional ground oriented units).

Between 1986 and 2011 Vancouver/UEL total dwelling stock has added 48,420 units (44 percent growth), growing from 186,940 units in 1986 to 269,610 units in 2011. Despite this growth, Vancouver/UEL has seen its share of the region's dwelling stock decline since 1986, as the rest of the region has seen its dwelling stock grow more rapidly. Thus, Vancouver/UEL has gone from representing 35 percent (186,940 units) of the region's 532,220 total units in 1986 to accounting for only 30 percent (269,610 units out of 891,335 regional dwelling stock) in 2011.

1 Future Growth and Change in the City

As indicated above, the regional housing occupancy demand projections represent the number of net additional dwelling units needed to accommodate changing housing demand from the region's projected population. In this context, the scale of the regional housing market is not a product of land use policy per say, but rather of broader economic and demographic conditions. However, it is the tapestry of land availability and local land use policy that will determine where within the region housing development will be seen.

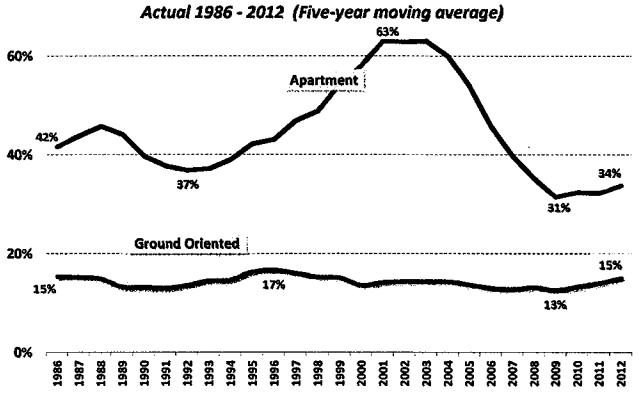
As it is not possible to anticipate the spatial consequences of each and every local government land use decision made throughout the region, a good starting point is to consider historical development trends as indicators of the directions that these decisions have taken historically and could take in the coming years. Informing the historical pattern of regional housing development is the landscape of current development and land use policy represented through the collection of Official Community Plans throughout Greater Vancouver. Therefore, three factors were used to determine how much net new housing is projected to be accommodated in specific areas within the region. The first was the regional projection of net additional housing demand by structure type. The second was the historical pattern of housing development within the region, as seen in the annual pattern of housing starts by structure type. Finally, the historical pattern of starts was modified to reflect capacity thresholds, development constraints, and planning policies reflected in the collection of Official Community Plans within the region. Combined, these three factors allow for a projection of net additional housing, by structure type, to be developed for Vancouver/UEL and other sub-regions in Metro Vancouver.

2 Residential Development Patterns within Vancouver/UEL

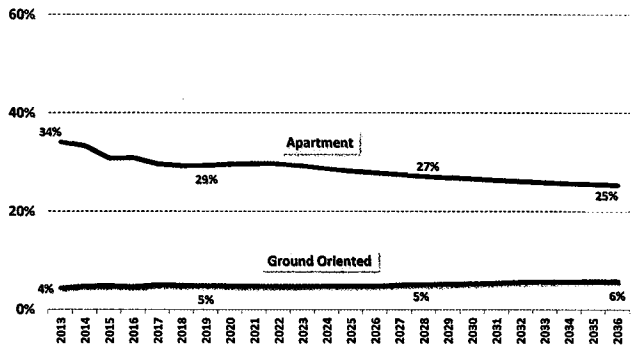
Before considering the projection of net additional regional housing that Vancouver/UEL would accommodate in the coming years, from a contextual perspective it is useful to consider historical patterns of housing starts. More specifically, Figure 9 (left pane) shows Vancouver's share of regional housing starts back to 1965.

Figure 9

Historical Share of Regional Housing Starts by Structure Type, Vancouver/ UEL
Actual 1986 - 2012 (Five-year moving average)



Projected Share of Regional Additional Dwellings by Structure Type, Vancouver/ UEL
2013 to 2036 (Five-year moving average)



As the historical employment and population centre of the region (although this is rapidly changing), and with a constrained land base, it is not surprising to see that Vancouver/UEL has historically accounted for a significant proportion of regional apartment starts, ranging between 31 and 63 percent over the past four-plus decades. The share of regional apartment starts in Vancouver/UEL increased through the early-2000s, but in recent years, as higher-density growth has spread outwards from Vancouver (into Burnaby,

Richmond, Surrey, and the North Shore), Vancouver/UEL's share has fallen. In 2012, Vancouver/UEL's five-year moving average share of region-wide apartments starts had fallen to 34 percent.

A much lower share, with much less variation, of ground oriented starts have occurred in Vancouver/UEL, ranging more narrowly between 13 and 17 percent of Greater Vancouver's ground oriented starts since 1965. With significantly more available and developable land located outside of Vancouver (specifically in the Tri-Cities, Surrey, and in the Langleys), it is not surprising to see Vancouver/UEL's share of regional ground oriented starts remain relatively low (15 percent in 2012)[3].

Over the longer term, Vancouver/UEL's share of regional apartment starts is expected to follow a slow pattern of decline (to 25 percent by 2036) for many of the same reasons apartment household maintainer rates are expected to change: the "push" of tightening land supply and increasing real estate prices, and the "pull" of growing accessibility for the rest of the region (Figure 9, right pane). Further diversification of the employment base within the region will also lead to growing share of regional apartment starts outside of Vancouver, and an inevitable decline in the City's share of apartment additions.

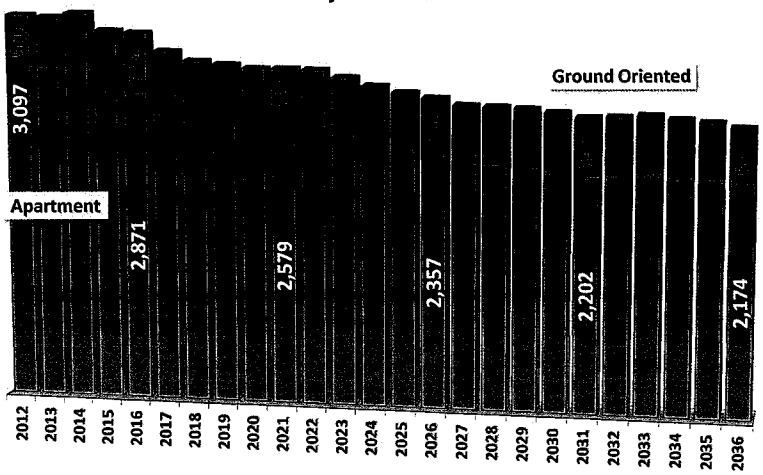
With respect to growth in the ground oriented segment of the housing market, Vancouver/UEL is expected to average between only four and six percent of net additional ground oriented units region-wide. While this appears to be much lower than the City's historical experience (with its share of historical ground oriented starts shown in Figure 9), it is necessary to underline the difference between housing starts and net additional dwelling units, and the role that single detached housing will play within the 'ground oriented' category. More specifically, consideration of total ground oriented starts includes units that are being added for replacement demand, a situation where an existing single detached house would be demolished and then rebuilt again as a single detached unit (thereby registering as a start, but not representing a net addition to the City's housing stock).

While the demolition of a single detached unit in the City and its replacement with another single detached unit is certainly seen given the age of the City's detached dwelling stock, the more common situation would be for that single detached unit to be replaced by a duplex, or the assembly of multiple older single detached homes and their replacement with a series of row homes. In fact, the Census showed that between 2006 and 2011 the number of single detached homes in the City fell by 865 units.

Figure 10

Net Additional Units by Structure Type, Vancouver/ UEL

Projected to 2036



In looking forward, it is not expected that Vancouver/UEL will experience any net increase in its single detached housing stock, with all of the growth in the ground oriented category being limited to row houses, townhomes, and more compact forms of housing. Recognizing a certain degree of housing starts being realized for replacement demand, Vancouver/UEL's share of net new ground oriented housing over the coming years is expected to fall below its historical share of ground oriented starts.

Vancouver/UEL's projected share of regional net additional apartment units would see the total number of annual additions to the apartment stock in the sub-area slow over time, from an estimated 3,097 additional units in 2012

3 "Ground oriented" includes single detached, row, duplex, triplex and other forms of housing that do not share a common corridor entrance.

to 2,174 net new units by 2036 (Figure 10). This decline in the number of annual additions would see Vancouver/UEL's share of the regional apartment stock fall from 48 percent today (2012) to 41 percent by 2036. It is important to note that this decline in regional share would be the result of, among other things, an increasing demand of these type of unit throughout the rest of the GVRD. However, despite the decline in regional share, Vancouver's apartment stock would continue to grow, from 170,756 units in 2012 to 230,406 by 2036. Thus, apartments would go from representing 60 percent of the sub-area's total housing stock today to 65 percent by 2036, still well above the current regional average of 41 percent.

Over the medium-term, annual net additions to the ground oriented housing stock are projected to increase slightly, going from the current 557 by 2021, before falling marginally to 507 by the end of the projection period. Given the relatively stable number of annual additions to the ground oriented stock—in the range of 500 units per year—the number of ground oriented units in Vancouver/UEL would grow from 112,388 today (2012) to 125,501 by 2036, a 13,113-unit (12 percent) increase.

3 From Dwellings to People

Having developed an outlook for housing change in Vancouver/UEL, the final step in the projection process involves populating newly-added dwelling units with residents—in other words, it is necessary to "fill up" the new dwelling stock with people using age and structure type specific occupancy factors to arrive at the annual increments of new population by age and sex in the City[4].

Figure 11

Age Distribution of Residents Moving into Existing Units, Vancouver/UEL

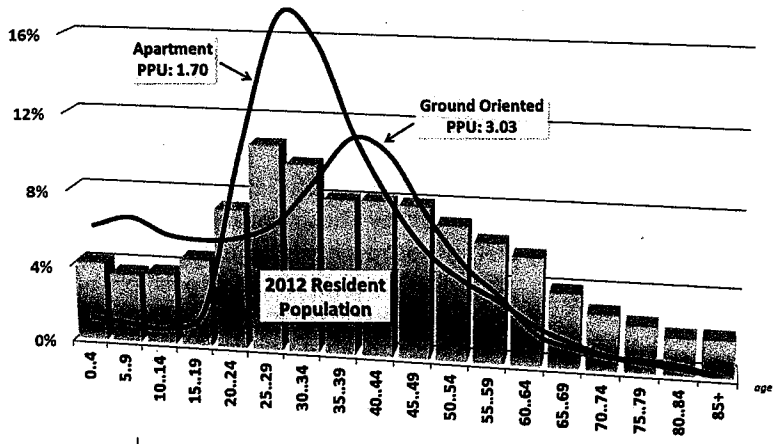


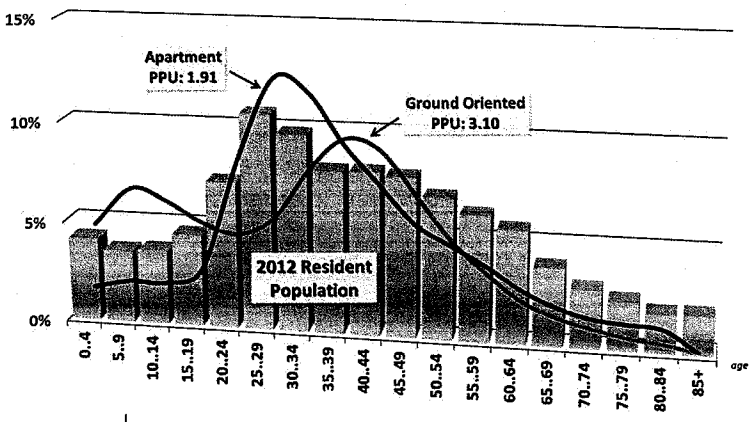
Figure 11 shows the specific in-mover household profiles used to populate the turnover of existing units within Vancouver/UEL. The most recent mobility status data from the Census show that households moving into existing apartments in the City are typically younger than those moving into existing ground oriented units, with the typical apartment in-mover being in their mid- to late-20s versus mid- to late-30s for ground oriented units. In addition to being slightly older, those moving into ground oriented accommodation have a greater likelihood of moving with children: people under the age of 15 made up 23 percent of the households moving into ground oriented units and only 8.2 percent of those moving into apartments.

Another important distinction between mobility into these two structure types is the overall size of household: households moving into existing apartments are significantly smaller than those moving into existing ground oriented dwellings. The average size of households moving into apartments was 1.70 persons versus 3.03 persons for ground oriented homes.

4 The units vacated by existing residents due to turnover are also filled up using age and structure type specific turnover rates found in the Census data. For this allocation, data from the 2006 Census on the mobility status of the population was cross-tabulated by age, structure type of dwelling, and dwelling period of construction to determine the demographic composition of residents moving into newly-constructed units. This was done on a structure type specific basis to reflect different occupancy characteristics of ground oriented units versus apartments.

Figure 12

Age Distribution of Residents Moving Out of Existing Units, Vancouver/UEL



In order to model households moving out of their existing dwellings in Vancouver/UEL it was necessary to develop proxy profiles and household sizes as the Census only concerns itself with the demographic characteristics of households as they occupy their current dwelling. Thus, the region-wide context was used to develop age profiles and household sizes for modeling out-movers from each of the sub-areas.

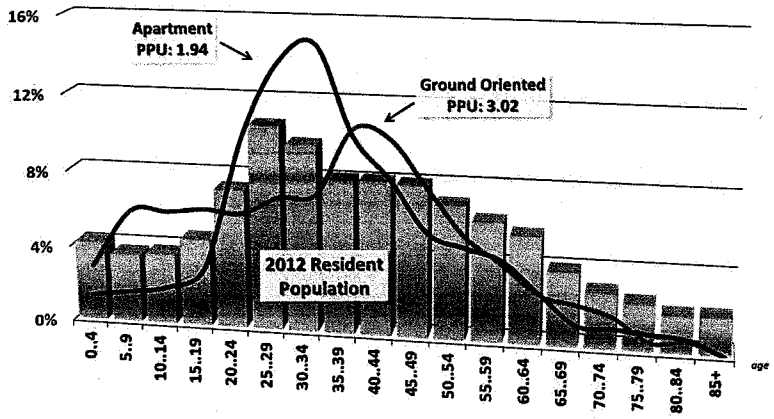
Figure 12 shows that similar relationships hold between the age profile and size of households moving out of existing units and the age profile and size of in-mover households used in the modeling process. Looking at the profile of people occupying existing apartment units shows that the 25 and 29 age group represented the largest proportion of apartment out-movers in Vancouver/UEL (14 percent) versus 18 percent of the 25 to 29 group being apartment in-movers. In addition, people under the age of 15 accounted for only eleven percent of apartment out-movers. Further, while households moving into existing apartment units averaged 1.94 people per unit, households moving out of apartment units tended to be smaller (1.91 persons per unit).

Considering ground oriented out-movers, the 35 to 39 age group accounted for the largest share of people moving out of existing ground oriented units (eleven percent), while people under the age of 15 accounted for 23 percent for those moving out of ground oriented units. The size of households moving out of ground oriented formats, at 3.10 people per unit, was smaller than the household size seen among ground oriented in-movers (3.37 persons per unit).

With respect to the age distribution of residents moving into new units, the data were segmented by period of construction, with recently-built buildings represented by those constructed and occupied within the previous five years. Recently-built apartment units attract a slightly older resident base in the City compared to the composition of people moving into existing units (Figure 13; next page). For instance, residents aged 50 and older represented 18 percent of people moving into new apartment units while this age group only accounted for 15 percent of those moving into older (existing) apartments. Similarly, residents aged 50 and older represented 20 percent of people moving into new ground oriented units while this age group only accounted for 15 percent of those moving into older (existing) ground oriented units.

Figure 13

Age Distribution of Residents Moving into New Units, Vancouver/UEL



Further, new apartment units tend to attract a greater proportion of children under the age of 15 when compared to those moving into older

units. For instance, children under the age of 15 accounted for ten percent of movers into new apartments, versus only eight percent for older apartments. The size of households moving into new apartment units was the same as those moving into existing apartment units (1.94 persons per unit).

This contrasts the ground oriented stock, where children moving into new ground oriented units accounted for only 19 percent of in-movers—significantly lower than the 23 percent seen for older ground oriented units. The size of households moving into new ground oriented formats was smaller, at 3.34 persons per unit, than the 3.37 persons per unit seen for movers into older ground oriented accommodation.

Considering the range of existing and new residents in old and new housing described by age, sex and the structure type of their dwelling results in an annual projection of population in Vancouver/UEL for the next 24 years. In addition, it allows for an assessment of population change in terms of the changing age structure of Vancouver/UEL's residents between 2012 and 2036. The output of the annual iterative modeling process is outlined below.

Figure 14

Total Population, Vancouver /UEL

Actual 2001 - 2012; Projected to 2036

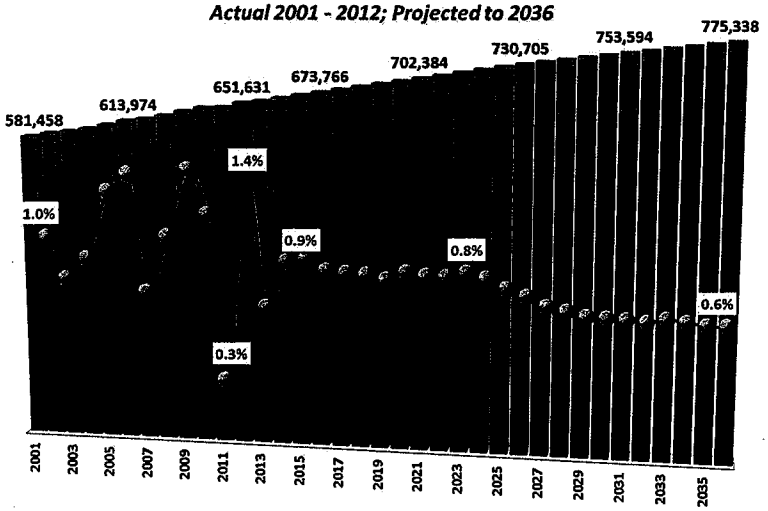
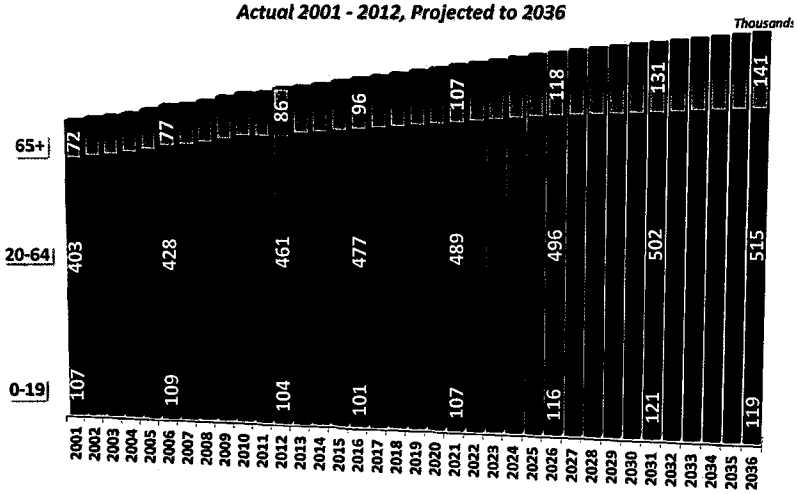


Figure 15

Total Population by Broad Age Groups, Vancouver/ UEL

Actual 2001 - 2012, Projected to 2036



4 The Demographic Outlook

Combining the projected magnitude and composition of new housing—and the associated new residents—with the natural increase and aging of current residents results in a baseline projection for the City. As Figure 14 shows, Vancouver/UEL's population is projected to increase by 19 percent by 2036, growing from 651,631 residents today (in 2012) to 775,338 residents by 2036. As such, over the next 24 years the City would add 123,707 residents, the result of an average of 5,154 people being added to the population each year between 2012 and 2036.

Due in part to the City's demography and relatively low fertility rate (1.07 kids per woman of childbearing age versus 1.33 regionally), annual population growth rates are expected to fall below one percent for the duration of the projection period. On average, annual growth is expected to be 0.8 percent out to 2036, below the 1.3 percent average annual growth rate seen in the City between 1986 and 2011.

While the City's total population is expected to grow slightly more slowly in the coming years, significant growth in the retiree segment of the population will see it change more dramatically. For example, compared to overall population growth of 19 percent between 2012 and 2036, the retiree segment of the population (those aged 65 and better) is projected to grow by 64 percent, as it adds more than 54,000 people to its current base of 85,802 residents (Figure 15).

In contrast, the City's working- and school-aged populations would see relatively low growth over the coming decades, with each group growing at a slower rate than both the 65-plus population and the population as a whole. In adding 53,834 people by 2036, the City's working-aged population would grow by only 12 percent from its current base of 461,469 people. This pattern of slow labour force growth is reflective of the situation that will be seen regionally, provincially and nationally. Similarly, the number of children—those under the age of 20—would grow by 15,060 people, or only a seven percent more than the current population of 104,360.

It should be noted that this pattern of population growth and change is a consequence of two factors, one demographic, and the other housing-related. In large part the growth projected for the older population will emerge due to the aging of Vancouver/UEL's existing residents over the projection period. With a significant share (71 percent) of the population currently between the ages of 20 and 64, long and increasing life expectancies will see many of these residents still living in the City by 2036.

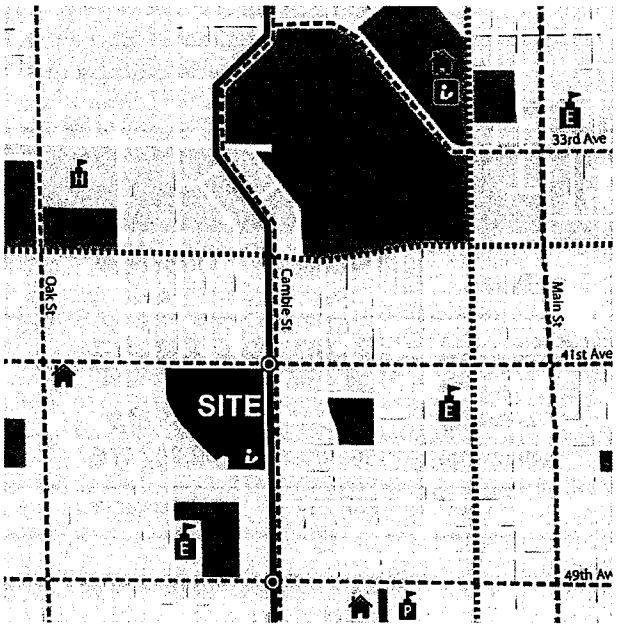
At the same time, however, growth in the younger working-aged population (those aged 20 to 64) and their kids (those under the age of 20) will largely be tied to the scale and mix of dwelling units that are projected to be added in the coming years. With today's dwelling stock in the City projected to be augmented by growth in apartments and smaller format ground oriented dwellings, population growth will occur as the result of a growing number of younger but smaller households than might be realized in other parts of the region where different forms of housing are being added.

Economic Impact Assessment

Oakridge Centre Redevelopment

I Measuring the Impact of the Oakridge Centre Redevelopment: Overview

In addition to providing a comprehensive overview of demographic and housing change throughout the Greater Vancouver region and more locally throughout the City of Vancouver, Urban Futures has been requested to provide an economic impact assessment for the proposed redevelopment of Oakridge Centre. Located at the southwest corner of Cambie Street and 41st Avenue, the development proposal (submitted on behalf of the site owner, Ivanhoé Cambridge) that is currently being considered is for a mixed-use development including commercial, office, residential, and public amenity space. The current proposal includes adding 709,133 square feet of commercial space, 291,933 square feet of office space and 2,647,300 square feet of residential space (2,818 residential dwelling units).



The economic impacts associated with the redevelopment of Oakridge Centre are measured in terms of how the physical changes at the site could affect municipal revenues, as well as changes in the level of employment, income, and spending within the local (and broader) economy.

Before exploring the approach or specific impacts that the redevelopment could have on these elements, it is important to note that there are no scientifically-precise means of measuring the long-range economic impacts of a change in land use. To a large degree this is due to the diversity and extent of the economic linkages among industries, residents, and government. In some instances these linkages are direct, while in others they are of an indirect nature and are therefore more difficult to account for. Furthermore, until demolition and construction at the site is underway, and the precise mix of on-site employers, employees, residents, and amenities is determined, total employment, property values, tax revenues, and incomes as they relate to the redevelopment can only be estimated. As such, the *ex-ante* impacts of the redevelopment presented throughout this report should be viewed in this light.

That being said, while assessing the impacts of the redevelopment may not be easy, it is important for the project proponents, City planning staff and Council, and the general public to have a firm understanding of the potential impacts of the proposed redevelopment. It is within this analytical context and its associated constraints that this economic impact assessment measures the impacts on both revenues accruing to the City of Vancouver and broader economic activity that would be expected to result from the proposed redevelopment of Oakridge Centre.

Data Sources

The data and information used in this economic impact assessment come from a range of sources. The primary data sources include Westbank Development and Brook Pooni Associates for all project specific information, Statistics Canada's Labour Force Survey for data on income and employment, the City of Vancouver and Metro Vancouver for information on property taxes, development cost levies, and development cost charges, and BC Stats and the Ministry of Finance for the data on provincial economic multipliers.

II Oakridge Centre: About the Site & the Proposed Redevelopment

As noted above, the site being considered for redevelopment is a 28.3-acre, mixed-use site located at the southwest corner of Cambie Street and West 41st Avenue in the City of Vancouver. Oakridge Centre shopping mall currently dominates the site, accounting for 721,467 square feet of gross commercial floor area (GFA), or 78 percent of total GFA on the site. An office component also exists on the site, representing 132,326 square feet of office GFA, or 14 percent of the total gross floor area. A small amount of amenity space (23,524 square feet of GFA, three percent) is also located on the site, accommodating a library, montessori school, and seniors centre. Finally, there are a small number of residential strata condominium units (32 in total) representing a total of 50,400 square feet of residential GFA (five percent of the floor area on the site).

Table 1

Project Details (ft^2 GFA)
Oakridge Centre Redevelopment

Type	Existing Site	Proposed Site	Net Increase in GFA
Commercial	721,467	1,430,600	709,133
Office	132,326	424,259	291,933
Amenity	23,524	45,000	21,476
Residential	50,400	2,697,700	2,647,300
Total	**927,717**	**4,597,559**	**3,669,842**

As part of its rezoning application, the site owner has applied to expand each of the four uses (commercial, office, amenity, and residential) on the site in the following manner (Table 1):

- The largest expansion, in terms of GFA, would be in the residential component, with 2,818 new apartment units representing a net increase of 2,647,300 square feet of residential GFA (from 50,400 to 2.7 million square feet).

- The amount of commercial GFA would increase by 709,133 square feet (from 721,467 to 1.4 million), some of which would accommodate new retail anchor tenants and expanded Bay and Target stores.

- There would be 291,933 square feet of additional office GFA spread through parts of three buildings (increasing the office floor area from 132,326 to 424,259 square feet).

- The amount of amenity space would expand by 21,476 square feet (going from 23,524 to 45,000) and would accommodate a library, daycare, community centre, and seniors centre.

- The redeveloped site would also include 6,694 parking spaces in 3.5 million square feet of below-grade area.

III Economic Impact Assessment: The Conceptual Framework

Economic impact assessments that pertain to a change in land use (as would be the case with the redevelopment of Oakridge Centre) generally consist of two dimensions. The first, and most straightforward from a measurement perspective, are the ***fiscal impacts***, or the increase in municipal revenues received by the local government as a result of a new development (or redevelopment). Fiscal impacts typically include any development cost charges, fees and contributions as well as any net change in property taxes collected by the local government.

The second dimension of the analysis is the broader ***economic impact*** associated with replacing and adapting existing land uses on a site with a new scale and mix of uses. This includes the employment impacts associated with the redeveloped site as well as the potential incomes and expenditures of residents, employees, and businesses who would occupy the site while the project is underway and when it is complete.

A temporal aspect to the economic impact analysis also needs to be considered, detailing both fiscal and economic impacts as they specifically relate to the development & construction phase of the project and the completed and operational phase, the latter of which is characterized by the ongoing occupancy of residents (population) and businesses (employment).

Within this framework, the analysis can be segmented into two major types of impacts described for two distinct phases of the redevelopment:

Fiscal Impacts
During development & construction
Upon project completion

Economic Impacts
During development & construction
Upon project completion

As it is important to understand specifically what is considered as part of each dimension, each element is considered in more detail below.

1 Fiscal Impacts: Project Development & Construction Phase

The fiscal impacts of a change in land use are measured in two ways. The first is in terms of the municipal revenues associated with the development and construction activity. Within the contemporary development framework, developers are typically required to provide all on-site infrastructure and services and connection to all off-site infrastructure. They are also typically required to pay development cost charges (DCCs) and/or development cost levies (DCLs) associated with the development. These fees are typically assessed on a per square foot basis (although in the case of DCCs levied against residential construction, they can also be assessed on a per dwelling unit basis), and are intended to pay for new or upgraded facilities made necessary through the expansion of uses in the development. This could include engineering and road infrastructure, childcare facilities, non-profit housing, and park space.

In addition to DCLs, the Vancouver Charter allows the City to negotiate community amenity contributions (CACs) on developments that require rezoning. At the time of this report's writing CACs were being negotiated between the proponents and the City and have therefore not been explicitly included as part of the fiscal impact analysis (that said, some CAC details are provided on page 27). As such, the

measurement of the fiscal dimensions of the impact assessment focuses on the fees, charges, and levies paid to the municipality during the development and construction phase of the redevelopment.

2 Fiscal Impacts: Project Completion/Ongoing Occupancy Phase

Once the redevelopment has been completed, the primary fiscal impacts will be in the form of the net increase in ad valorum property taxes paid to the municipality based on the increase in the assessed value of the completed project. While other sources of revenue may be received by local and/or regional governments—such as business license fees and parking-related taxes and fees—these have been omitted from this economic impact analysis as their impacts are typically relatively small.

It is important to note that there will also be some costs to the municipality associated with any redevelopment. Examples of ongoing costs would range from waste collection to boulevard maintenance or snow clearing. That being said, in addition to many of these operational costs being borne directly by the residential and commercial occupiers under specific contracts, the off-site costs associated with the provision and maintenance of transportation or waste management infrastructure are generally not included in economic impact assessments as they are included as part of the transportation and environmental assessments.

3 Economic Impacts: Project Development & Construction Phase

The economic impacts during the development and construction phase of the redevelopment consist of the total spending on the construction process, including the costs of materials, labour, and administration to complete the project. As part of this dimension of the impact assessment, the total number of construction-related jobs required to see the redevelopment through to completion can be estimated. Further to this, the associated impacts on incomes and consumption spending of these jobs can also be estimated.

4 Economic Impacts: Project Completion/Ongoing Occupancy Phase

The economic impacts of the completed project are primarily measured in terms of the net changes in employment (number of jobs) that will permanently locate on the site within the expanded commercial space (both retail and office). In addition to changes in the scale of on-site employment, the incomes of on-site employees and of residents who will occupy the expanded residential space and their associated consumption spending can be estimated. Likewise, assessments of the non-wage, non-salary expenditures by employers in the office and commercial components of the redevelopment can be made.

Not typically considered in an economic impact assessment such as this are the non-monetary effects (positive externalities) associated with the redevelopment, such as economic impact of diversifying the employment base of the neighbourhood or City, or the environmental impact of locating high-density residential developments along a major transportation corridor. Similarly, negative externalities such as noise pollution or congestion of any off-site transportation infrastructure are not typically considered as part of an economic impact assessment. As such, these externalities do not form part of the analysis contained herein.

Economic Multipliers

In addition to the direct impacts of land use changes, these changes also have a ripple effect through the economy, as expenditures and revenues related to the construction and ongoing occupancy of the redeveloped site work their way through the broader provincial economy. As these spin-off effects flow through the economy the magnitude of their influence is reduced over time as a result of savings, taxes, and the purchase of imports.

Quantifying the magnitude of these flows through the economy requires modeling the complex interactions of spending among sectors of the economy (among individuals, firms, and government) while accounting for the impacts of taxation and savings at each stage. Given the complexity of such a task, these undertakings are typically developed by provincial governments and presented in the form of Input-Output (I-O) tables. These tables can then be used to estimate the effect that spending changes in one industry could have on the rest of the economy.

While regional differences in economic structure (for example the greater focus on services in the Lower Mainland versus the resource dependence of Prince George) will see the nature and magnitude of these interactions differ throughout the province, regional estimates of economic multipliers are extremely expensive to develop, requiring as they do detailed surveys of expenditures and purchases for local businesses. As no detailed regional I-O tables are readily available, assessing the magnitude of the indirect impacts of changes in land use at the Oakridge Centre site rely on the British Columbia Input-Output Model (BCIOM) to provide an assessment of the impact that increased expenditures and tax revenues would have on employment throughout the wider local economy.

In order to assess the cumulative impact of a change in economic activity, it is important to consider both direct and indirect effects: ***direct effects*** are the initial changes in employment, income, or output that trigger, or are triggered by, the first round of spending (e.g. the value of a firm's initial change in payroll or production). ***Indirect effects*** are the changes in employment, income, or output in subsequent rounds of re-spending that arise through purchases from local supplier industries (inter-industry purchases).

Note that the employment multipliers used in this analysis are from BC Stats' most recent BCIOM medium industry aggregation with an 80 percent recycling rate[5], published in October 2005. They can be found in the Appendix to this report.

What is, and is not, measured by Economic Impact Assessments

Economic Impact Assessments are concerned with ***net changes*** in a range of fiscal and economic dimensions. That is, they recognize the net changes in each of municipal revenues, employment, income, and spending within the local (and broader) economy, from the development and construction phase through to project completion and long-term occupancy.

In aid of developing a clear set of quantitative impacts associated with the redevelopment of Oakridge Centre, the following analysis utilizes a 'status quo' approach that holds some variables constant over time. For example, it is outside the scope of most economic impact assessment to determine the degree to which municipal property tax rates, assessed property values (upon completion), inflation, incomes, or levels of consumption spending might change over the long-run. As such, these elements have been assumed to remain constant for purposes of assessing longer-term fiscal and economic impacts. Specific references will be made to this where relevant throughout the following analysis.

Finally, while the proposed redevelopment would include a very small amount additional amenity space (representing 0.6 percent of the total additional GFA; refer to Table 1, above), it is expected that it will be owned by the City of Vancouver, with any net benefits deemed to be offset by an increase in costs for the City. For example, to the extent that the City would be paying the salaries of additional Vancouver Public Library employees on the site, the benefits of additional employment (in terms of incomes earned and spending throughout the economy) would be mitigated by a direct increase in the City's costs in order to compensate the workers. As such, this economic assessment focuses solely on the impacts of the proposed additional commercial, office, and residential space.

5 The "recycling rate" refers to the amount of an extra dollar of output that does not go to taxes, savings, or spending on imports. An 80 percent recycling rate implies that 80 cents out of every extra dollar of production (income) is recycled (re-spent) within the domestic economy.

IV Economic Impact Assessment: The Analysis

1 Fiscal Impacts: Development & Construction and Project Completion Phases

The fiscal impacts for the development and construction phase are separated into up-front revenues (remitted by the developer to the City upon issuance of a development or building permit) and ongoing annual revenues upon completion of the project for each of the commercial/office and residential components of the redevelopment.

As different DCCs, DCLs, and property tax rates are applied to different types of property within the City, each of the commercial/office and residential aspects of the development have been considered independently before being aggregated into a set of total fiscal impacts. Table 3 summarizes the impacts on municipal (City of Vancouver) and regional (Metro Vancouver) revenues associated of each phase of the Oakridge Centre redevelopment.

Both property tax and DCC and DCL rates have been assumed to remain constant at their 2012 levels, while assessed values are assumed to remain constant at levels estimated for project completion by the development team.

Commercial & Office Expansion

Based on an estimated net increase of 1,001,066 square feet of gross commercial and office floor area and Metro Vancouver's 2012 commercial development cost charge (DCC) rate of $0.443 per square foot of GFA, the (up-front) DCC revenues generated from the commercial and office component of the redevelopment would total $443,472 (Table 2).

Table 2

Fiscal Impacts
Oakridge Centre Redevelopment

	Development & Construction	Annually Upon Completion
Commerical & Office Expansion		
Development Cost Charges	$443,472	
Development Cost Levies	$12,513,325	
Property Taxes - Education		$2,772,527
Property Taxes - Municipal Services		$4,816,486
Total	**$12,956,797**	**$7,589,013**
Residential Expansion		
Development Cost Charges	$1,662,620	
Development Cost Levies	$31,083,416	
Property Taxes - Education		$2,174,498
Property Taxes - Municipal Services		$3,932,661
Total	**$32,746,036**	**$6,107,159**
Total Fiscal Impacts	**$45,702,833**	**$13,696,172**

In addition to the DCCs accruing to Metro Vancouver, the value of development cost levies (DCLs) associated with the commercial and office component of the redevelopment collected by the City of Vancouver would be $12,513,325. This DCL revenue is based on the current rate of $12.50 per square foot of commercial GFA.

Based on an estimated assessed value of $831,507,930 upon completion[6], the net increase in the assessed value of the commercial and office components of $433,207,360 would generate $7,589,013 annually in property tax revenue at the current business mill rate of 1.752 percent. Based on the share of property tax revenues flowing to education, $2.77 million would be allocated to spending on education provincially, while the remaining $4.82 million would accrue to the City of Vancouver.

6 Estimate from Ivanhoe Cambridge.

Residential Expansion

Based on the addition of 2,818 dwelling units and Metro Vancouver's 2012 residential DCC rate of $590 per dwelling unit, the DCC revenues generated from the residential component of the redevelopment would total $1,662,620. In addition to the DCCs accruing to Metro Vancouver, the value of DCLs associated with the residential component of the redevelopment collected by the City of Vancouver are estimated to be up to $31,083,416. This would be generated from the addition of 2,486,673 square feet of residential GFA[7] and a current DCL rate of $12.50 per square foot of GFA.

Based on an estimated assessed value of the residential expansion of $1.59 billion[8] and a residential mill rate of 0.383 percent, the residential expansion would generate an additional $6,107,159 in property tax revenue annually upon completion and occupancy of the project. Of this, $2.17 million would be allocated to spending on education, while the remaining $3.93 million would accrue to the City of Vancouver.

Overall, the commercial, office, and residential expansions would generate $45.7 million in DCCs and DCLs during the development and construction phase. Additional annual property tax revenues would be $13.7 million once the project has been completed and occupied.

Other Fiscal Considerations

Two other fiscal considerations should be mentioned within the overall framework of the impact assessment. First, the payment of community amenity contributions (CACs), in-kind or cash, to the City of Vancouver upon rezoning of the site represents a net gain for the City. At the time of this report's writing CACs were still being negotiated between the proponents and the City and have therefore not been explicitly included as part of this analysis. However, it is important to note that the CACs associated with this redevelopment will help to fund significant public benefits. The proponents have proposed a 70,000 square foot civic centre accommodating co-located public amenities such as a community centre, seniors' centre, gymnasium, daycare, and a library. Also proposed is a large, programmed public open space on the roof of the centre and a mix of affordable housing. Not only will these amenities represent an ongoing community benefit to on-site and neighbourhood residents, but they will also generate and support on-site employment in the community centre, daycare, and library over the long-term.

Second, ongoing parking-related revenues that might accrue to the City of Vancouver should be considered if the City were to be an operator. However, as the project is currently only at the rezoning application stage, it is too early to speculate on the long-term arrangements pertaining to on-site parking at Oakridge Centre. As such, any ongoing parking-related revenues that may be collected by the City have not been included as part of this economic impact assessment.

Fiscal Impacts and Economic Multipliers

In considering the fiscal dimensions of the proposed redevelopment of Oakridge Centre and the change in revenues that might accrue directly to the City of Vancouver, the ripple effects created through the broader economy by these revenues also needs to be considered. As some of the revenues collected by the City will be spent on a range of initiatives within Vancouver (on things that are both related and unrelated to the redevelopment), this spending will create activity through the broader domestic economy.

Employment multipliers for spending in British Columbia (refer to the Appendix for details) can be used to assess the degree of spin-off employment that will potentially be created from municipal revenues

7 Not that 160,627 square feet of non-market residential additions have been excluded for the purposes of calculating DCLs.
8 It is estimated that 1,990,393 square feet of residential GFA will be owner-occupied (2,373 units), while an additional 300,942 square feet will be rental (445 units). At an estimated per square foot assessed value of $725 for owned units and $500 for rental units (source: Ivanhoe Cambridge), the total assessed value of the residential component of the redevelopment would be $1.59 billion. At this time no distinction has been made between the per square foot values of market versus nonmarket housing; that being said, the impact on the total estimated assessed value of the residential component of the redevelopment of doing so would be minimal.

associated with the development and construction, as well as the ongoing occupancy and phases of the redevelopment. The estimated up-front revenues of $45.7 million during the development and construction phase would be expected to generate 464 additional jobs throughout the domestic provincial economy (Table 3). Of these, 322 would be directly created through the increased revenues accruing to the City of Vancouver, and 143 would be indirectly created as the revenues (and in turn, spending) work their way through the provincial economy.

Table 3

Fiscal Impacts: Employment Multipliers
Oakridge Centre Redevelopment

Total Fiscal Impacts	Development & Construction	Annually Upon Completion
Development Cost Charges	$45,702,833	
Property Taxes		$13,696,172
Total	**$45,702,833**	**$13,696,172**
Employment Impacts (no. of FTE jobs created)		
Direct	322	145
Indirect	143	36
Total	**464**	**181**

Once the site has been fully redeveloped, it is expected that annual property tax revenue would increase by $13.7 million. This ongoing, annual revenue would, in turn, generate 181 jobs annually throughout Vancouver, the Lower Mainland, and BC. Of these, 145 would be generated directly and 36 would be created indirectly.

2 Economic Impacts: Project Development & Construction Phase

As noted earlier, while the fiscal considerations focus on the revenues accruing to municipal (and regional) authorities in terms of charges, levies, and taxes, the economic impacts focus on the value associated with adapting existing land uses for a new scale and/or mix of uses. This would include the employment impacts associated with the redeveloped site at Oakridge Centre as well as the potential incomes and expenditures of residents, employees, and businesses who would occupy the site over the longer-term (once the redevelopment is completed). As with the fiscal impacts, the economic impacts can be considered for each of the development and construction phase (for example, direct construction employment, incomes, and spending) and the project completion and ongoing occupancy phase (the ongoing on-site retail/office employment and residential occupancy and the associated incomes and spending of both).

Table 4

Economic Impacts:
Development & Construction Phase (8 years)
Oakridge Centre Redevelopment

Project Costs	
Estimated Total Cost	$2 billion
Estimated Average Annual Cost	$250,000,000
Annual Employment Impacts (no. of FTE jobs created)	
Direct	1,593
Indirect	1,008
Total	**2,600**
Direct Employment: Annual Income & Expenditures	
Average Annual Income (Direct Emp)	$58,886
Aggregate Employment Income	$93,776,480
Marginal Propensity to Consume (MPC)	78%
Aggregate Consumption Expenditures	$73,240,073

Starting with the development and construction phase, it is possible to assess the employment impacts associated with the spending required to complete the project based on an estimate of total project cost and BC Stats' employment multipliers generated from their BCIOM (refer to the Appendix of this report for specific multiplier values). With total estimated project costs in the range of $2 billion[9], and an estimated timeline for project completion that would span eight years,

9 Preliminary estimate from Ivanhoe Cambridge. This includes all pre-construction, demolition, and construction costs, and implicitly any CACs that are ultimately agreed to by the project proponents.

an average of 2,600 full time equivalent (FTE) jobs would be generated annually over the course of the development and construction phase. This would comprise 1,593 directly-generated jobs with many (if not most) locating on-site during the construction phase and 1,008 indirectly-created jobs (Table 4).

With annual earnings in construction-related occupations averaging $58,886 in 2012[10], the aggregate employment income that would be generated as a result of the 1,593 direct jobs would be $93.8 million each year over the life of the project. Some proportion of this income, in turn, would translate into spending within the local (and broader) economy. Data from the most recent (2009) Survey of Household Spending shows that households in BC spend an average of 78 percent of their gross (before-tax) income on consumption goods and services including shelter. In an economic context, this percentage is referred to as the marginal propensity to consume, or MPC and can be used to determine how much of household income will flow through the economy as spending. The additional $93.8 million in employment income earned through the development and construction phase of the Oakridge Centre expansion would therefore generate an additional $73.2 million in consumption expenditures on the part of the 1,593 workers.

(Note that as it was the case for property tax rates, DCC and DCL rates, and assessed property values, incomes are assumed to remain constant at their current levels over time for purposes of this research.)

3 Economic Impacts: Project Completion / Ongoing Occupancy

The final set of economic impacts to consider with respect to the redevelopment of Oakridge Centre are those associated with the ongoing occupancy by additional businesses and residents on the site. These impacts, described as they relate to each of the commercial/office and residential components of the project, are detailed in Table 5. The first step in determining the long-run implications for the commercial and office components of the redevelopment requires the utilization of sector-specific employment densities to estimate future levels of on-site employment in the additional commercial and office space.

Commercial Occupancy

Currently, there are an estimated 2,249 FTE employees[11] working in 721,467 square feet of gross commercial floor area at Oakridge Centre, representing a space ratio of 3.12 employees per 1,000 square feet of GFA. Assuming that this current employee space ratio is maintained as commercial/retail space is added at Oakridge Centre, the addition of 709,133 square feet of commercial GFA would be accompanied by 2,211 new on-site FTE jobs upon project completion.

As with the other fiscal and economic elements, it is necessary to consider the economic ripple effects that would be created by these new jobs and their spending. Based on the weighted average of annual incomes associated with retail-related occupations of $43,121[12], the 2,211 additional jobs would generate an estimated $95.3 million in aggregate employment income annually upon completion and occupancy of

10 This estimate is based on the weighted average annual income associated with construction-related occupations (refer to the Appendix of this report for the specific occupations that have been included). The average income estimate is based on data for the Vancouver Census Metropolitan Region from the most recent Census (2006) and changes in average weekly earnings by occupation from the Labour Force Survey for BC up to 2012.

11 As with the estimate of office employment, this estimate of 2,249 FTE employees working in the commercial component of the current site has been derived using a total current employment estimate for the site of 2,700 FTE employees (Source: Ivanhoe Cambridge), industry standard employment densities of 4.16 employees per 1,000 GFA of retail space and 4.54 employees per 1,000 GFA of office space (Source: Altus Group), and the current share of office GFA in total employment-related GFA at Oakridge Centre (721,467 out of 927,717 square feet, or 78 percent).

12 This estimate is based on the weighted average annual income associated with commercial-related occupations (refer to the Appendix of this report for the specific occupations that have been included). The average income estimate is based on data for the Vancouver Census Metropolitan Region from the most recent Census (2006) and changes in average weekly earnings by occupation from the Labour Force Survey for BC up to 2012.

Table 5

Economic Impacts: Project Completion / Ongoing Occupancy
Oakridge Centre Redevelopment

Commercial Expansion

Number of Employees (FTE)	2,211
Average Annual Income	$43,121
Aggregate Employment Income	$95,341,888
Marginal Propensity to Consume (MPC)	78%
Aggregate Consumption Expenditures	$74,462,667
Total Industry Spending	$151,692,386
Aggregate Non-Wage, Non-Salary Spending	$56,350,498

Office Expansion

Number of Employees (FTE)	994
Average Annual Income	$71,127
Aggregate Employment Income	$70,694,800
Marginal Propensity to Consume (MPC)	78%
Aggregate Consumption Expenditures	$55,213,123
Total Industry Spending	$90,085,184
Aggregate Non-Wage, Non-Salary Spending	$19,390,384

Employment Impacts of Non-Wage, Non-Salary (NWNS) Spending by Businesses

Total NWNS Spending	**$75,740,882**
Direct	1,191
Indirect	272
Total	**1,463**

Residential Expansion

Number of Permanent Residents	6,241
Employment Rate	61.9%
Total Residents Employed	3,863
Average Annual Income	$53,004
Ratio of Total Income to Employment Income	1.33
Aggregate Income	$272,814,250
Marginal Propensity to Consume (MPC)	78%
Aggregate Consumption Expenditures	$213,069,797

the commercial portion of the redeveloped site. With an estimated 78 percent of gross (pre-tax) income being spent throughout the local (and broader) economy (in other words, an MPC of 78 percent), this would translate to an additional $74.5 million in consumption spending from the additional on-site commercial jobs created through the redevelopment.

Office Occupancy

Currently, there is an estimated 451 FTE employees[13] working in 132,326 square feet of gross office floor area at Oakridge Centre, representing a space ratio of 3.40 employees per 1,000 square feet of GFA.

Assuming that this current employee space ratio is maintained as additional office space is added at Oakridge Centre, the addition of 291,933 square feet of office GFA would be accompanied by 994 new on-site FTE jobs upon project completion.

These 994 additional office jobs would be expected to generate an additional $70.7 million in aggregate employment income each year based on a weighted average annual income for office-related occupations in metropolitan Vancouver of $71,127[14]. With an estimated 78 percent of gross (pre-tax) income being spent throughout the local (and broader) economy, this would lead to an additional $55.2 million in consumption spending.

The Impact of Non-wage, non-salary Spending

In addition to the wages and salaries earned by the new employees working on-site in the expanded office and commercial space, additional non-wage, non-salary expenditures would also be made on the part of the businesses located on the site. These expenditures would range from the spending on light fixtures for a clothing store, to office supplies for a lawyer's office, and further to medical equipment for a dentist's office.

13 As with the estimate of commercial employment, this estimate of 451 FTE employees working in the office component of the current site has been derived using a total current employment estimate for the site of 2,700 FTE employees (Source: Ivanhoe Cambridge), industry standard employment densities of 4.16 employees per 1,000 GFA of retail space and 4.54 employees per 1,000 GFA of office space (source: Altus Group), and the current share of office GFA in total employment-related GFA at Oakridge Centre (132,326 out of 853,793 square feet, or 15 percent).

14 Estimate based on the weighted average annual income associated with office-related occupations (refer to the Appendix of this report for the specific occupations that have been included). The average income estimate is based on data for the Vancouver Census Metropolitan Region from the most recent Census (2006) and changes in average weekly earnings by occupation from the Labour Force Survey for BC up to 2012.

Based on estimates of the ratio of spending on wages and salaries to total industry spending from Statistics Canada[15], the $166.0 million in aggregate annual incomes for new employees in both the commercial and office space would lead to an additional $75.7 million in non-wage, non-salary spending by new businesses occupying the site (Table 5). Given the scale of commercial expansions, 74 percent of this, or $56.4 million, is expected to be generated from new retail activity and 26 percent ($19.4 million) from new office-related activity.

These annual non-wage, non-salary expenditures can also be traced through the economy as their ripple effects are realized. Again based on the employment multipliers, the additional annual non-wage, non-salary spending of $75.7 million would generate 1,463 FTE jobs each year within BC. This would comprise 1,191 direct and 272 indirect jobs.

Residential Occupancy

The residential component of the redevelopment is expected to be 2,818 apartment units in 13 buildings. Within the context of the broader Vancouver/UEL community, which is projected to added 22,900 net new apartment units over the project development time line, the proposed residential expansion represents approximately one year of City-wide additional demand (the 2,818 new units compare to an average of 2,863 apartment units being demanded each year in Vancouver/UEL over the next eight years). As per current plans, the breakdown of units by type on the expanded site would be 164 studio apartments, 950 one-bedroom units, 1,212 two-bedroom units, and 492 three-bedroom units.

In order to move from the total number of additional units expected on-site to the population that will occupy them, a custom tabulation of the most recent (2006) Census data on occupancy in recently-constructed apartments in the Vancouver Census Metropolitan Area was used. The Census data show that studio and one-bedroom apartments would each accommodate an average of 1.60 residents per unit, while two-bedroom units would house an average of 2.20 persons per unit and three-bedroom units an average of 3.64 persons.

Combining the Census data on the average people per unit for each dwelling type, the 2,818 occupied residential units would yield an on-site residential population of 6,241 usual residents upon project completion (Table 6)[16]. These residents are an important consideration in the context of an economic impact assessment, as many of them will be working, earning income, and spending money within the local Lower Mainland market and beyond. As with other dimensions considered above, it is necessary for this impact assessment to account for the earnings and spending of these future occupants of the development.

Table 6

Apartment Occupancy at Build-out
Oakridge Centre Redevelopment

Unit Type	No. Units	PPU	Total Pop.
Studio	164	1.60	262
1 bdrm	950	1.60	1,520
2 bdrms	1,212	2.20	2,666
3 bdrms	492	3.64	1,792
All Units	2,818	2.21	6,241

The first step in determining the economic impacts associated with these new residents is to estimate how many of them would be working (somewhere—not necessarily on-site). Based on an overall employment rate for the Vancouver CMA of 61.9 percent[17], the total number of on-site residents earning employment income would be 3,863 people. With an average annual employment income

15 A ratio of spending on wages and salaries to total industry spending of 0.63 was used for the commercial component and 0.78 for the office component based on data from CANSIM Table 381-0013: Inputs and outputs, by industry and commodity, S-level aggregation and North American Industry Classification System (NAICS), annual (dollars).

16 It should be noted that no vacancy allowance has been included in this calculation. Based on 2011 data for apartments in the City of Vancouver, 6.7 percent of apartments in the City were unoccupied, or not occupied by usual residents on a permanent basis. Note that unoccupied incudes both vacant units and units that might be occupied on a temporary basis as second homes.

17 2012 Labour Force Survey, Vancouver CMA: 1,274,400 people employed out of a total eligible population of 2,059,700.

for all occupations of $53,004[18], these 3,863 residents would earn an aggregate annual employment income $204.8 million. Finally, including an assessment for non-employment income (such as investment income, OAS payments, income from pensions and RRSPs, etc) based on data from the 2006 Census on income by source for British Columbia[19], would see total estimated aggregate income (from all sources) earned by on-site residents of $272.8 million.

With BC households spending an average of 78 percent of their gross (before-tax) income on consumption goods and services (including shelter), this would translate into an additional $213.1 million in annual spending on goods and services that would be realized throughout the provincial economy upon project completion.

18 This estimate is based on the average annual income for all occupations. The average income estimate is based on data for the Vancouver Census Metropolitan Region from the most recent Census (2006) and changes in average weekly earnings from the Labour Force Survey for BC up to 2012.

19 Statistics Canada, 2006 Census of Population, Statistics Canada catalogue no. 97-563-XCB2006009.

V Appendix

Occupation Categories, Average Income, & Employment*
for use in the Economic Impact Assessment

Commercial Employment	Income	Employment
A21 Managers in retail trade	$52,194	17,150
A221 Restaurant and food service managers	$34,280	5,745
G0 Sales and service supervisors	$37,420	5,230
G2 Retail salespersons and sales clerks	$38,275	18,940
G3 Cashiers	$24,476	4,400
G4 Chefs and cooks	$25,648	8,245
G5 Occupations in food and beverage service	$20,474	4,875
G63 Security guards and related occupations	$29,560	3,560
G9 Sales and service occupations, n.e.c.	$27,595	27,645
Weighted Average Commercial Income	$34,448	
2005-2012 Increase in AWE - Retail (LFS)	25%	
Average Commercial Income Used in EIA	**$43,121**	

Office Employment	Income	Employment
A1 Specialist managers	$78,274	27,025
A3 Other managers, n.e.c.	$81,222	30,480
B Business, finance, & admin occs	$49,403	125,280
D013 Dentists	$96,177	770
D02 Optometrists, chiro & other health diag/treat pros	$58,920	315
D03 Pharmacists, dietitians and nutritionists	$76,073	1,680
D04 Therapy and assessment professionals	$57,172	1,460
D3 Assisting occupations in support of health services	$35,996	7,300
Weighted Average Office Income	$58,396	
2005-2012 Increase in AWE - Business & Admin (LFS)	22%	
Average Office Income Used in EIA	**$71,127**	

Construction Employment	Income	Employment
H01 Contractors & supervisors, trades & related	$66,082	5,015
H1 Construction trades	$39,201	15,025
H2 Stationary engineers & elec trades/telecomms	$55,660	5,745
H3 Machinists, metal forming, shaping & erecting occs	$50,633	6,330
H41 Machinery & transport equip mechanics	$61,457	5,475
H6 Heavy equip & crane operators, including drillers	$55,225	1,985
H82 Trades helpers and labourers	$33,646	3,990
Weighted Average Construction Income	$49,145	
2005-2012 Increase in AWE - Construction (LFS)	20%	
Average Construction Income Used in EIA	**$58,886**	

**Base Income & Employment data for Vancouver CMA (2006 Census)*

BCIOM Industry Multipliers
Medium Aggregation, 80% Recycling Rate

Jobs generated per $1m in spending

	Direct	Indirect
Education	16.83	1.74
Other Services	7.04	3.12
Construction	6.37	4.03

Oakridge Economic Impact Assessment, March 2014 Update

Project Details (ft^2 GFA)
Oakridge Centre Redevelopment

Type	Existing Site	Proposed Site	Net Increase in GFA
Commercial	604,512	1,384,716	780,204
Office	136,796	424,259	287,463
Amenity	23,524	70,000	46,476
Residential	50,400	2,811,788	2,761,388
Total	**815,232**	**4,690,763**	**3,875,531**

Fiscal Impacts
Oakridge Centre Redevelopment

	Development & Construction	Annually Upon Completion
Commerical & Office Expansion		
Development Cost Charges	$472,976	
Development Cost Levies	$13,345,838	
Property Taxes - Provincial (Educ.)		$2,772,527
Property Taxes - Municipal		$4,816,486
Total	**$13,818,814**	**$7,589,013**
Residential Expansion		
Development Cost Charges	$1,719,260	
Development Cost Levies	$32,509,516	
Property Taxes - Provincial (Educ.)		$2,227,495
Property Taxes - Municipal		$4,028,509
Total	**$34,228,776**	**$6,256,004**
Total Expansion		
Development Cost Charges	$2,192,236	
Development Cost Levies	$45,855,354	
Property Taxes - Provincial (Educ.)		$5,000,023
Property Taxes - Municipal		$8,844,995
Total Fiscal Impacts	**$48,047,590**	**$13,845,017**
Employment Impacts of Total Expansion (no. of FTE jobs created)		
Direct	338	146
Indirect	150	36
Total	**488**	**183**

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Economic Impacts:
Development & Construction Phase
Oakridge Centre Redevelopment

Project Costs	Development & Construction	Annually Upon Completion
Estimated Total Cost	$1.5 billion	
Estimated Average Annual Cost	$187,500,000	
Annual Employment Impacts (no. of FTE jobs created)		
Direct	1,194	
Indirect	756	
Total	**1,950**	
Commercial Expansion		
Number of Employees (FTE)		2,433
Average Annual Income		$43,121
Aggregate Employment Income		**$104,897,279**
Marginal Propensity to Consume (MPC)		78%
Aggregate Consumption Expenditures		$81,925,493
Aggregate Non-Wage, Non-Salary Spending		**$61,998,080**
Office Expansion		
Number of Employees (FTE)		979
Average Annual Income		$71,127
Aggregate Employment Income		**$69,612,340**
Marginal Propensity to Consume (MPC)		78%
Aggregate Consumption Expenditures		$54,367,714
Aggregate Non-Wage, Non-Salary Spending		**$19,093,483**
Total Expansion		
Number of Employees (FTE)		3,411
Aggregate Employment Income		**$174,509,619**
Marginal Propensity to Consume (MPC)		78%
Aggregate Consumption Expenditures		$136,293,207
Aggregate Non-Wage, Non-Salary Spending		**$81,091,563**
Employment Impacts of Non-Wage, Non-Salary (NWNS) Spending by Businesses		
Direct		1,289
Indirect		289
Total		**1,578**
Residential Expansion		
Residential Units		2,914
Estimated Number of Permanent Residents		6,499
Employment Rate		61.9%
Total Residents Employed		4,023
Average Annual Income		$53,004
Ratio of Total Income to Employment Income		1.33
Aggregate Income		$284,094,695
Marginal Propensity to Consume (MPC)		78%
Aggregate Consumption Expenditures		$221,879,902

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