City of Windsor
Multi-Residential Interim Control By-law Study

Independent Real Estate Intelligence

DRAFT REPORT

January 30, 2022

Altus Group

City of Windsor
Multi-Residential Interim Control By-law Study

Prepared for:

City of Windsor

Prepared by:

Altus Group Economic Consulting

33 Yonge Street Toronto Ontario M5E 1G4

Phone: (416) 641-9500 Fax: (416) 641-9501

economics@altusgroup.com

altusgroup.com

January 30, 2022

DRAFT

EXECUTIVE SUMMARY

Altus Group Economic Consulting was retained by the City of Windsor to assist in undertaking research into determining appropriate locations in the City that can accommodate additional residential density.

This report provides demographic and economic analysis on factors driving intensification and infill demand in the City to inform planning policy recommendations for necessary changes to the City's Official Plan ("OP") and Zoning By-law to achieve the goal of increased intensification within the City's existing built-up area.

The analysis contained in this report will be used by the City's planning consultants (Municipal Consultants) to bring policy recommendations for the City to promote and encourage growth within the City.

The City experienced a growth in population between 2001-2005, however, it lost population each year over the 2006-2011 period. Since 2012, the City's population has grown, with the rate of growth increasing in the most recent past five years.

The composition of growth has changed in Windsor over the last two decades. When shown by four-year period, the net inflows to the City from domestic (from other provinces or parts of Ontario) and international sources (immigration, non-permanent residents) is roughly 4,500 persons per year between 2017-2020, nearly two-and-half times what it was in the prior four-year period (2013-2016). These more recent trends are markedly different than the net outflows seen during the period two four-year periods from 2005-2008 and 2009-2012

Population losses and gains have not been evenly distributed throughout the City. Of the 52 Census Tracts ("CTs") in the City of Windsor, a total of 43 CTs (or 83%) lost population over the 2006-2016 period. Of the nine (9) CTs that gained population, six (6) were located on the eastern, western, or southern edges of the City's boundary.

The population Inner Area of the City shrunk by nearly 4%, or 5,300 persons, with only one CT in the Inner Area seeing population growth, while the Outer Area outside of the blue line in the Figure below, grew by 6%, or roughly 5,900 persons.

Declining household sizes is also one major driver spurring the need for housing. The City needed 3,030 new homes over the 2006-2016 period just to maintain in the 2006 population levels, exclusive of any growth that occurred to 2016. The shrinking household sizes is also related to an aging population, with age brackets between 45-90+ all seeing increases of persons between 2006-2016, while age brackets below 45 saw loses.

Since 2001, average prices for single-detached units in the City have increased by 232%, from $177,500 in 2001 to $588,400 in 2020. While the average prices for single-detached units in Ontario have increased by a similar rate (239%) since 2001, the gap between the average prices in Ontario and the City have increased from $86,000 in 2001 to over $300,000 in 2020.

After rising from 3.0% in 2001 to a high of 15.0% in 2008, the vacancy rate in the City has steadily fallen to a low of 2.5% in 2017, and has been below 4.0% in each of the past five years. As expected during periods of high vacancy rates, rents were relatively unchanged over the 2001-2014 period, ranging between $652 and $703 per month over the 14-year period. As vacancy rates declined over the 2011-2017 period and have stayed low since, rents have increased to a 20-year high of $933 per month, an increase of 33% since 2014. The significant decline in vacancy rates and corresponding increase in average rents is indicative of a rental housing market that is in need of additional supply

To understand the overall housing market demand, we have undertaken an analysis of post-secondary enrolment trends for the institutions located in the City. It was projected that total post-secondary student enrolment in Windsor will increase by another 3,500 students, or another 17.7%, between Fall 2020 and Winter 2025.

Currently, there is only one formal student housing space for every 14 students as of the 2019-2020 school year but by the 2024-2025 school year, the City is expected to have 1 formal student housing space for every 10 students. Should there be any delays to the proposed new student housing developments, the City is expected to have 1 formal student housing space for every 16 students.

The recent acceleration of population growth in the City (and the broader Essex County area) has had implications for the price of new housing.

Despite the increase in demand, the amount of new housing constructed in the City has not increased substantially.

It is estimated that the City will see an increase in housing demand in the next 20 years, with total net housing demand forecasted to be:

- 5,432 single/semi-detached units;
- 1,443 townhouse units;
- 3,012 apartment units per year, including 2,317 rental apartments, and 694 condominium apartments; and
- 145 'other' dwellings (such as accessory apartments, etc.)

Based on our analysis of the demographic, and real estate market trends affecting the City, the broader region and the Province of Ontario as a whole, our recommendations are as follows:

- The City needs more housing in the inner areas of the City, with populations in a majority of the City declining due to a lack of new housing options and shrinking average household sizes;
- The City is not seeing enough purpose-built rental housing constructed to meet demand;
- Access to retail, transit and other community amenities can bolster the market for new residential development, making an area attractive to prospective new households;
- Similarly, adding residential uses near existing retail clusters can improve the viability of those retail environments. The practice of redeveloping major retail centres for a mix of uses including residential, as well as other community amenities such as parks, community centres, and even additional retail is growing across Ontario and Canada;
- The City needs to account for prospective growth in post-secondary enrolment in forecasting housing needs.

TABLE OF CONTENTS

Page

EXECUTIVE SUMMARY i

1 INTRODUCTION 1

1.1 Background 1

1.2 Interim Control By-law 1

1.3 Approach 1

2 POPULATION AND HOUSING TRENDS 2

2.1 Population 2

2.2 Housing 11

2.3 Other Considerations – Population and Housing 17

3 EMPLOYMENT AND ECONOMIC TRENDS 26

3.1 Employment Trends 26

3.2 Non-Residential Market Trends 29

4 GROWTH FORECASTS AND HOUSING OUTLOOK 35

4.1 Housing Propensity Model (Altus Group Forecasts) 35

4.2 Summary of City of Windsor Housing Demand Forecast 40

5 RECOMMENDATIONS AND CONCLUSIONS 42

5.1 Summary of Factors Driving Demand for Housing in Windsor 42

5.2 Recommendations and Findings Regarding Most Suitable Locations for Infill and Intensification 43

1 INTRODUCTION

1.1 BACKGROUND

Altus Group Economic Consulting was retained by the City of Windsor to assist in undertaking research into determining appropriate locations in the City that can accommodate additional residential density.

This report provides demographic and economic analysis on factors driving intensification and infill demand in the City to inform planning policy recommendations for necessary changes to the City's Official Plan ("OP") and Zoning By-law to achieve the goal of increased intensification within the City's existing built-up area.

1.2 INTERIM CONTROL BY-LAW

In July 2020, the City of Windsor Council approved interim control by-law (ICBL) 103-2020 that allows the City to reconsider current land use policies in respect of high-density dwellings such as group homes, shelters, lodging houses, residential care facilities and buildings with five or more dwelling units.

1.3 APPROACH

This study reviews trends relating to population, housing and employment growth in the City, including how the City has changed over the past 10-20 years.

The analysis contained in this report will be used by the City's planning consultants (Municipal Consultants) to bring policy recommendations for the City to promote and encourage growth within the City.

2 POPULATION AND HOUSING TRENDS

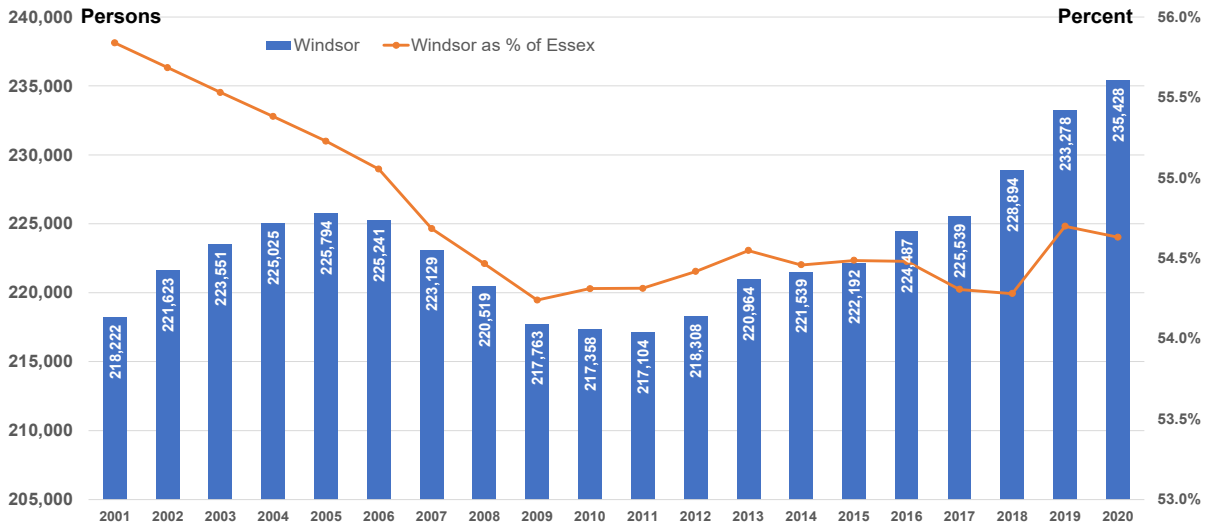
This section of the report reviews historic trends related to the population and composition of population in the City of Windsor.

2.1 POPULATION

2.1.1 Change in Population

Figure 1 shows the population of the City of Windsor in total, and as a share of total Essex County population over the 2001-2020 period, as estimated by Statistic Canada. Over the full 20-year period of analysis, the City grew by 7.9%, or 17,200 persons, while the population in Essex County increased by 10.3%, or 40,100 persons. The share of Essex County population in the City of Windsor fell from nearly 56% in 2001 to a low of 54.2% in 2009, but since that time the City's share of County population has remained relatively steady at over 54%.

Figure 1 **Population, City of Windsor, 2001-2020**



Source: Altus Group Economic Consulting based on Statistics Canada Population Estimate, 2001-2020

The City experienced a growth in population between 2001-2005, while it lost population each year over the 2006-2011 period. However, since 2012, the City's population has grown, with the rate of growth increasing in the past five years.

2.1.2 Change in Population by Age Group

Figure 2 provides a population breakdown of the number of people by age group in the City of Windsor over the 2006 to 2016 period. The City of Windsor has seen significant losses of population in the age groups of ages 0-14, 25-34, and 35-44, while it has seen large relative population gains in the age groups of ages 55-64, 64-74, and 85-90+. As a population ages, there will be a corresponding increase in number of dwelling units required per person (as persons aged 0-14 will not generate any demand for housing in-and-of-itself).

Overall, the City's population has only grew by 0.3% over the 2006-2016 period, or a total of 710 people, between 2006-2016, however, the distribution of losses and gains has not been even across the demographic spectrum. While the City saw a decline in the number of children and young adults (aged 15-24 and 25-44), it gained persons in the older adults (aged 45-64) and seniors (aged 65+).

Figure 2

Census Population by Age Group, City of Windsor, 2006-2016

	2006	2011	2016	Change 2006-2016	
Age Group		*Persons*		*Total*	*Percent*
0-14	39,480	36,270	35,425	(4,055)	(10.3)
15-24	29,490	28,510	29,350	(140)	(0.5)
25-34	31,175	26,360	27,490	(3,685)	(11.8)
35-44	33,090	28,680	26,390	(6,700)	(20.2)
45-54	29,795	31,795	31,180	1,385	4.6
55-64	22,435	26,090	29,065	6,630	29.6
65-74	15,535	16,980	20,680	5,145	33.1
75-84	11,800	11,505	11,970	170	1.4
85-90+	3,680	4,700	5,640	1,960	53.3
Total	216,480	210,890	217,190	710	0.3

Source: Altus Group Economic Consulting based on Statistics Canada Population Census 2006, 2011, 2016

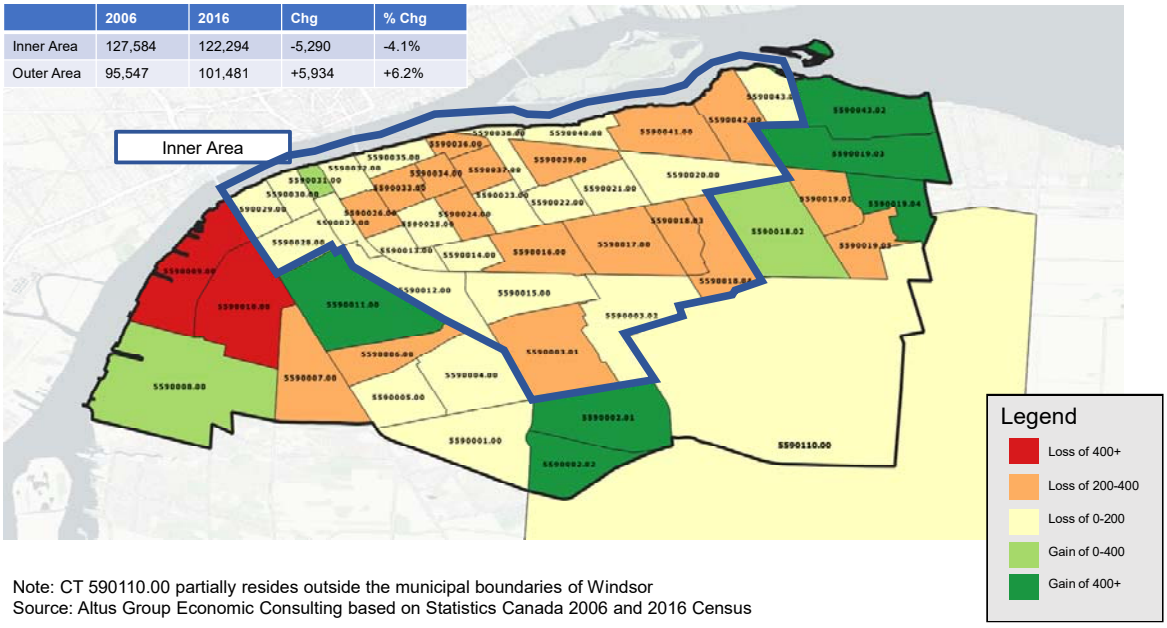
2.1.3 Change in Population by Area of City

Of the 52 Census Tracts ("CTs") in the City of Windsor, a total of 43 CTs (or 83%) lost population over the 2006-2016 period. Of the nine (9) CTs that gained population, six (6) were located on the eastern, western, or southern edges of the City's boundary.

Figure 3

Population Changes by Census Tract, City of Windsor, 2006-2016

	2006	2016	Chg	% Chg
Inner Area	127,584	122,294	-5,290	-4.1%
Outer Area	95,547	101,481	+5,934	+6.2%



Note: CT 590110.00 partially resides outside the municipal boundaries of Windsor
Source: Altus Group Economic Consulting based on Statistics Canada 2006 and 2016 Census

The Inner Area population of the City, demarcated by the thick blue line, over the 2006-2016 period, shrunk by nearly 4%, or 5,300 persons, with only one CT in the Inner Area seeing population growth, while the Outer Area, outside of the blue line in the Figure below, grew by 6%, or roughly 5,900 persons.

Understanding the amount of population loss in built-up areas of the City is important to recognising that a certain proportion of the dwelling unit intensification being considered through this planning exercise will be to regain and retain population in the Inner Area part of the City. The decline in population in existing built-up areas of the City is driven by a combination of not enough new housing being constructed combined with declining average household sizes, meaning that a certain amount of development will be required just to maintain the population in existing areas of the City.

2.1.4 Average Household Sizes

Windsor has seen the number of people per unit ("PPU") of households decrease by 3.3% between 2006-2016. This resulted in the population in existing households declining by over 7,000 persons, meaning that the City

needed 3,030 new homes over the 2006-2016 period just to maintain the 2006 population levels, exclusive of any growth that occurred to 2016.

Figure 4 **Household Size by Dwelling Type, City of Windsor, 2006-2016**

Dwelling Type	2006	2016	Change	% Change
	Persons Per Unit (PPU)			*Percent*
Single-detached house	2.72	2.63	(0.08)	-3%
Semi-detached house	2.68	2.61	(0.07)	-3%
Row house	2.56	2.44	(0.13)	-5%
Apartment	1.70	1.64	(0.07)	-4%
Total	2.42	2.34	(0.08)	-3%

Source: Altus Group Economic Consulting based on Statistics Canada 2006 and 2016 Census

The City's 2020 DC Study, authored by Hemson Consulting, forecasted continued steady decline in average household sizes to 2.27 persons per unit by 2041, a further 3.4% decline in average household size.

Figure 5 **Forecasted Total Population, Households, and Household Size, City of Windsor, 2020-2041**

Mid-Year	Census Population	Total Occupied Households	Average Household Size
	Persons	*Dwellings*	*Persons / Unit*
2020	220,991	94,593	2.35
2041	239,989	105,903	2.27
Change 2020-2041	18,998	11,310	(0.08)
		Percent	
% Change 2020-2041	8.6%	12.0%	-3.4%

Source: Altus Group Economic Consulting based on City of Windsor Development Charge Background Study, 2020

2.1.5 Sources of Population Change

2.1.5.1 International Immigration

International immigrants are defined by Stats Canada as:

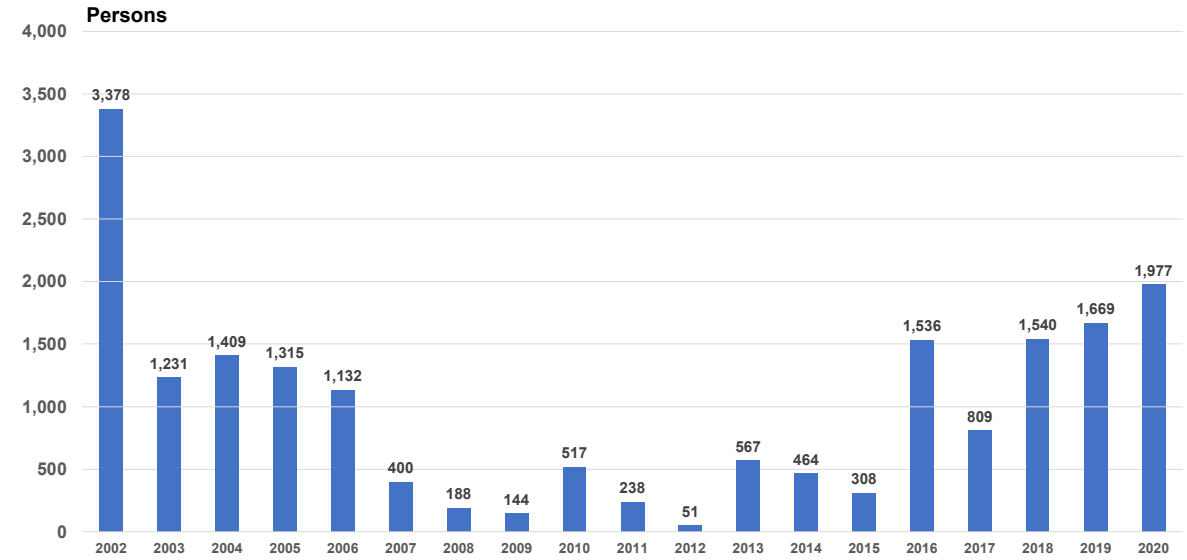
> "…persons who are, or who have ever been, landed immigrants or permanent residents. Such persons have been granted the right to live in Canada permanently by immigration authorities. Immigrants who have obtained Canadian citizenship by naturalization are included in this category"

The statistics on immigration do not include people who hold study permits, which are counted as "non-permanent residents" which will be discussed separately later in this report.

Between 2009-2015, net international immigration[1] to the City progressively decreased from 3,400 to 300 net new persons per year. Beginning in 2016 through to the year 2020, net international immigration increased to approximately 1,500 to 2,000 people per annum (except for 2017). Four of the past five years have been the highest net inflow of persons to the City since 2002.

Figure 6

Net International Immigration by Age Cohort, City of Windsor, 2002-2020



Source: Altus Group Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

Generally, net international immigration to the City has been led by adults between the ages of 25-34 and children between the ages of 0-14. The second largest immigrant age cohort to the City are young adults between the ages of 15-24 and adults aged 35-44. There has been some but much more limited numbers of net international immigration by people in the age cohorts of 45-54 and 55-64, however, there have been very few immigrants, in senior cohorts above 65+ years in age.

2.1.5.2 Interprovincial Migration

Interprovincial migration is the net movement of people between provinces or territories within Canada. In this case, it measures the net number of

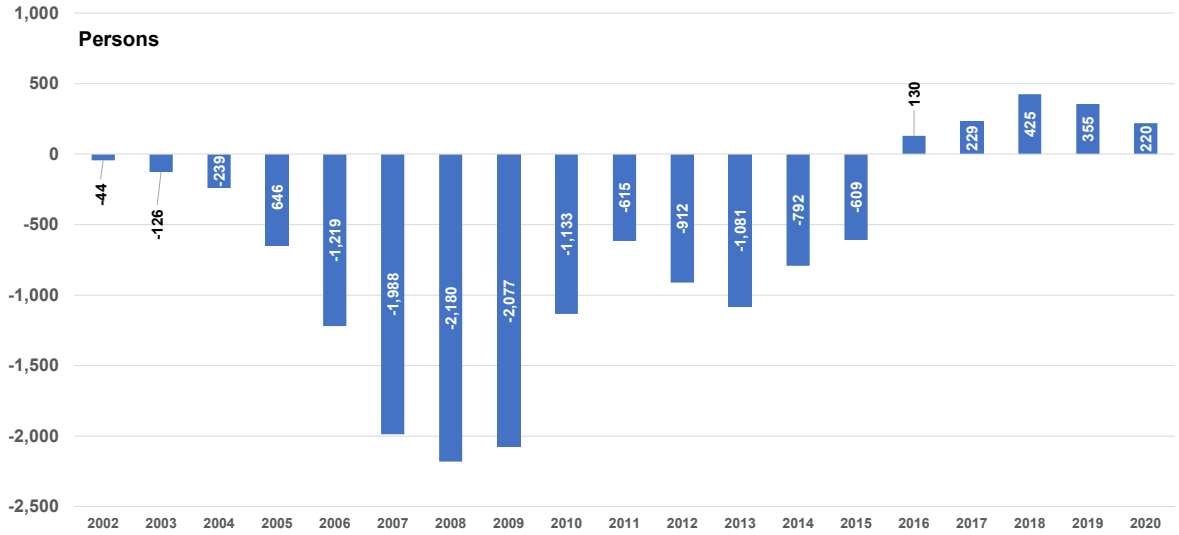
[1]Net immigration is immigration (people arriving in Canada as permanent residents) less emigration (permanent residents of Canada leaving to live outside of Canada)

people moving to/from Windsor from/to other provinces/territories outside of Ontario.

Over the 2002-2015 period, the City saw net outflows of people from the City to other provinces, however, since 2016, this statistic has become a net inflow of people from other provinces of Canada.

Figure 7

Interprovincial Migration, City of Windsor, 2002-2020



Source: Altus Group Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

2.1.5.3 Intraprovincial Migration

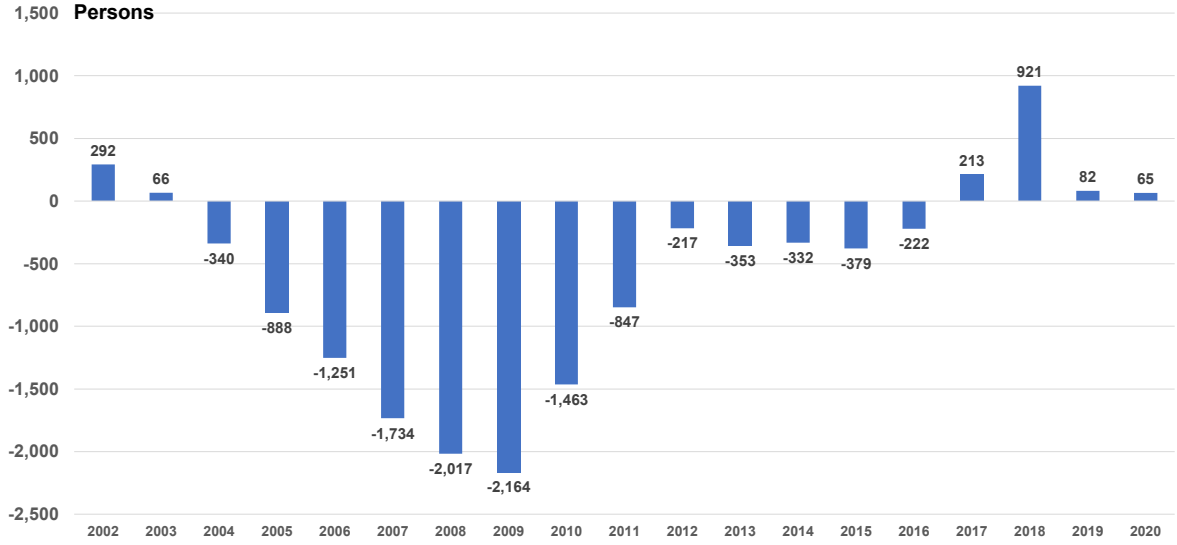
Intraprovincial migration is the movement of people within the same province or territory. In this case, it represents the net number of people moving to/from Windsor from/to other parts of Ontario.

Windsor has seen net negative outflows to intraprovincial migration in every year where there is data available except more recently between 2017-2020.[2] In total, the City has lost approximately 10,600 people between 2002-2020, with the largest share of this loss being made up of people in the age cohorts of between 15-44.

The two largest negative total outflow years between 2002-2020 were recorded in 2008 (2,000 persons) and 2009 (2,200 persons). However, since

those peak negative outflow years, the City has seen diminishing outflows of people with recorded positive inflows beginning in in 2017 to the present.

Figure 8 **Intraprovincial Migration, City of Windsor, 2002-2020**



Source: Altus Group Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

2.1.5.4 Non-Permanent Residents

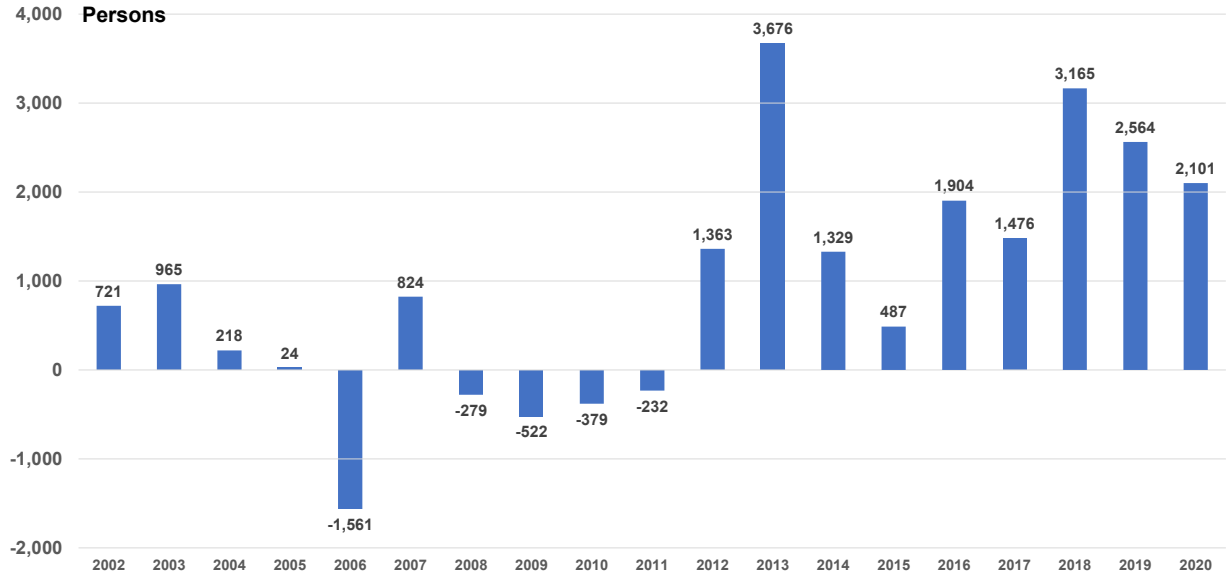
Statistics Canada defines non-permeant residents as:

> persons from another country with a usual place of residence in Canada and who have a work or study permit or who have claimed refugee status (asylum claimants).
>
> Family members living with work or study permit holders are also included, unless these family members are already Canadian citizens or landed immigrants/permanent residents.

After the City saw net outflows of non-permanent residents in five of the six years between 2006 and 2011, the City has since seen net inflows in each year over the 2012-2020 period, reaching a high of nearly 3,700 persons in 2013. The net inflow has been above 2,000 persons in each of the past three years (2018-2020).

Figure 9

Non-Permanent Residents, City of Windsor, 2002-2020

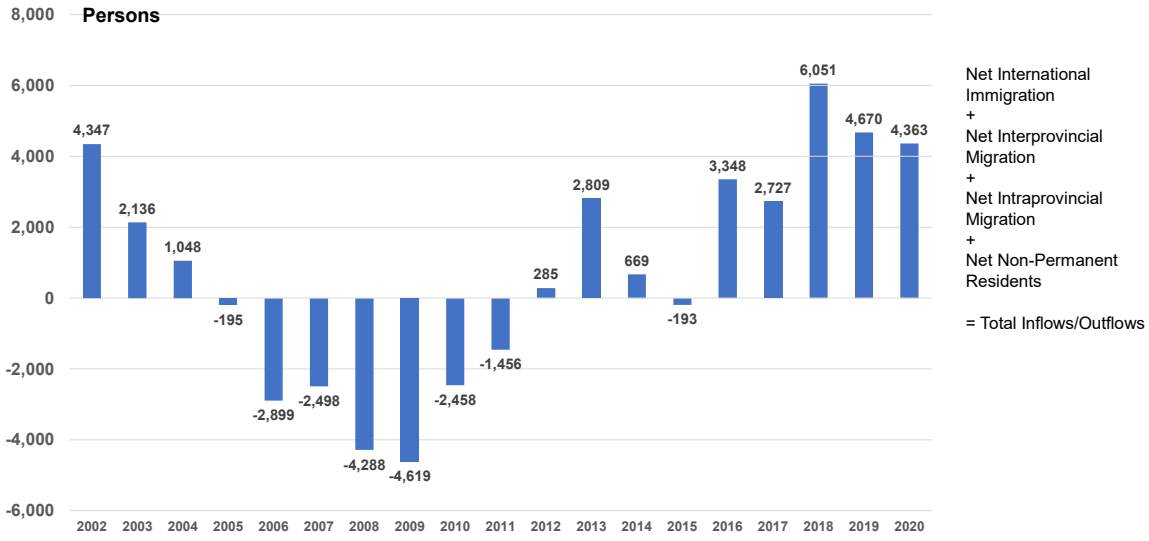


Source: Altus Group Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

2.1.5.5 Conclusions Regarding Sources of Population Change

When the annual inflows/outflows from net international immigration, net interprovincial migration, net intraprovincial migration and net non-permanent residents, it is evident that the net inflows from international and domestic sources are increasing significantly, with the past five years (2016-2020) being five of the largest seven years of inflows to the City since 2002 (behind only 2013 and 2002).

Figure 10 **Total Inflows/Outflows, City of Windsor, 2002-2020**

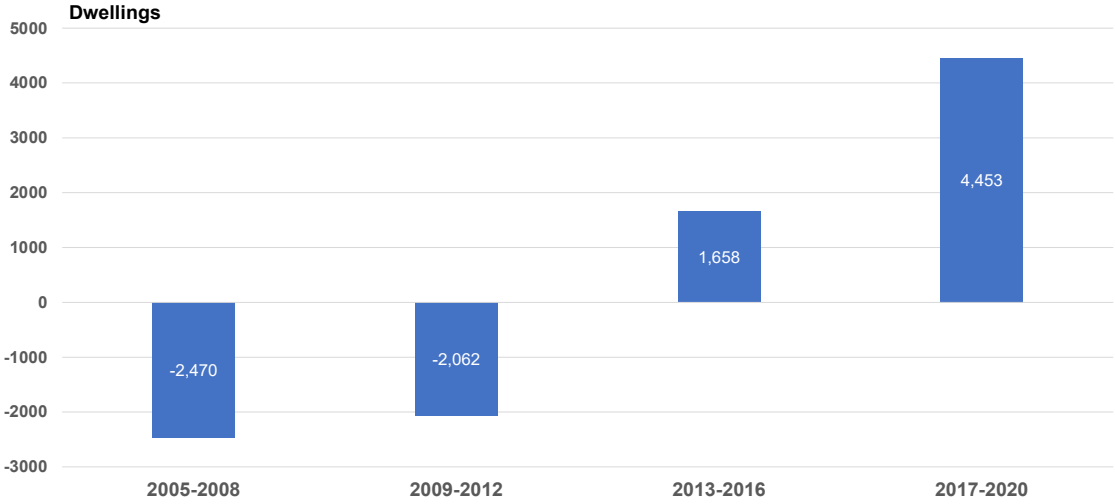


Source: Altus Group Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

When shown by four-year period, the net inflows to the City from domestic and international sources is roughly 4,500 persons per year, nearly two-and-half times what it was in the prior four-year period (2013-2016), and markedly different than the net outflows seen during the period two four-year periods from 2005-2008 and 2009-2012.

Figure 11 **Annual Net Inflows/Outflows, City of Windsor**

City of Windsor, 2005-2020, by 4-Year Period



Source: Altus Group Economic Consulting based Statistics Canada Estimates of the Components of Demographic Growth, 2005-2020

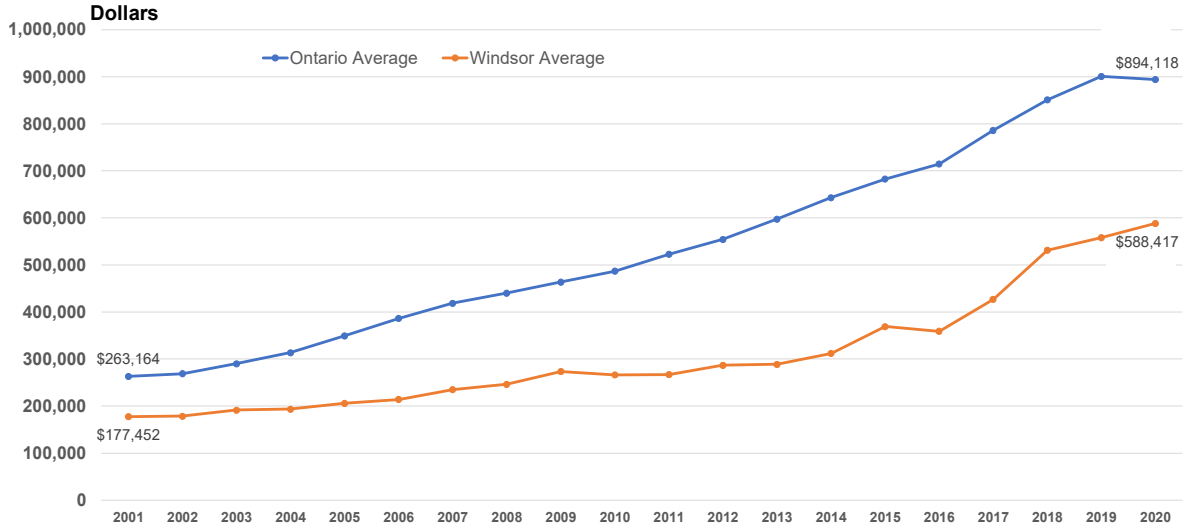
2.2 HOUSING

2.2.1 Housing Prices

Figure 12 shows the average price for absorbed (sold and completed) single-detached homes in the City of Windsor between 2001-2020, as reported by CMHC.[3]

Since 2001, average prices for single-detached units in the City have increased by 232%, from $177,500 in 2001 to $588,400 in 2020. While the average prices for single-detached units in Ontario have increased by a similar rate (239%) since 2001, the gap between the average prices in Ontario and the City have increased from $86,000 in 2001 to over $300,000 in 2020.

Figure 12 Average Absorbed Single-Detached Price, Ontario and City of Windsor, 2001-2020



Source: Altus Group Economic Consulting based on CMHC Housing Absorption Data, 2001-2020

2.2.2 Size of New Construction

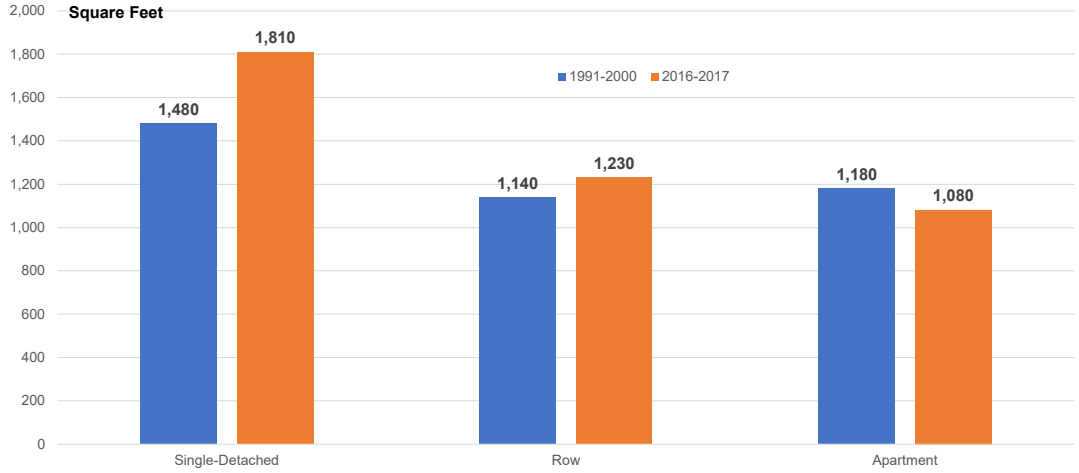
Figure 13 provides a breakdown of average above-grade living area by structure type for the City of Windsor.

The average size of a new single-detached unit in the City has grown from their average size in the 1990s by 22%, while the average townhouse unit has increased in size by 10%. The average size for apartment units has fallen by

[3] The data from CMHC does not control for unit sizes.

8%, but at 1,080 square feet is still on average larger than most new apartment units built elsewhere in Ontario.

Figure 13 **Average Above-Grade Living Area by Unit Type, by Period of Construction, City of Windsor**

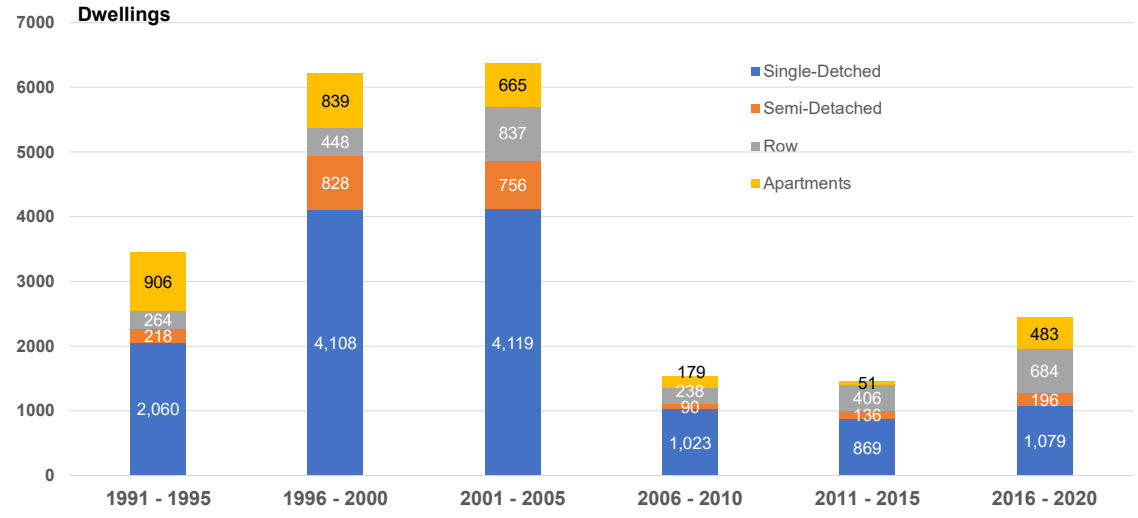


Source: Altus Group Economic Consulting based on Statistics Canada, Table 46-10-0028-01

2.2.3 Housing Completions by Unit Type

Figure 14 shows total housing completions by structure type in Windsor over the past 30 years, as broken out into separate five-year periods.

Figure 14 **Housing Completions by Structure Type**
City of Windsor, 1991-2020, by 5-Year Period



Source: Altus Group Economic Consulting based on CMHC Housing Completions Data

Since the 1996-2000 period, ground-oriented housing (single-detached and semi-detached) has progressively made up a smaller share of the total completed units in the City, falling from 79% of units in the 1996-2000 period, to 52% in the most recent five-year period (2016-2020).

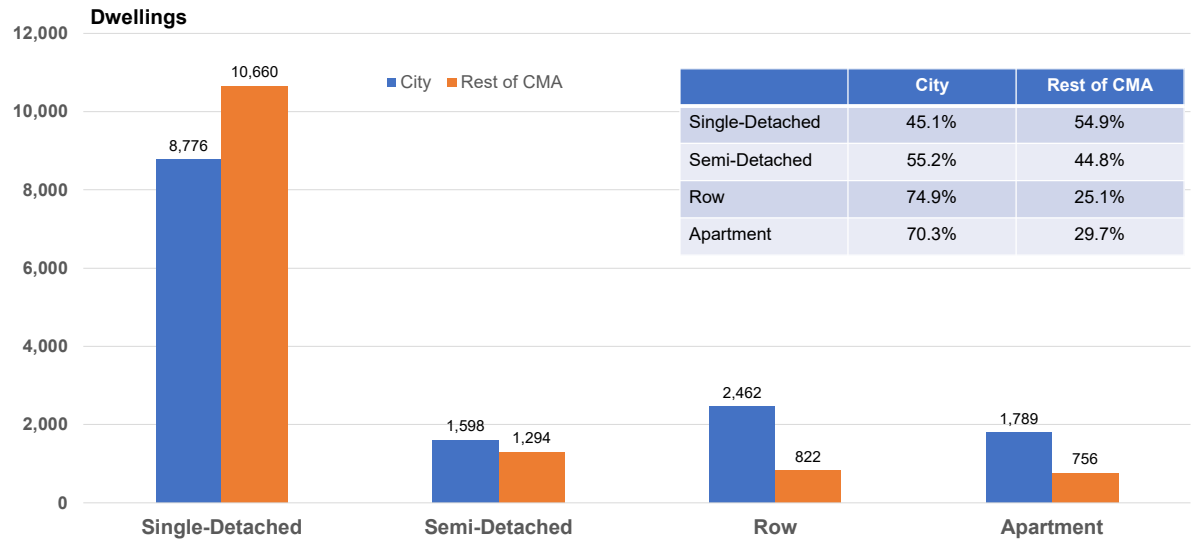
Row housing (townhouses) has increased in importance, making up 7-16% of new housing completions in the City over the 1991-2010 period, but 28% in each of the past two five-year periods.

The total number of apartment completions in the City was highest during the 1991-2005 period, when 2,410 apartment units were completed or an average of 160 units per year. Over the next fifteen-year period, the City saw just 713 apartment units completed or under 48 units per year.

Since 1999, the City has received roughly 52% of the housing unit completions in the broader Windsor CMA, however, the share differs by unit type, with the City receiving lower than average shares of single-detached units, but higher than average shares of all other types of housing[4], with the City's share of CMA completions for rows (74.9%) and apartments (70.3%) each exceeding 70%.

Figure 15 **Location of Housing Completions by Structure Type**

City of Windsor and Rest of Windsor CMA, 1999-2020



	City	Rest of CMA
Single-Detached	45.1%	54.9%
Semi-Detached	55.2%	44.8%
Row	74.9%	25.1%
Apartment	70.3%	29.7%

Source: Altus Group Economic Consulting based on CMHC Housing Completions Data

[4] Semi-detached, row, apartment

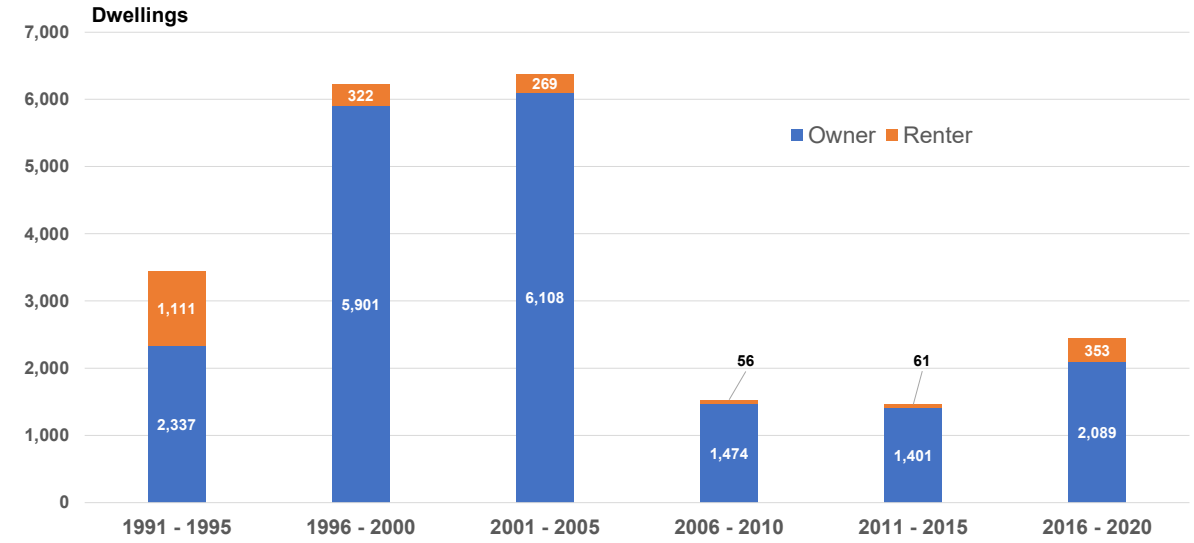
As the housing demand forecasts undertaken by Altus Group Economic Consulting are done for the Windsor CMA, the proportions of housing by structure type between the City and rest of CMA will be utilized to form assumptions for what proportion of future housing demand is likely to be directed towards the City of Windsor.

2.2.4 Housing Completions by Tenure

Figure 16 shows total housing completions by tenure in the City of Windsor over the past 30 years, as broken out into separate five-year periods.

The share of housing completions that were rental tenure over the 1991-2020 period was just 10.1%, heavily driven by the 32% share seen in the 1991-1995 period. Since 1991-1995, just 5.9% of new housing completions in the City have been rental tenure, or only 1,061 rental units in total (or 42 units per year).

Figure 16 **Housing Completions by Tenure**
City of Windsor, 1991-2020, by 5-Year Period



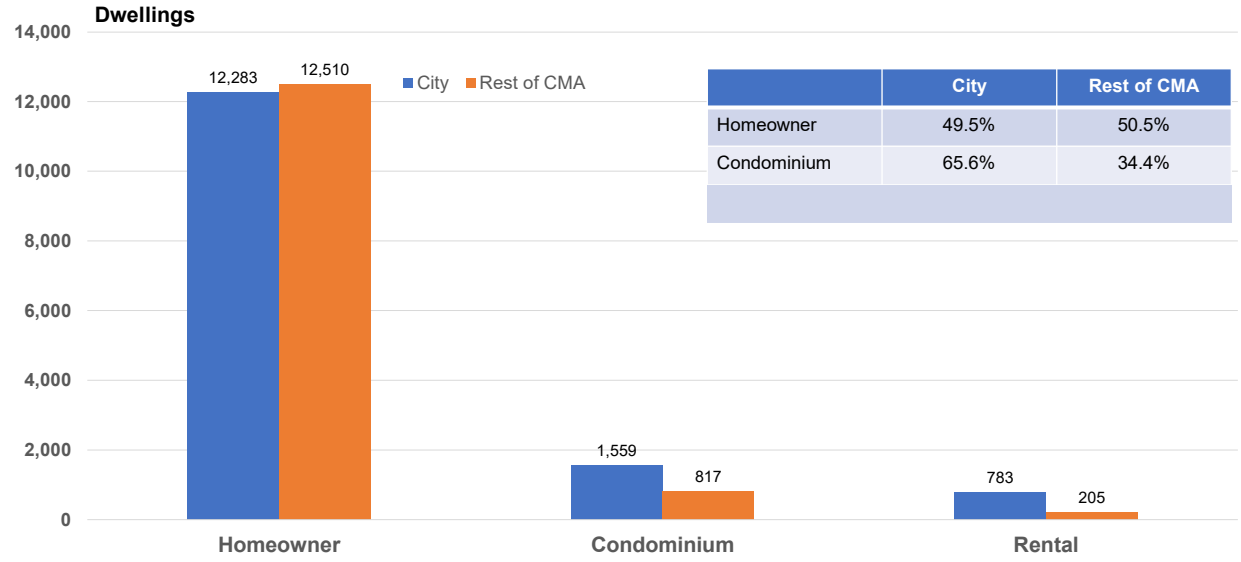
Source: Altus Group Economic Consulting based on CMHC Housing Completions Data, 1991-2020

Since 1999, the City has received roughly 52% of the housing unit completions in the broader Windsor CMA, however, like the differences in unit type, there are also significant differences in the forms of housing tenure that the City receives versus the rest of the CMA.

The City receives a lower-than-average shares of freehold ownership units (49.5%), but higher than average share of all other tenures, including

condominium (65.6%) and rental units (79.3%). To the extent that our housing demand forecast identifies specific unit types and tenures, these historic trends will be used to inform assumptions that allocate housing demand to the City or the rest of the Windsor CMA.

Figure 17 **Location of Apartment Housing Completions by Tenure**
City of Windsor and Rest of Windsor CMA, 1999-2020



	City	Rest of CMA
Homeowner	49.5%	50.5%
Condominium	65.6%	34.4%

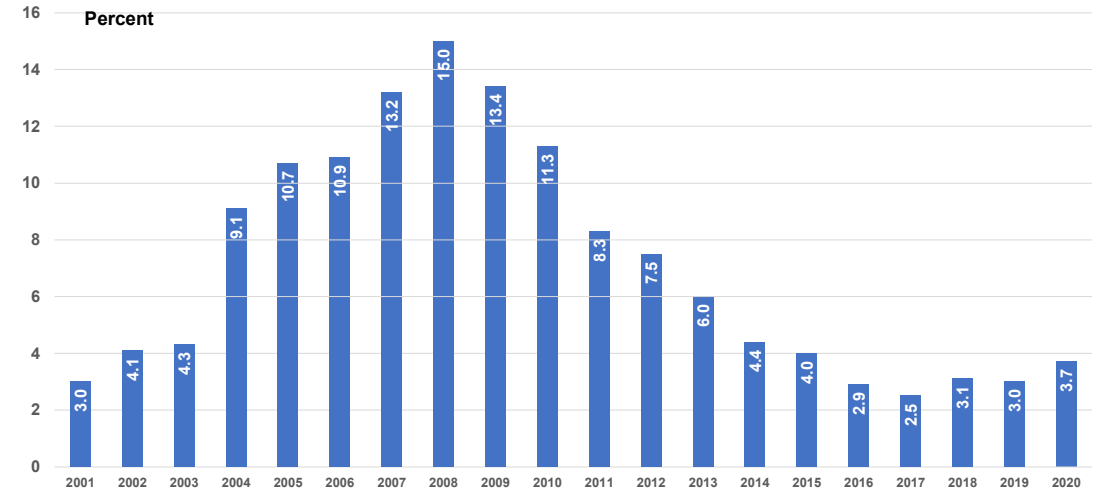
Source: Altus Group Economic Consulting based on CMHC Housing Completions Data

When the rental tenure units are broken down by unit type, the City receives a substantial share of the purpose-built rental housing completions within the CMA. Of the rental row houses, 93% were located in the City, while 82% of rental apartments were located in the City.

2.2.5 Rental Housing Market Trends

Figure 18 shows the 20-year trend in vacancy rates for private rental apartment units in the City of Windsor. After rising from 3.0% in 2001 to a high of 15.0% in 2008, the vacancy rate in the City has steadily fallen to a low of 2.5% in 2017, and has been below 4.0% in each of the past five years.

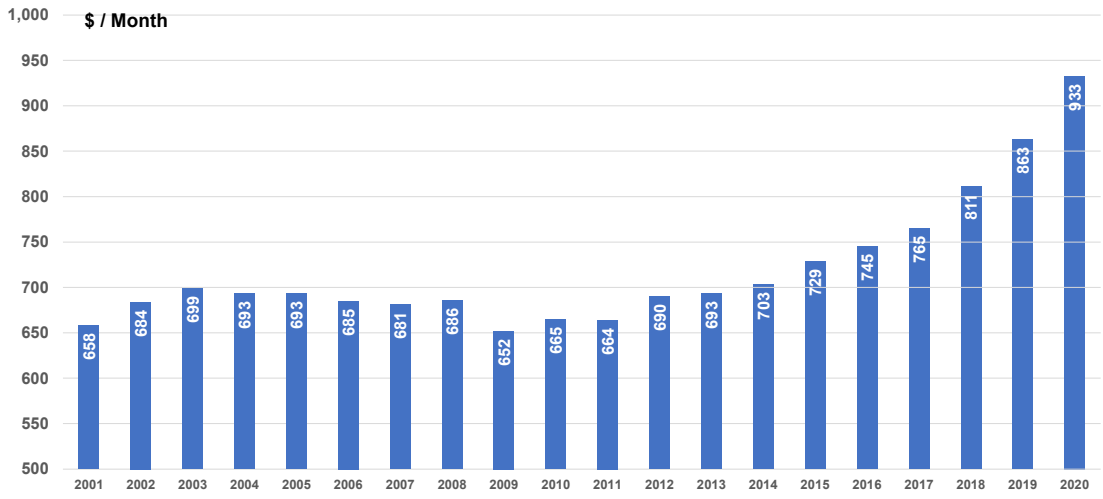
Figure 18 **Rental Apartment Vacancy Rate, City of Windsor**



Source: Altus Group Economic Consulting based on CMHC Rental Market data

Figure 19 shows the changes to average monthly rents for private apartment units in the City. As expected during periods of high vacancy rates, rents were relatively unchanged over the 2001-2014 period, ranging between $652 and $703 per month over the 14-year period. As vacancy rates declined over the 2011-2017 period and have stayed low since, rents have increased to a 20-year high of $933 per month, an increase of 33% since 2014.

Figure 19 **Average Monthly Rents, Rental Apartments, City of Windsor**



Source: Altus Group Economic Consulting based on CMHC Rental Market data

The significant decline in vacancy rates and corresponding increase in average rents is indicative of a rental housing market that is in need of additional supply. Over the 2001 to 2020 period, the number of private rental apartments in the City has increased by just 296 units, from 14,218 units in 2001 to 14,516 units in 2020.

2.2.6 Seniors Housing Market Trends

Figure 20 provides the vacancy rate, total number of residence buildings, residents, and spaces for senior housing in Windsor over the 2019-2021 period. The vacancy rate in the City has risen from 8.7% in 2020 to 26.2% in 2021.

Figure 20

Senior Housing, Vacancy Rates, Total Residences, Residents and Spaces, 2020-2021, City of Windsor

Year	Vacancy Rate	Total Residences	Total Residents	Total Spaces
	Percent	*Buildings*	*People*	
2019	6.6	n.d	n.d	n.d
2020	8.7	10	1,087	1,113
2021	26.2	10	888	1,130
Change 2020-2021	17.5	-	(199)	17

Source: Altus Economic Consulting based on CMHC Senior Housing Data

Figure 21 provides the vacancy rate by rent range and unit type for senior housing in Windsor between 2019 and 2021.

Figure 21

Vacancy Rate, by Rent Range and Unit Type, 2019-2021, City of Windsor

	Rent Range				
Year	Less than $2,500	$2,500-$2,999	$3,000-$3,499	$3,500-$3,999	$3,500-$3,999
			Percent		
2019	6.8	12.4	6.6	n.d	4.0
2020	n.d	13.3	6.2	5.3	6.0
2021	32.9	28.0	27.0	21.1	22.9

	Unit Type			
	Ward/ Semi-Private	Bachelor/ Studio	1 Bedroom	2 Bedroom+
			Percent	
2019	n.d	9.5	4.6	n.d
2020	n.d	11.1	4.6	n.d
2021	n.d	25.2	21.7	n.d

Source: Altus Economic Consulting based on CMHC Senior Housing Data

Mirroring total vacancy rates, the rates by either rent range or unit type have grown significant since the onset of the COVID-19 pandemic. Generally,

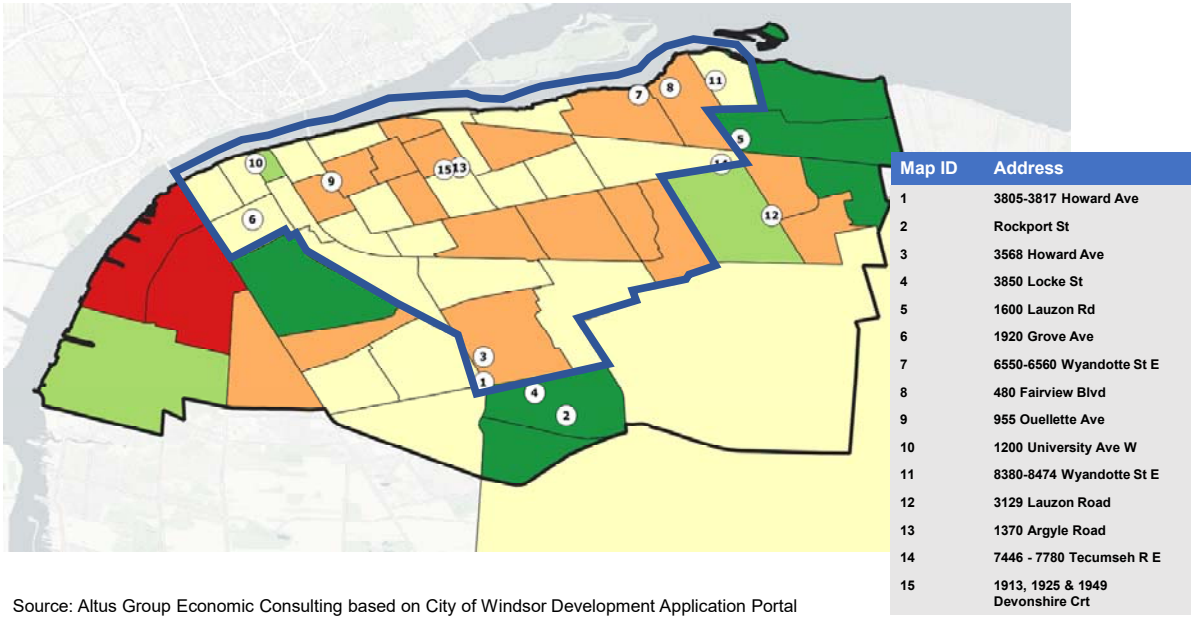
vacancy rates are higher for smaller rental units and those with lower rental prices.

2.3 OTHER CONSIDERATIONS – POPULATION AND HOUSING

2.3.1 Location of Development Applications

Of the major development applications in the City, there are 1,038 dwelling units proposed (for those with known unit counts), with the majority of these dwelling units proposed for the "Inner Area" where the population has been declining.

Figure 22 **Major Residential Development Applications, City of Windsor**



Source: Altus Group Economic Consulting based on City of Windsor Development Application Portal

Of the 1,038 units in the active development applications, 81% are located in the Inner Area, including 89% of the apartments under proposal.

This is indicative of a high-density residential market willing and able to locate in the existing parts of the City, however, the quantum of new development will need to be increased to meet demand through supportive policies permitting and encouraging high-density residential projects in existing built-up parts of the City.

Figure 23 **Active Major Residential Developments, City of Windsor, Winter 2022**

Map ID	Address	Single	Semi	Row	Apartment	Total
				Dwelling Units		
1	3805-3817 Howard Ave	-	-	-	54	54
2	Rockport St	80	-	-	-	80
3	3568 Howard Ave	13	-	-	-	13
4	3850 Locke St	-	18	-	-	18
5	1600 Lauzon Rd	n.d	n.d	n.d	n.d	n.d
6	1920 Grove Ave	-	40	-	-	40
7	6550-6560 Wyandotte St E	n.d	n.d	n.d	n.d	n.d
8	480 Fairview Blvd	-	-	-	15	15
9	955 Ouellette Ave	-	-	-	32	32
10	1200 University Ave W	-	-	-	133	133
11	8380-8474 Wyandotte St E	-	-	-	63	63
12	3129 Lauzon Road	-	-	-	96	96
13	1370 Argyle Road	-	-	-	81	81
14	7446 - 7780 Tecumseh R E	-	-	-	390	390
15	1913, 1925 & 1949 Devonshire Crt	-	-	-	23	23
Total		93	58	-	887	1,038

Note: Inclusive of development proposals greater than 5 dwelling units, but excludes residential and senior care facilities
Source: Altus Group Economic Consulting based on City of Windsor Development Application Portal

In their recent Economic Outlook for the City, CBRE indicated that the City of Windsor was primed to see growth within the existing built-up part of the City:

> **Windsor Municipality Targets Density & Development**
>
> The City of Windsor's aggressive push to incentivize new development and spur urban density in the core is expected to expand and drive developer interest. With robust fundamentals, further tax rebates and new community improvement plans expected, both new and long proposed projects could finally break ground or get announced in 2021.

2.3.2 Importance of Access to Transit

Transit Windsor currently operates 15 different bus routes including a new limited-stop *express* route (Route 518X) from Tecumseh Mall to St. Clair College (via Devonshire Mall) intended to reduce travel times by over an hour each way between the eastern portions of the City and St. Clair College. This route is set to become a permanent corridor after experiencing strong ridership in its pilot phase – averaging 1,500 to 1,800 unique trips, or annualized ridership of over 90,000[5]. It is estimated that transit will see a 30% increase in ridership once the route is approved for expansion[6]. The success of this pilot is integral to the execution of the City's 2019 Transit Master Plan;

[5] City of Windsor (Dec 2021) – https://www.citywindsor.ca/Newsroom/Pages/Proposed-2022-Budget-Delivers-Results-for-Transit-Operations.aspx

[6] City of Windsor – 2022 Budget Issue Detail (Public), Page 250

More Than Transit ("TMP") that prioritizes enhanced transit service and increased ridership.

The 518X joins an existing transit network which is "downtown" centric, with 10 routes originating or terminating in Downtown Windsor. There are also four routes that are interregional connecting to points outside of the City, including Downtown Detroit, the Town of LaSalle, the Town of Tecumseh and a limited service to the Municipality of Leamington.

Transit ridership has generally followed the population trends of Windsor – remaining relatively stagnant since 2007, at times declining, and rising slightly during the years prior to the pandemic.

However, Transit Windsor continues to face several challenges:

- The historical operating budget for Transit Windsor for the service shows that both revenues and expenses have been increasing over the past decade; however, expenditures continue to be roughly double the operating revenue generates;[7]
- Despite increasing costs, the City has been unable to increase revenue vehicle kilometres and hours;
- A review of Transit Windsor travel patterns shows that a gap exists between peak transit demand and service supply, as commute trips by all modes of travel are distributed across the City rather than being focused on the core, despite the majority of the network routes being directed there. As an example, less than 10% of morning peak period trips have a destination of Downtown Windsor, an outcome that contrasts with most other major municipalities[8].

To improve the City's transit infrastructure, the City has budgeted $63 million for new capital projects over the next decade. In addition, following the success of the Express 518X, the next major service improvement is the addition of Route 418, estimated to cost about $1 million annually to operate[9]. The route will provide express east-west service along Tecumseh Road and

[7] City of Windsor & Dillon Consulting (2019) – Transit Master Plan; *More Than Transit,* Page 7

[8] City of Windsor & Dillon Consulting (2019), Page 8

[9] Blackburn News (Dec 2021) - https://blackburnnews.com/windsor/windsor-news/2021/12/02/budget-proposes-transit-windsor-investments-enough/

the new St. Denis Athletic and Community Centre at the University of Windsor.

It will be important to focus intensification within the City of Windsor on areas already well-served by transit services, to leverage and optimize planned capital and operational investments.

2.3.3 Importance of Access to Amenities

There is a great deal of literature that reviews the impacts of various amenities on land values and home prices. Using land values and homes prices acts as a proxy for reviewing the impact on housing demand from amenities, as growth in prices are an indicator of greater demand. These include:

- **Public Transit:** Access to public transit is positively correlated with higher land values and homes prices[10], however, geographic context needs to be accounted for. The impact from higher order transit has a wider but less sizable effect on low-rise communities, while in high rise transit orientated communities ("TOD") the effect is greater but not as geographically dispersed.[11]
- **Parks and Open Spaces:** Access to public parks and open spaces has been found to have significant impact on nearby residential properties' sale prices, particularly for housing types that lack self-contained green spaces (i.e., backyards), like apartments or townhomes.[12]
- **Libraries:** It was also found that being located within walking distance to a public library increased property values, with a nearly 8% property value increase for properties within 400 metres of a library. [13]

[10] Shanaka Herath. *Elevating the Value of Urban Location: A Consumer Preference-Based Approach to Valuing Local Amenity Provision.* Land. 2021

[11] Higgins and Kanaroglou. *Rapid transit, transit-oriented development, and the contextual sensitivity of land value uplift in Toronto*. Urban Studies. 2017

[12] McCord, McCluskey, Davis, et al. *Effect of public green space on residential property values in Belfast metropolitan Area*. Journal of Financial Management of Property and Construction. 2014

[13] Diamond, Gillen, et al. *The Economic Value of The Free Library in Philadelphia. Fels Institute of Government at the University of Pennsylvania*. 2010

- **Retail**: A 2007 study of a municipality in Washington State found that proximity to retail had a significant positive effect on residential values.[14]

2.3.4 University and College Enrolment and Housing Options

The Census population for the City only includes permanent population, excluding non-permanent populations such as post-secondary students. However, while post-secondary students are not included in population counts, they do require housing for much of the year, and need to be considered in understanding the housing trends affecting a municipality.

Therefore, to understand the overall housing market demand, we have undertaken an analysis of post-secondary enrolment trends for the institutions located in the City – primarily the University of Windsor and St. Clair College primarily, but others as well.

Student enrollment for both St. Clair College and the University of Windsor has grown by a total of approximately 3,600 students between Fall 2012-Winter 2020 semesters.[15] However, the increase in student population has been greatest at the University of Windsor, which has seen a growth of approximately 3,200 full-time students, an increase of 23.1%.

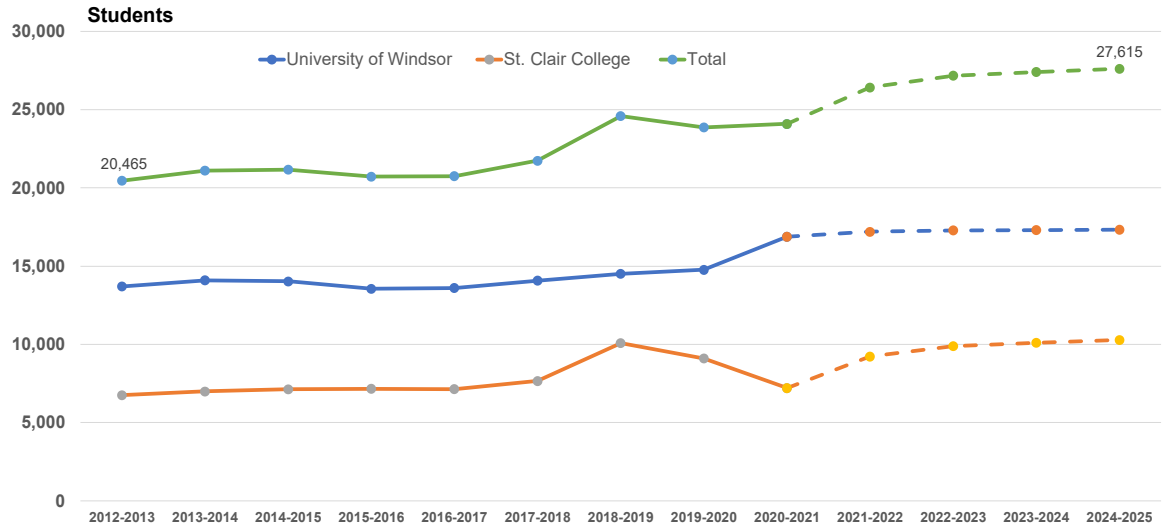
It was projected that total post-secondary student enrolment in Windsor will increase by another 3,500 students, or another 17.7%, between Fall 2020 and Winter 2025.

[14] Matthews. *Retail Proximity and Residential Values*. 2007

[15] See Appendix B **Error! Reference source not found.** for a yearly breakdown of student enrollment by higher education institution and by total.

Figure 24 **University and College Enrollment**

City of Windsor, 2012-2020 (actual) and 2021-2025 (projected)



Note: Projections of student enrollment between 2020-2025 for St. Clair College have been discounted to account for campuses outside of Windsor
Source: Altus Group Economic Consulting based on University of Windsor, St. Clair College, and Ministry of Colleges and Universities

Figure 25 below provides a summary of both existing and future potential formal student housing in the City.

Currently, there is only one formal student housing space for every 14 students as of the 2019-2020 school year. Assuming that both the unnamed future residence hall at the University of Windsor with 450 spaces and the new International Student Residence Hall with 512 spaces at St. Clair College are completed by the 2024-2025 school year, the City is expected to have 1 formal student housing space for every 10 students. Should both student residences at the College and University be delayed beyond 2025, then the City is expected to have 1 formal student housing space for every 16 students.

Figure 25

Existing and Potential Future Student Housing, City of Windsor

Existing Housing	
Educational Institution and Reisdent Halls	Spaces
St. Clair College	
Windsor Campus	408
Total	408
University of Windsor	
Alumni Hall	337
Laurrie Hall	150
Cartier Hall	153
Risidence West[1]	270
Total	910
Potential Future Housing	
St. Clair College	
Intnational Student Residence	512
University of Windsor	
Unnamed Residence Hall	450
Total Existing Student Housing	1,726
Total Potential Student Housing	962
Total Student Housing	2,688

1 Closed for 2021-2022 semister
Source: Altus Group Economic Consulting based on University of Windsor, St. Clair College

Based on discussions with the University of Windsor, it was identified that most student who choose to dwell in student residences are typically first-year bachelor program students from outside the Windsor Region. As these students mature into second and subsequent school years, they typically move into student housing in the nearby neighbourhoods or in other parts of City.

In devising housing need forecasts, the City should ensure that current and future post-secondary students are captured in the estimated housing demand.

2.3.5 Commuting Flows

Figure 26 below shows, for persons with a usual place of work, the place of work for persons who reside in the City of Windsor, and the place of residence for people who work within the City. In total, the number of people working in the City at a usual place of work (93,565 persons) is significantly greater than the number of working persons who live in the City

(76,425 persons), meaning that there is a net inflow of 17,140 persons from areas surrounding the City.

Figure 26

Commuting Flow, City of Windsor, 2016

Municipality	2016 Persons Working in Windsor	2016 Place of Work for Persons Living in Windsor	2016 Net Inflow / (Outflow)
		Persons	
Windsor, CY	60,310	60,310	-
LaSalle, T	8,430	1,750	6,680
Amherstburg, T	4,445	760	3,685
Lakeshore, T	7,230	3,970	3,260
Essex, T	2,980	740	2,240
Kingsville, T	1,830	660	1,170
Chatham-Kent, MU	860	450	410
Leamington, MU	850	715	135
Tecumseh, T	6,210	6,425	(215)
All Other	420	645	(225)
Total	93,565	76,425	17,140

Source: Altus Group Economic Consulting based on Statistics Canada, Catalogue no. 98-400-X2016325

The greatest net inflow of workers into the City is from LaSalle, where 8,430 people live and work in the City of Windsor, but only 1,750 persons who live in the City of Windsor and commute to LaSalle, for a net inflow of nearly 6,700 persons.

There are also significant net inflows from Amherstburg (3,685 persons), Lakeshore (3,260 persons), Essex (2,240 persons) and Kingsville (1,170 persons).

3 EMPLOYMENT AND ECONOMIC TRENDS

This section of the report reviews trends in employment in the City, as well as trends affecting the retail and industrial sectors in particular.

3.1 EMPLOYMENT TRENDS

3.1.1 Change in Employment

In 2006, the City of Windsor had 114,785 jobs, but over the 2006-2016 period, the number of jobs in the City has declined by 8% or nearly 9,000 jobs. The decline in nearly 10,000 jobs with a usual place of work was offset somewhat by an increase of 1,450 jobs with 'no fixed' place of work, which may include construction workers, delivery drivers, and other occupations without a usual place of work.

Figure 27

Total Employment in City of Windsor, 2006-2016

	2006	2016	Change 2006 -2016	
		Jobs		*Percent*
Work at Home	3,765	3,325	(440)	-12%
No Fixed Place of Work	7,090	8,540	1,450	20%
Usual Place of Work	103,930	93,960	(9,970)	-10%
Total Employment	114,785	105,825	(8,960)	-8%

Source: Altus Economic Consulting based on Statistics Canada Census, 2006 and 2016

3.1.2 Change in Employment by Sector

Figure 28 below shows the change in employment in the City by industry sector over the 2006-2016 period, where the City saw a decline of nearly 10,000 jobs. The largest decline was seen in the manufacturing sector, which lost 27% of the jobs the sector had in 2006, or a decline of nearly 6,900 jobs in the 10-year period.

Figure 28 **Change in Jobs Located in City of Windsor by Industry, 2006-2016**

Industry	2006	2016	Change 2006-2016	% Change
		Jobs		*Percent*
11 Agriculture, forestry, fishing and hunting	190	130	(60)	-32%
21 Mining and oil and gas extraction	295	245	(50)	-17%
22 Utilities	535	490	(45)	-8%
23 Construction	2,475	2,020	(455)	-18%
31-33 Manufacturing	25,235	18,340	(6,895)	-27%
41 Wholesale trade	2,700	1,995	(705)	-26%
44-45 Retail trade	13,150	11,445	(1,705)	-13%
48-49 Transportation and w arehousing	3,765	3,465	(300)	-8%
51 Information and cultural industries	1,490	1,230	(260)	-17%
52 Finance and insurance	3,310	3,835	525	16%
53 Real estate and rental and leasing	1,385	1,155	(230)	-17%
54 Professional, scientific and technical services	3,970	3,995	25	1%
55 Management of companies and enterprises	50	45	(5)	-10%
56 Administrative and support, w aste management, remediation, etc.	2,705	3,775	1,070	40%
61 Educational services	7,740	8,030	290	4%
62 Health care and social assistance	11,415	13,900	2,485	22%
71 Arts, entertainment and recreation	4,990	3,120	(1,870)	-37%
72 Accommodation and food services	9,440	8,425	(1,015)	-11%
81 Other services (except public administration)	4,405	3,540	(865)	-20%
91 Public administration	4,675	4,795	120	3%
Total	103,930	93,960	(9,970)	-10%

Source: Altus Group Economic Consulting based on 2006 and 2016 Census

Other sectors seeing large losses were the arts/entertainment/recreation sector (-37% or 1,870 jobs), the accommodation/food service sector (-11% or 1,015 jobs), and retail (-13% or 1,705 jobs).

The only sectors that saw increased employment in the City were the health care sector, the administrative and support sector and educational services.

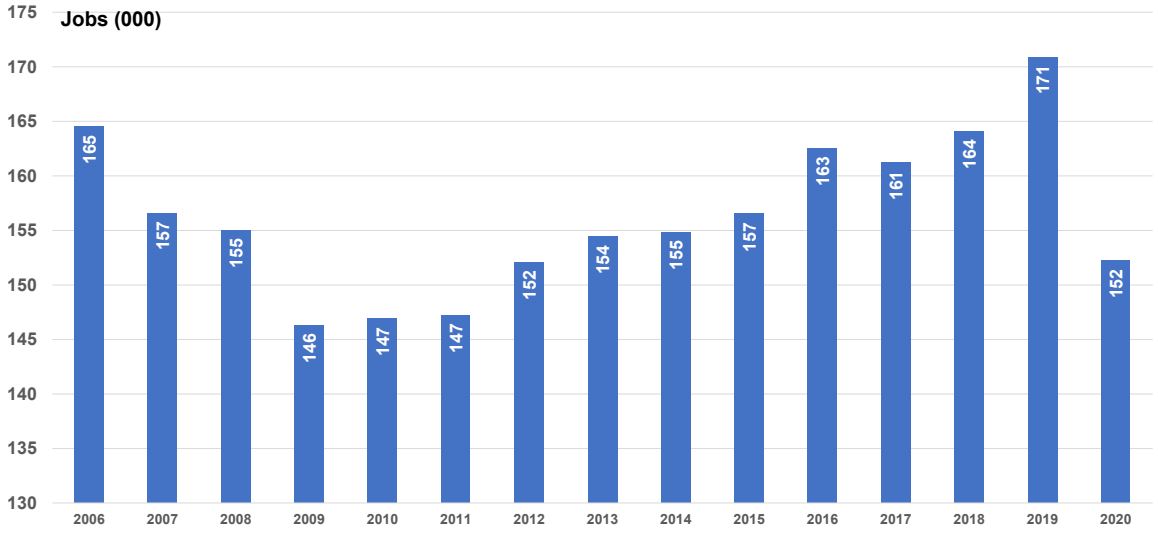
3.1.3 Employment Rate and Unemployment Rate

Figure 29 provides labour force characteristic statistics between 2006-2020 for the Windsor Census Metropolitan Area ("CMA")[16]. Note, census metropolitan areas are the lowest level of geographic analysis for publicly available employment data that is provided by Statistics Canada.

Over the 2009-2019 period, total employment in the Windsor CMA increased by nearly 25,000 jobs, from 146,000 jobs in 2009 to 171,000 jobs in 2019. Employment levels fell to 152,000 jobs in 2020 due to impacts from the COVID-19 pandemic.

[16] Includes the City of Windsor along with the Towns of Amherstburg, LaSalle, Lakeshore and Tecumseh.

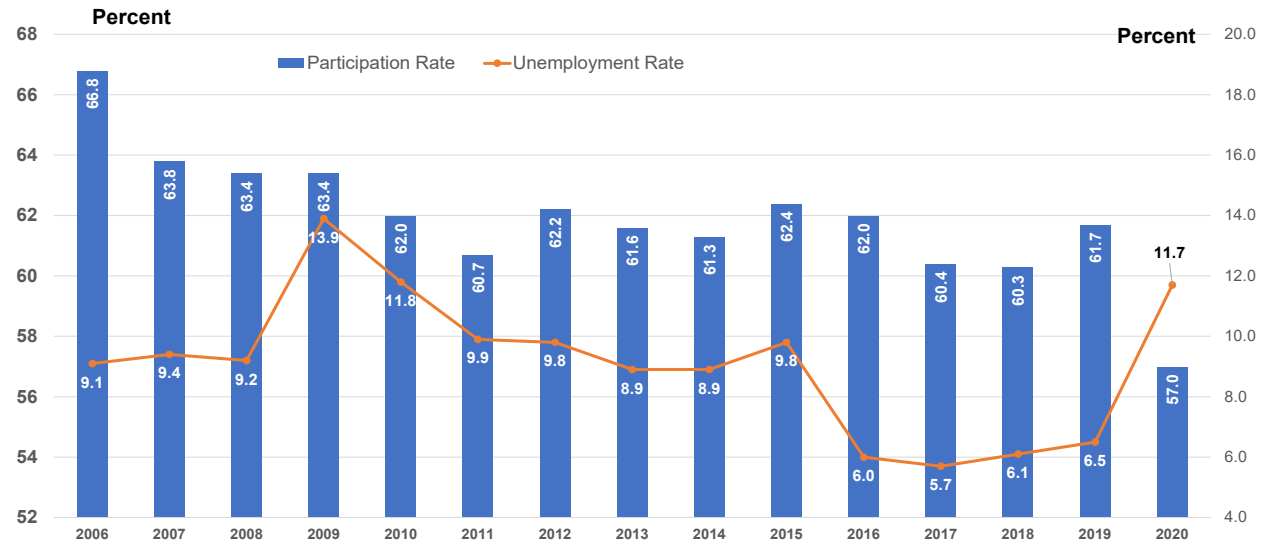
Figure 29 **Total Employment, Windsor CMA, 2006-2020**



Source: Altus Group Economic Consulting based on Statistics Canada, Table 14-10-0385-01

The participation rate (number of persons aged 15+ with work or looking for work as % of all persons aged 15+) among City residents has fallen from roughly 67% in 2006 to 62% in 2019 before falling further in 2020 to approximately 57%.

Figure 30 **Trends in Labour Participation Rate and Unemployment Rate, Windsor CMA, 2006-2020**



Source: Altus Group based on Statistics Canada, Table 14-10-0385-01

The unemployment rate in the Windsor CMA since 2009 had been on a general declining trend, settling at roughly 6% since 2016. However, in 2020, due to the impacts from the COVID-19 pandemic, the unemployment rate increased to 11.7%, although this is expected to return to long-term historic averages once the economic effects of the pandemic ease in 2021 and beyond.

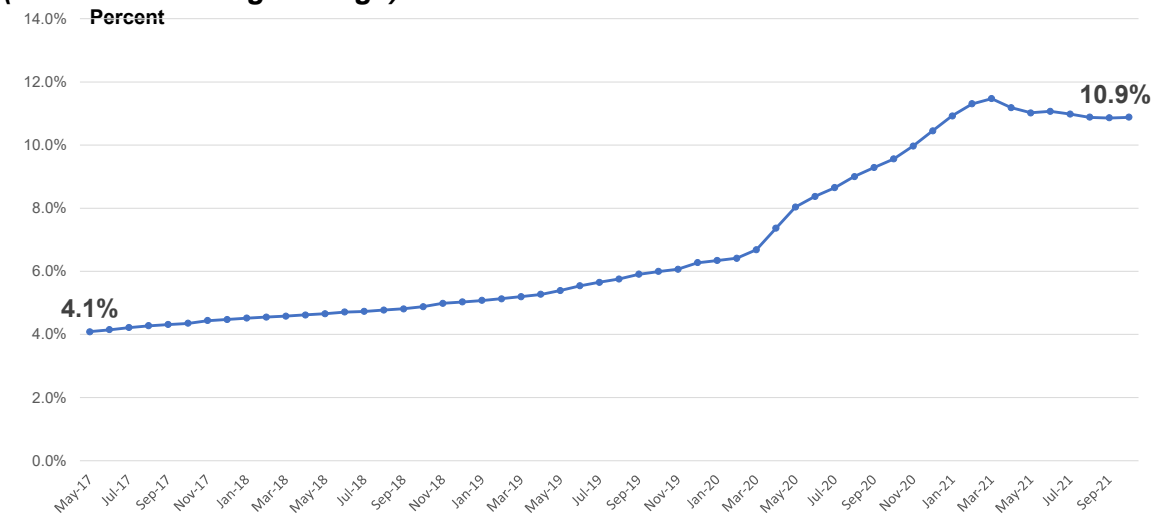
3.2 NON-RESIDENTIAL MARKET TRENDS

3.2.1 Retail Market

Ecommerce as a share of all retail sales in Canada has grown from 4.1% of sales in mid-2017 to 10.9% in late-2021, with the growth accelerated by the pandemic.

Figure 31

E-Commerce as % of Retail Sales, Canada, 2017-2021
(12 month moving average)



Source: Altus Group Economic Consulting based Statistics Canada, Table 20-10-0072-01

A continued increase in the shift towards online retail will push fulfilment of retail demand towards the industrial sector, where online orders are processed through warehouse and distribution centres, and away from traditional retail store formats. It is estimated that with every $1 billion in online e-commerce sales, an additional 1.25 million square feet of industrial space is required.[17]

[17] CBRE, Market Outlook Report, 2021

CBRE forecasts that e-commerce will grow another 58% in the next five years, and this growth may alone be responsible for an additional 40 million square feet of demand for industrial and warehousing space throughout Canada.

Analyses done on retail vacancy rates in major Canadian urban centres has generally found that retail spaces in smaller neighbourhood centres have fared better than more isolated, regional shopping centres such as enclosed malls. The average vacancy rate among "Regional Centres", which generally consists of enclosed malls is over 9%. Meanwhile, the vacancy rate for power centres (which typically include hardware stores and general retailers like Wal-Mart or Canadian Tire) is lower at 3.1%, while community/neighbourhood retail also has maintained a low vacancy rate at 3.7%.

Figure 32

Vacancy Rates by Type of Retail Location

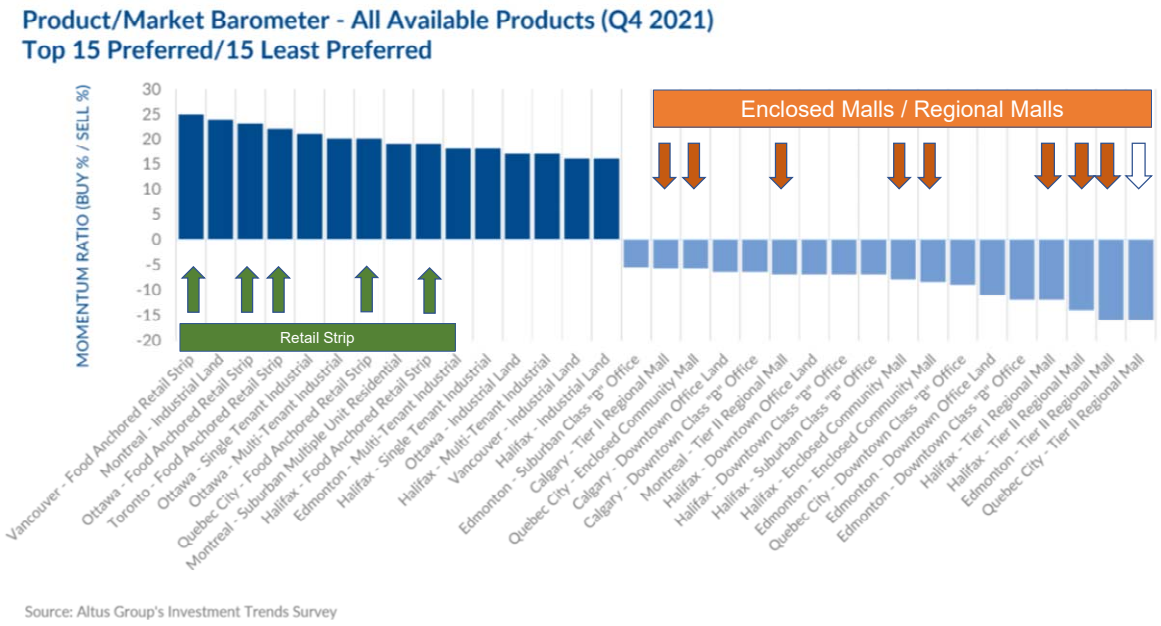
	Community, Neighbourhood and Strip Plaza	Power Centre	Regional Centre
		Percent	
Vancouver	3.6%	1.4%	n.a.
Calgary	4.0%	3.0%	17.0%
Edmonton	3.0%	1.7%	6.9%
Winnipeg	5.5%	4.1%	14.5%
Toronto	2.8%	2.9%	5.0%
Ottawa	3.2%	2.4%	10.6%
Montreal	4.7%	5.3%	7.9%
Halifax	6.0%	6.2%	23.5%
Average	3.7%	3.1%	9.3%

Note: Power Centre is generally big-box format retail locations
Note: Regional Centre is generally enclosed malls
Source: Altus Group Economic Consulting based on CBRE, Canada Retail Report, Spring 2021

Similar to the findings by CBRE, Altus Group's Investment Trends Survey found that out of the 128 combinations of product types (various types of office, retail, industrial types) and location across Canada, both "Enclosed Malls" and "Regional Malls" were among the least preferred asset types among investors. Combined large-scale retail development types comprised nine (9) of the 15 least preferred asset types across Canada, with a mix of regional malls and enclosed malls.

However, of the top 10 most preferred asset types, "food anchored retail strip" in various locations across made up five (5) of the top 10 most preferred assets.

Figure 33



Source: Altus Group's Investment Trends Survey

The introduction of residential uses in close proximity to established retail centres can help to add value for retailers and allow for a mix of uses that make for convenient shopping for new residents, as well as help boost demand for additional retail uses in some cases.

The addition of residential uses to established shopping centres is a burgeoning trend occurring across Canada, as well as Ontario, with the following shopping centres seeking to add residential uses to transform isolated commercial areas into mixed-use community hubs.

Figure 34

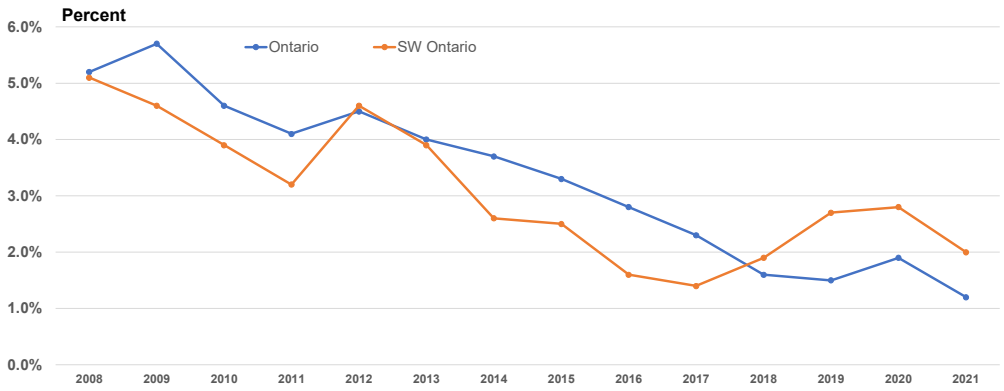
Shopping Centre	Municipality	Proposed Additional Uses
Yorkdale Shopping Centre	Toronto	1,500 rental residential units, hotel, additional retail space
CF Shops at Don Mills	Toronto	2,800 residential units
Bayview Village	Toronto	1,130 residential units and 147,100 square feet of additional retail space

Shopping Centre	Municipality	Proposed Additional Uses
Cloverdale Mall	Toronto	Refurbished retail uses, plus addition of residential, parks, open spaces.
Promenade Mall	Vaughan	1,000 residential units, office space, hotel
Agincourt Mall	Toronto	4,000 residential units, office space, additional commercial space, child care centre, etc.
Square One	Mississauga	Significant number of high-density residential units
Westgate Shopping Centre	Ottawa	Five residential buildings, 20,000 square feet of retail
Source: Retail Council of Canada, Canadian Shopping Centre Study, 2019		

3.2.2 Industrial Market

As of year-end 2021, the industrial market across Ontario is severely constrained by a lack of supply, with vacancy rates across the entirety of Ontario nearing 1.0%, with just 12.7 million square feet (out of a total of 1.07 billion square feet province-wide) available as of Q4 2021.

Figure 35 **Trends in Industrial Vacancy Rates, Ontario and SW Ontario**



**SW Ontario includes Brantford, Cambridge, Guelph, Hamilton, Waterloo Region, London, St. Catharines, Stratford, Woodstock*
Source: Altus Data Studio

While Altus Group's "Southwestern Ontario" submarket area does not extend far enough to include the City of Windsor, it does cover an area from Niagara Region to the London area, with the same Province-wide trends evident in the SW Ontario submarket, including vacancy rates of just 2.0% and only 2.37 million square feet (out of 120.5 million square feet total) available to be leased.

In essence, vacancy rates in the range of 1-2% represent 'full occupancy' as there will always be an expectation of 'structural' vacancy consisting of companies moving to new buildings, going out of business, awkward available space sizes or configurations that have limited marketability, etc. that can leave buildings vacant for short periods of time.

The vacancy rate in the SW Ontario submarket is consistent with the findings of CBRE which specifically studies the Windsor industrial market. CBRE found that the availability rate for industrial in the City as of year-end 2020 was just 2.2%, down from 2.6% the year prior. The net asking rents, owing to the relative lack of supply, increased from $6.85 per sf in 2019 to $7.75 per sf in 2020, an increase of 13% in just one year.

CBRE found that the industrial sector in the City could soon significantly expand and build upon the various employment lands ready and available for development in the City.

> **Automotive & Manufacturing Tailwinds to Drive Investment**
>
> 2020 carried with it a series of multibillion-dollar announcements to invest in Southwestern Ontario's automotive industry from Ford, General Motors and Stellantis, which should solidify the region's economic future. With these tailwinds, an influx of corporate investment across Windsor's manufacturing sectors is anticipated to follow in the years ahead as the electric and autonomous vehicle market takes shape.

The expectations of a 'tight' industrial market in the City is expected to continue, given a modest development pipeline:

> **Record Tight Industrial Market Here to Stay**
>
> Windsor's industrial market ended the year on a high note and recorded an eye catching 2.2% availability rate, which decreased 100 bps from a year prior to a new record-low. Despite an anticipated minor softening of demand in 2021, availability is expected to remain near current levels as a result of the modest development pipeline which has virtually no speculative development.

Given the significant under supply of industrial space in the Province and Southwestern Ontario, the City should be seeking to retain as many occupied and vacant employment lands as possible, unless there are compelling reasons to allow residential uses on them.

4 GROWTH FORECASTS AND HOUSING OUTLOOK

This section provides a high-level overview of the housing demand forecast prepared by Altus Group Economic Consulting for housing by unit type and tenure in the Windsor CMA, and how much of this estimated demand can be expected to accrue to the City of Windsor.

4.1 HOUSING PROPENSITY MODEL (ALTUS GROUP FORECASTS)

4.1.1 Approach and Methodology

Based on modelling from Altus Group Economic Consulting, estimates of housing demand by unit type in the Windsor CMA have been undertaken.

The Altus Group Housing Demand Model is a multi-dimensional propensity-based model taking demographic inputs (from the separate cohort survival population growth model) and analysing among historical and projected propensities for the interplay between age of household maintainers, household type, household tenure, and household structure type. In all the model considers some 780 demand propensities.

Our approach to forecasting these propensities is to model the historical pattern on propensities and evaluate trend that is significantly different than zero (no change) those that are not significantly different than zero are projected to be held constant. Typically, this accounts for some 80-90% of propensities - for those that show a significant trend up or down over the historical period, an analysis is done to evaluate the drivers of that trend and factors related to those drivers are evaluated for the forecast.

The sections of the report below will summarize some of the key findings from the housing demand model. However, the detailed forecasts will be provided in an appendix to this report.

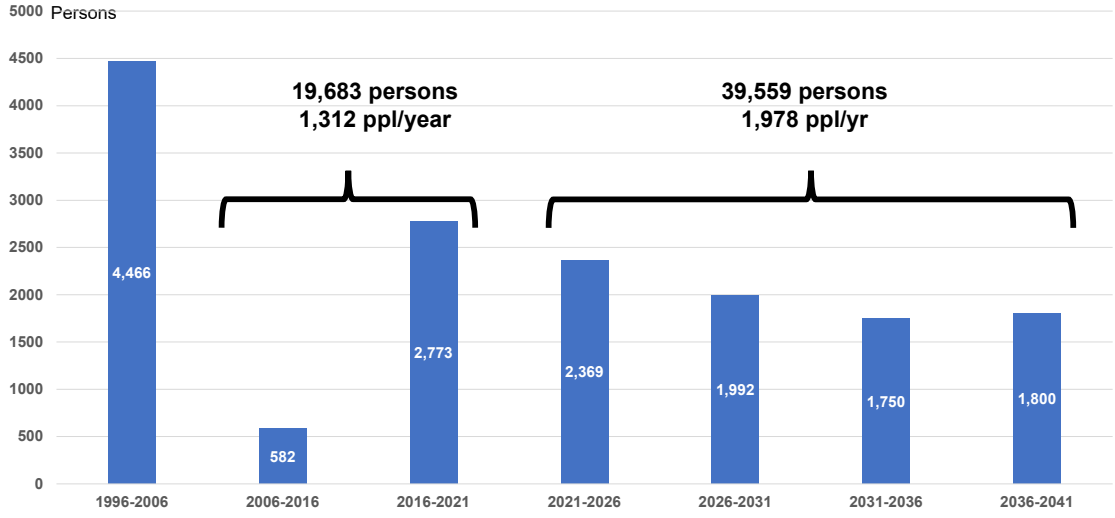
4.1.2 Windsor CMA Population Forecast

Figure 36 depicts the population forecast in the Windsor CMA based on the Altus Group model.

In total, it is expected that the Windsor CMA will grow by nearly 39,600 persons over the 2021-2041 period, or approximately 1,978 persons per year. This compares to the average annual rate of growth over the 2006-2021 period of 1,312 persons per year. Therefore, the amount of population growth

forecasted over the 2021-2041 period represents an increase in population growth of approximately 51% over the preceding 15-year period.

Figure 36 **Forecasted Change to Windsor CMA Population**
City of Windsor, 2006-2021 (actuals) and 2021-2041 (forecast), Annual Averages



Source: Altus Group Economic Consulting

4.1.3 Windsor CMA Housing Demand by Structure Type

The figure below provides the detailed results from the Altus Group forecast of housing demand by structure and tenure in the Windsor CMA over the 2021-2041 period.

In total, it is forecast that housing demand will equate to approximately 891 units per year over the 20-year period, with the first ten years of the forecast period most heavily weighted, with each five-year period from 2021-2031 seeing annual housing demand in the CMA exceed 1,000 units per year.

The distribution of housing demand growth by unit consists of 58.8% single-detached, 7.1% semi-detached, 10.8% row houses, and 21.7% apartment units.

Of the apartment unit demand, nearly three-quarters is for rental apartment units (15.8% of total housing demand), with the remaining apartment demand being for condominium apartment units.

Figure 37 **Potential Housing Demand by Structure Type, Windsor CMA (Draft 1.14.22) 1996-2041**

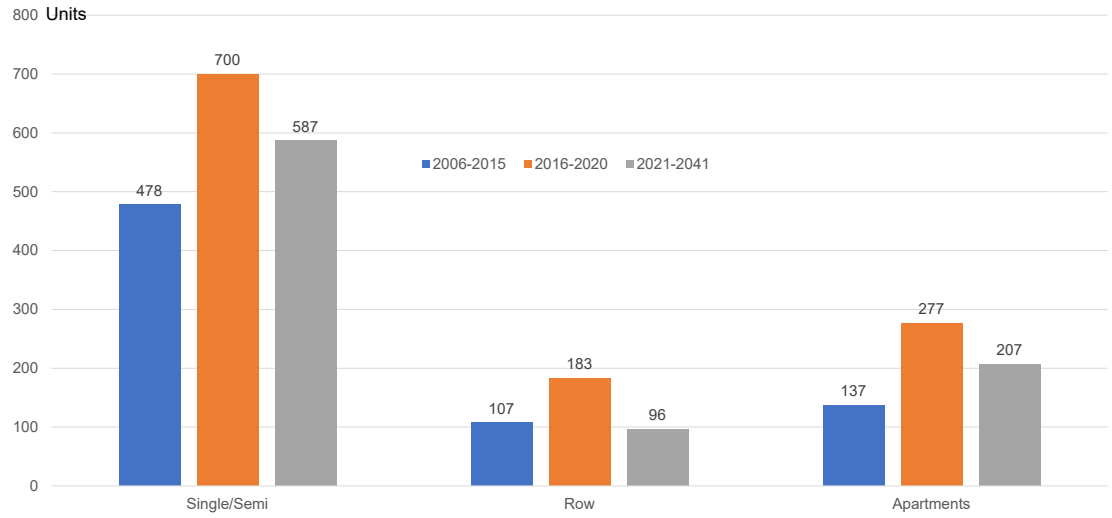
Base Scenario

				Apartments				
	Single Detached	Semi Detached	Row	Total	Owner	Renter	Other	Total
Households				*Occupied Dwelling units*				
1996	72,100	2,995	4,485	21,505	1,775	19,730	4,740	105,825
2006	86,690	5,250	6,310	23,475	4,065	19,410	4,065	125,790
2016	91,045	5,670	7,375	24,455	3,595	20,860	4,340	132,885
2021	93,963	6,250	8,289	25,140	3,860	21,280	4,357	137,999
2026	96,601	6,684	9,026	26,525	4,178	22,348	4,430	143,267
2031	99,566	7,047	9,618	27,668	4,484	23,184	4,497	148,396
2036	102,214	7,331	10,022	28,410	4,739	23,671	4,543	152,520
2041	104,449	7,512	10,214	29,010	4,918	24,092	4,636	155,821
Annual Household Growth				*Occupied Dwelling units*				
1996-06	1,459	226	183	197	229	(32)	(68)	1,997
2006-16	436	42	107	98	(47)	145	28	710
2016-21	584	116	183	137	53	84	3	1,023
2021-26	528	87	147	277	64	213	15	1,054
2026-31	593	73	118	229	61	167	13	1,026
2031-36	529	57	81	148	51	97	9	825
2036-41	447	36	38	120	36	84	19	660
2021-41	524	63	96	194	53	141	14	891
Distribution of Households				*Percent*				
1996	68.1	2.8	4.2	20.3	1.7	18.6	4.5	100.0
2006	68.9	4.2	5.0	18.7	3.2	15.4	3.2	100.0
2016	68.5	4.3	5.5	18.4	2.7	15.7	3.3	100.0
2026	67.4	4.7	6.3	18.5	2.9	15.6	3.1	100.0
2036	67.0	4.8	6.6	18.6	3.1	15.5	3.0	100.0
Distribution of Growth				*Percent*				
1996-06	73.1	11.3	9.1	9.9	11.5	(1.6)	(3.4)	100.0
2006-16	61.4	5.9	15.0	13.8	(6.6)	20.4	3.9	100.0
2016-21	57.1	11.3	17.9	13.4	5.2	8.2	0.3	100.0
2021-26	50.1	8.2	14.0	26.3	6.0	20.3	1.4	100.0
2026-31	57.8	7.1	11.5	22.3	6.0	16.3	1.3	100.0
2031-36	64.2	6.9	9.8	18.0	6.2	11.8	1.1	100.0
2036-41	67.7	5.5	5.8	18.2	5.4	12.8	2.8	100.0
2021-41	58.8	7.1	10.8	21.7	5.9	15.8	1.6	100.0

Source: Altus Group Economic Consulting, Housing Demand Model

Figure 38 shows the average annual housing demand by unit type for the City over the 2021-2041 period, and as compared to the 2006-2015 and 2016-2020 periods.

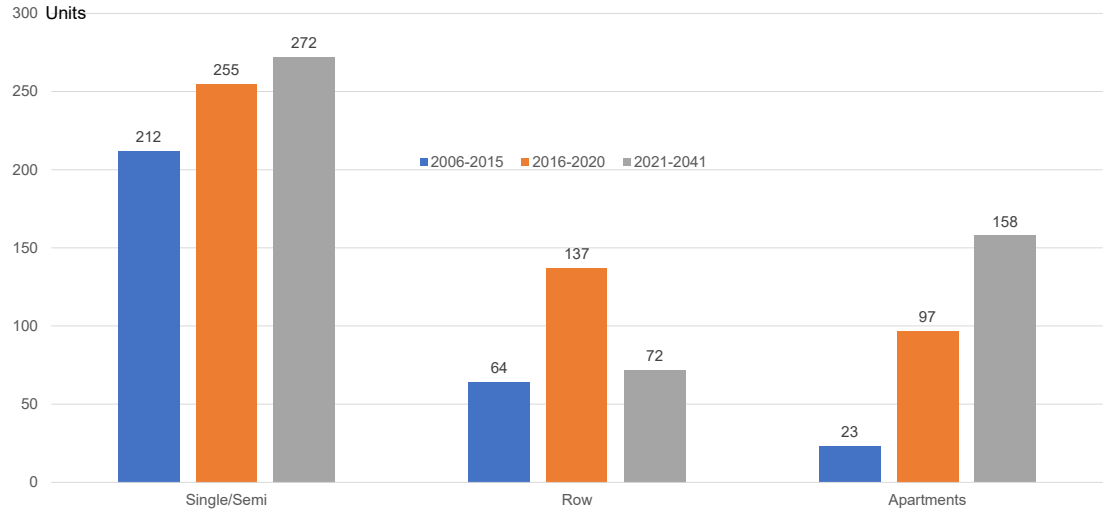
Figure 38 **Forecasted Housing Demand by Unit Type,**
Windsor CMA, 2021-2041, Annual Averages



Source: Altus Group Economic Consulting

Based on the historic share of housing completions by type in the City versus the rest of the Windsor CMA, and the housing forecast by unit type for the CMA, it is expected that the City would receive approximately 56.3% of the forecasted housing demand in the Windsor CMA over the 2021-2041 period.

Figure 39 **Forecasted Housing Demand by Unit Type,**
City of Windsor, 2021-2041, Annual Averages



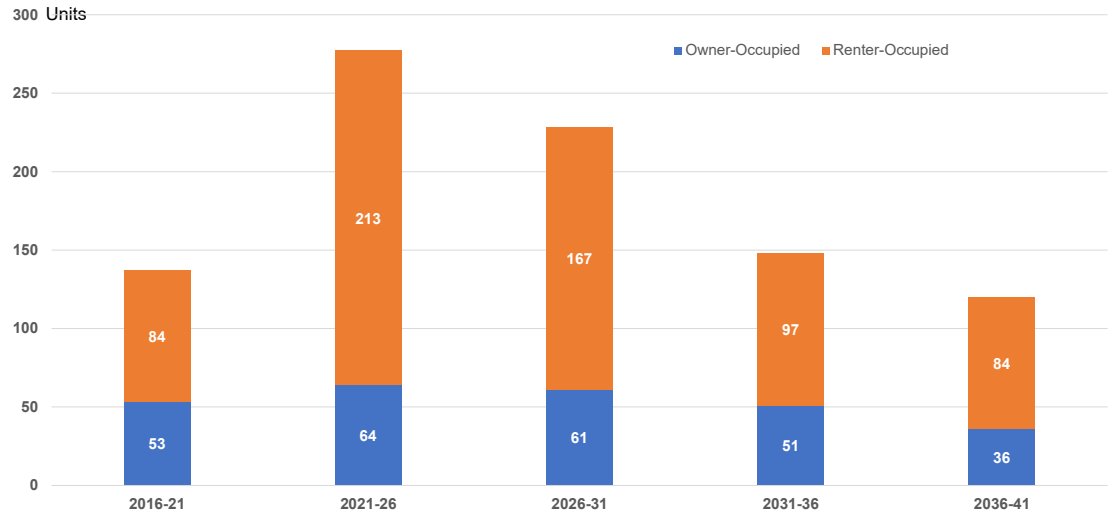
Source: Altus Group Economic Consulting

4.1.4 Windsor CMA and City Apartment Housing Demand by Tenure

Figure 40 shows how the annual Windsor CMA housing forecast of apartment dwelling demand of 194 units per year changes over time, and how it is broken down by tenure (ownership or rental).

The demand for owner-occupied apartments in the CMA over the 2021-2041 period ranges from 36 to 64 units per year, or an average of 53 units per year. This is consistent with the demand for owner-occupied apartment units that were added in the City over the 2016-2021 period (53 units per year).

Figure 40 **Forecasted Apartment Unit Demand by Tenure**
Windsor CMA, 2016-2021 (actuals) and 2021-2041 (forecast), Annual Averages

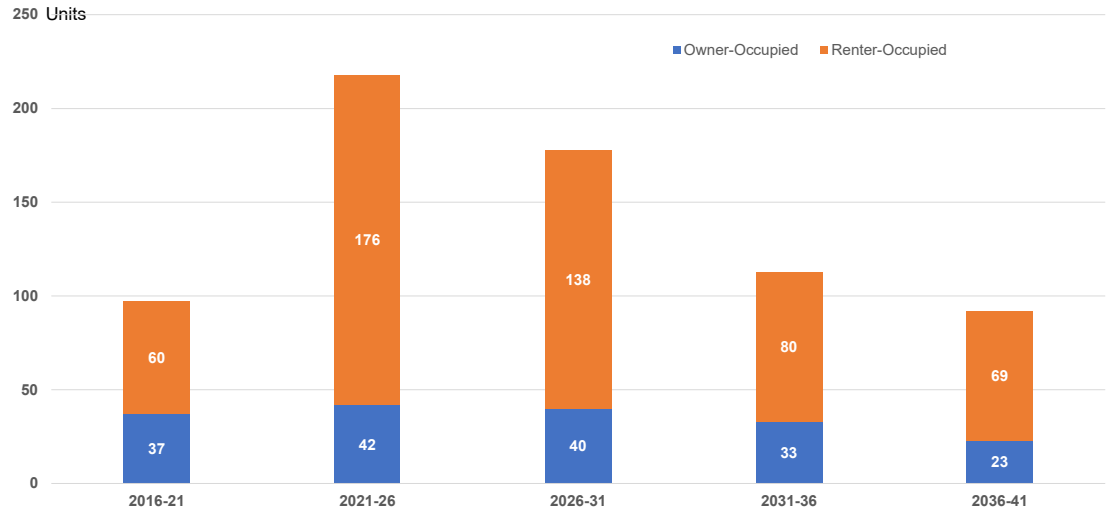


Source: Altus Group Economic Consulting

The driver of future apartment unit demand is for renter-occupied units, which ranges from 84 to 213 units per year over the 2021-2041 period, and averages 141 units per year, up 67% from the amount seen over the 2016-2021 period (84 units per year).

It is estimated that a significant proportion of the apartment unit demand (owner or rental in tenure) will be located in the City of Windsor. Based on historic trends, of the 194 apartment units forecast for the CMA each year over the 2021-2041 period, roughly 158 units will be located in the City (or 78% of all apartment housing demand in the CMA).

Figure 41 **Forecasted Apartment Unit Demand by Tenure**
City of Windsor, 2006-2021 (actuals) and 2021-2041 (forecast), Annual Averages



Source: Altus Group Economic Consulting

A significant proportion of the growth in apartment units (both condominium and rental tenure) can be expected to be located within the City's existing built-up area.

4.2 SUMMARY OF CITY OF WINDSOR HOUSING DEMAND FORECAST

The table below summarizes the City of Windsor housing forecast by unit type over the 2021-2041 period. In total, housing demand is estimated to be 10,032 occupied dwelling units.

Note that these forecasts only incorporate housing demand for people with their primary residence in the City. Any additional housing demand from increased post-secondary enrolment, temporary foreign workers, etc., should be over and above the housing demand forecasts summarized below.

Figure 42 **Potential Housing Demand by Structure Type, City of Windsor 2021-2041**

Base Scenario

	Single Family			Apartment				
	Singles	Semis	Rows	Total	Condo	Renter	Other	Total
CMA Forecasts (annual)				*Occupied Dwelling units*				
2021-2026	528	87	147	277	64	213	15	1,054
2026-2031	593	73	118	229	61	167	13	1,026
2031-2036	529	57	81	148	51	97	9	825
2036-2041	447	36	38	120	36	84	19	660
Annual Average 2021-2041	524	63	96	194	53	141	14	891
				Percent				
City Share	45%	55%	75%	78%	66%	82%	52%	
City Forecasts (annual)				*Occupied Dwelling units*				
2021-2026	238	48	111	218	42	176	8	622
2026-2031	268	40	89	178	40	138	7	581
2031-2036	239	31	61	114	33	80	5	450
2036-2041	202	20	29	93	23	69	10	353
Annual Average 2021-2041	237	35	72	151	35	116	7	502
City Forecasts (total)								
2021-2026	1,191	240	553	1,088	209	880	38	3,110
2026-2031	1,339	200	443	890	201	689	35	2,907
2031-2036	1,195	157	303	568	167	401	24	2,248
2036-2041	1,010	100	144	465	117	347	48	1,766
Total 2021-2041	4,735	697	1,443	3,012	694	2,317	145	10,032

Source: Altus Group Economic Consulting, Housing Demand Model

5 RECOMMENDATIONS AND CONCLUSIONS

5.1 SUMMARY OF FACTORS DRIVING DEMAND FOR HOUSING IN WINDSOR

The City of Windsor's population is growing, however the inner-areas of the City have seen a decline in population even while the rest of the City was growing, and the City needs to encourage and promote intensification and infill to ensure that populations in existing parts of the City do not continue to decline. The decline in existing population in existing areas of the City is caused by a relative lack of new development and declining average household sizes.

In the past 5-10 years, the City has seen a steadily increasing amount of persons arriving in the City from international sources (immigration, non-permanent residents), as well as domestic sources (from other provinces, or elsewhere in Ontario), and in the case of domestic flows into or out of the City, Windsor has seen a reversal of long periods of net outflow to other parts of Canada and Ontario, and is now seeing net inflows from the rest of Canada.

The recent acceleration of population growth in the City (and the broader Essex County area) has had implications for the price of new housing, with average single-detached housing prices increasing by 232% since 2001, most of that price growth being in the last five years when both international and domestic sources of population growth increased dramatically.

Despite the increase in demand, the amount of new housing constructed in the City has not increased substantially, well below the amounts constructed during the 1996-2005 period, and only marginally higher than the period of 2006-2015 when only 300 new housing units were being completed per year.

Like elsewhere in Ontario, the City has seen very little purpose-built rental housing constructed, with just 6% of the new housing completions in the City since 1996 being rental in tenure.

Consistent with the lack of rental housing construction in the City, the rental vacancy rate has declined significantly over the past ten years, falling from above 13% in several years, to below 4% in each of the past five years. The

reduced vacancy rates in purpose-built rental apartments has caused apartment rental rates per month to increase by 33% since 2014.

The City imports a net 17,000 persons per day (as of 2016) from other parts of Essex County and the broader region, who come into the City for their place of employment, with the largest inflows to the City coming from LaSalle, Amherstburg, Lakeshore and the Town of Essex.

Perhaps owing to the relative lack of new housing production, the City has seen a significant decline in jobs located in the City, with nearly 9,000 fewer jobs located in the City in 2016 than there were in 2006.

Adding more housing options in the City of all types can help to reduce the need for in-commuters to fill jobs located in the City and make the City more attractive to employers by providing a sufficient locally-residing workforce.

The continued growth of e-commerce could impact the viability of 'bricks and mortar' retail options, however, studies have shown that retail oriented around neighbourhoods and communities are faring better than more isolated separated forms of retail (enclosed malls). Directing residential growth towards major retail centres can help add vitality to these areas of the City, support the existing retail in the City, and help build complete communities.

The industrial market across Ontario is at all-time low vacancy rates, with just 1.0% of industrial space across the Province vacant and available. The tightness of the industrial market, combined with emerging manufacturing investment in Michigan, means that the City should not rely on large-scale employment land conversion to add residential dwelling units in the built-up areas of the City. In fact, the shift towards online retail pushes a lot of demand for 'space' into the industrial sector, with every $1 billion in e-commerce sales equating to a need for an additional 1.25-million square feet of industrial space.

5.2 RECOMMENDATIONS AND FINDINGS REGARDING MOST SUITABLE LOCATIONS FOR INFILL AND INTENSIFICATION

Based on our analysis of the demographic, and real estate market trends affecting the City, the broader region and the Province of Ontario as a whole, our recommendations are as follows:

- The City needs more housing in the inner areas of the City, with populations in a majority of the City declining due to a lack of new housing options and shrinking average household sizes;
- The City is not seeing enough purpose-built rental housing constructed to meet demand;
- Access to retail, transit and other community amenities can bolster the market for new residential development, making an area attractive to prospective new households;
- Similarly, adding residential uses near existing retail clusters can improve the viability of those retail environments. The practice of redeveloping major retail centres for a mix of uses including residential, as well as other community amenities such as parks, community centres, and even additional retail is growing across Ontario and Canada;
- The City needs to account for prospective growth in post-secondary enrolment in forecasting housing needs;

It is estimated that the City will see an increase in housing demand in the next 20 years, with annual housing demand forecasted to be:

- 5,432 single/semi-detached units;
- 1,443 townhouse units;
- 3,012 apartment units per year, including 2,317 rental apartments, and 694 condominium apartments; and
- 145 'other' dwellings (such as accessory apartments, etc.)

In order to meet the housing demand forecast, particularly the likely demand for apartment dwellings in existing built-up parts of the City, the City should ensure that more sufficient land is designated and available for development to act as a contingency factor and to ensure that there is adequate choice in possible development sites for the entirety of the forecast period.

Appendix A
Detailed Data

Figure A- 1

Total Housing Completions by Structure Type, City of Windsor, 1991-2020

Year	Single-Detached	Semi-Detached	Row	Apartments	Total
			Units		
1991	260	12	47	429	748
1992	329	116	120	226	791
1993	393	20	52	76	541
1994	489	46	26	16	577
1995	589	24	19	159	791
1996	783	156	48	115	1,102
1997	864	94	40	297	1,295
1998	775	158	63	16	1,012
1999	773	206	123	75	1,177
2000	913	214	174	336	1,637
2001	839	144	119	67	1,169
2002	1,003	186	148	151	1,488
2003	841	212	183	124	1,360
2004	831	124	180	83	1,218
2005	605	90	207	240	1,142
2006	444	20	74	16	554
2007	180	28	30	8	246
2008	130	8	14	139	291
2009	107	16	47	16	186
2010	162	18	73	0	253
2011	106	12	39	12	169
2012	199	26	120	16	361
2013	161	16	81	6	264
2014	199	54	67	17	337
2015	204	28	99	0	331
2016	271	64	89	3	427
2017	231	44	162	84	521
2018	120	52	166	13	351
2019	206	20	71	18	315
2020	251	16	196	365	828

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 2

Total Housing Completions by Structure Type, City of Windsor, Five-Year Period 1991-2020

5 Year Period	Single-Detached	Semi-Detached	Row	Apartments	Total
			Units		
1991-1995	2,060	218	264	906	3,448
1996-2000	4,108	828	448	839	6,223
2001-2005	4,119	756	837	665	6,377
2006-2010	1,023	90	238	179	1,530
2011-2015	869	136	406	51	1,462
2016-2020	1,079	196	684	483	2,442

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 3 **Percentage Housing Completions by Structure Type, City of Windsor, Five-Year Periods 1991-2020**

5 Year Period	Single-Detached	Semi-Detached	Row	Apartments	Total
			Percent		
1991-1995	59.7	6.3	7.7	26.3	100.0
1996-2000	66.0	13.3	7.2	13.5	100.0
2001-2005	64.6	11.9	13.1	10.4	100.0
2006-2010	66.9	5.9	15.6	11.7	100.0
2011-2015	59.4	9.3	27.8	3.5	100.0
2016-2020	44.2	8.0	28.0	19.8	100.0

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 4 **Total Housing Completions by Tenure, City of Windsor, 1991-2020**

Year	Homeowner	Rental	Condo	Co-Op	Total
			Units		
1991	270	469	9	0	748
1992	349	302	4	136	791
1993	465	76	0	0	541
1994	557	20	0	0	577
1995	634	108	49	0	791
1996	959	75	68	0	1,102
1997	970	181	144	0	1,295
1998	990	22	0	0	1,012
1999	1,102	2	73	0	1,177
2000	1,296	42	299	0	1,637
2001	1,092	22	55	0	1,169
2002	1,322	54	112	0	1,488
2003	1,236	0	124	0	1,360
2004	1,119	52	47	0	1,218
2005	880	141	121	0	1,142
2006	538	16	0	0	554
2007	228	8	10	0	246
2008	144	16	131	0	291
2009	121	16	49	0	186
2010	176	0	77	0	253
2011	118	11	40	0	169
2012	237	22	102	0	361
2013	207	6	51	0	264
2014	278	20	39	0	337
2015	295	2	34	0	331
2016	416	5	6	0	427
2017	435	36	50	0	521
2018	338	13	0	0	351
2019	293	18	4	0	315
2020	412	281	135	0	828

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 5 **Total Housing Completions by Tenure, City of Windsor, Five-Year Period 1991-2020**

5 Year Period	Homeowner	Rental	Condo	Co-Op	Total
			Units		
1991-1995	2,275	975	62	136	3,448
1996-2000	5,317	322	584	-	6,223
2001-2005	5,649	269	459	-	6,377
2006-2010	1,207	56	267	-	1,530
2011-2015	1,135	61	266	-	1,462
2016-2020	1,894	353	195	-	2,442

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 6 **Percentage Housing Completions by Tenure, City of Windsor, Five-Year Period 1991-2020**

5 Year Period	Homeowner	Rental	Condo	Co-Op	Total
			Percent		
1991-1995	66.0	28.3	1.8	3.9	100.0
1996-2000	85.4	5.2	9.4	-	100.0
2001-2005	88.6	4.2	7.2	-	100.0
2006-2010	78.9	3.7	17.5	-	100.0
2011-2015	77.6	4.2	18.2	-	100.0
2016-2020	77.6	14.5	8.0	-	100.0

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 7 **Total Apartment Completions by Structure Size, City of Windsor, 2006-2020**

Year	1 to 49	50 to 99	100 to 199	200+	Total
			Units		
2006	16	-	-	-	16
2007	8	-	-	-	8
2008	16	-	123	-	139
2009	16	-	-	-	16
2010	-	-	-	-	-
2011	12	-	-	-	12
2012	16	-	-	-	16
2013	6	-	-	-	6
2014	17	-	-	-	17
2015	-	-	-	-	-
2016	3	-	-	-	3
2017	34	50	-	-	84
2018	13	-	-	-	13
2019	18	-	-	-	18
2020	93	-	272	-	365

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 8 **Total Apartment Completions by Structure Size, City of Windsor, Five-Year Periods 2006-2020**

5 Year Period	1 to 49	50 to 99	100 to 199	200+	Total
			Units		
2006-2010	56	-	123	-	179
2011-2015	51	-	-	-	51
2016-2020	161	50	272	-	483
2006-2020	**268**	**50**	**395**	**-**	**713**

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 9 **Percentage Apartment Completions by Structure Size, City of Windsor, Five-Year Periods 2006-2020**

5 Year Period	1 to 49	50 to 99	100 to 199	200+	Total
			Percent		
2006-2010	31.3	-	68.7	-	100.0
2011-2015	100.0	-	-	-	100.0
2016-2020	33.3	10.4	56.3	-	100.0
2006-2020	**37.6**	**7.0**	**55.4**	**-**	**100.0**

Source: Altus Economic Consulting based on CMHC Housing Completions Data

Figure A- 10 **Absorbed Single Detached Prices, City of Windsor, 1991-2020**

			Year-Over-Year Change	
	Median	Average	Median	Average
Year	*Dollars*		*Percentage*	
1991	140,000	160,428		
1992	135,000	150,318	-3.6%	-6.3%
1993	140,000	157,607	3.7%	4.8%
1994	155,000	169,878	10.7%	7.8%
1995	155,000	164,334	0.0%	-3.3%
1996	150,000	164,723	-3.2%	0.2%
1997	160,000	175,903	6.7%	6.8%
1998	150,000	169,148	-6.3%	-3.8%
1999	150,000	172,564	0.0%	2.0%
2000	150,000	163,992	0.0%	-5.0%
2001	160,000	177,452	6.7%	8.2%
2002	165,000	178,461	3.1%	0.6%
2003	170,000	191,731	3.0%	7.4%
2004	175,000	193,467	2.9%	0.9%
2005	180,000	205,982	2.9%	6.5%
2006	200,000	214,232	11.1%	4.0%
2007	215,000	234,982	7.5%	9.7%
2008	220,000	246,370	2.3%	4.8%
2009	245,000	273,579	11.4%	11.0%
2010	235,000	266,250	-4.1%	-2.7%
2011	250,000	267,039	6.4%	0.3%
2012	252,500	286,718	1.0%	7.4%
2013	267,500	288,863	5.9%	0.7%
2014	280,000	312,031	4.7%	8.0%
2015	340,000	369,230	21.4%	18.3%
2016	330,000	359,038	-2.9%	-2.8%
2017	420,000	426,843	27.3%	18.9%
2018	520,000	531,455	23.8%	24.5%
2019	555,000	558,172	6.7%	5.0%
2020	580,000	588,417	4.5%	5.4%

Source: Altus Economic Consulting based on CMHC Housing Absorption Data

Figure A- 11 **Average Absorbed Singled Detached Homes In Ontario and Select Municipalities**

Year	Ontario	Windsor	London	Kitchener	Hamilton	Toronto
			Dollars			
2001	263,164	177,452	214,492	227,021	231,706	564,140
2002	269,081	178,461	220,386	239,285	235,128	551,918
2003	290,124	191,731	240,688	236,186	265,749	520,823
2004	313,664	193,467	253,763	245,259	301,256	570,836
2005	349,663	205,982	276,860	271,456	331,422	609,595
2006	386,261	214,232	281,845	305,086	344,357	890,223
2007	418,785	234,982	296,745	338,060	340,989	919,300
2008	440,309	246,370	326,504	338,603	377,445	944,011
2009	463,661	273,579	352,167	349,037	399,266	940,566
2010	486,918	266,250	352,936	388,675	422,685	1,233,587
2011	522,909	267,039	354,114	413,267	419,949	1,252,512
2012	554,319	286,718	365,827	444,673	460,698	1,202,158
2013	597,562	288,863	383,963	485,782	470,423	1,577,146
2014	643,190	312,031	415,157	445,975	489,281	1,739,480
2015	682,769	369,230	435,469	452,732	487,077	2,032,261
2016	714,706	359,038	455,346	470,937	468,228	1,976,205
2017	786,091	426,843	536,395	503,552	457,194	1,846,322
2018	851,038	531,455	629,224	669,668	530,351	1,990,584
2019	900,979	558,172	656,733	740,994	572,245	1,889,558
2020	894,118	588,417	654,956	751,338	622,407	1,914,339
Change	630,954	410,965	440,464	524,317	390,701	1,350,199
2001-2020	239.8%	231.6%	205.4%	231.0%	168.6%	239.3%

Source: Altus Economic Consulting based on CMHC Housing Absorption Data

Figure A- 12 Median Absorbed Singled Detached Homes In Ontario and Select Municipalities

Year	Ontario	Windsor	London	Kitchener	Hamilton	Toronto
			Dollars			
2001	250,000	160,000	195,000	200,000	205,000	500,000
2002	250,000	165,000	200,000	220,000	220,000	400,000
2003	270,000	170,000	215,000	195,000	232,500	340,000
2004	290,000	175,000	225,000	210,000	280,000	380,000
2005	325,000	180,000	250,000	250,000	300,000	405,000
2006	350,000	200,000	260,000	270,000	320,000	800,000
2007	375,000	215,000	270,000	290,000	320,000	805,000
2008	395,000	220,000	300,000	300,000	350,000	885,000
2009	405,000	245,000	315,000	315,000	355,000	900,000
2010	425,000	235,000	320,000	340,000	390,000	995,000
2011	440,000	250,000	330,000	380,000	390,000	1,095,000
2012	480,000	252,500	335,000	425,000	440,000	995,000
2013	495,000	267,500	355,000	445,000	450,000	1,340,000
2014	515,000	280,000	380,000	415,000	475,000	1,790,000
2015	520,000	340,000	400,000	412,500	480,000	2,000,000
2016	570,000	330,000	427,500	450,000	455,000	2,000,000
2017	610,000	420,000	500,000	475,000	395,000	1,892,500
2018	650,000	520,000	600,000	625,000	490,000	2,000,000
2019	700,000	555,000	650,000	700,000	490,000	1,950,000
2020	700,000	580,000	600,000	700,000	580,000	1,990,000
Change	450,000	420,000	405,000	500,000	375,000	1,490,000
2001-2020	180.0%	262.5%	207.7%	250.0%	182.9%	298.0%

Source: Altus Economic Consulting based on CMHC Housing Absorption Data

Figure A- 13 **Population, City of Windsor & County of Essex, 2001-2020**

			Year-Over Year Change	
	Windsor	Essex	Windsor	Essex
Year	*People*		*Percent*	
2001	218,222	390,809		
2002	221,623	397,995	1.6	1.8
2003	223,551	402,572	0.9	1.2
2004	225,025	406,321	0.7	0.9
2005	225,794	408,840	0.3	0.6
2006	225,241	409,126	(0.2)	0.1
2007	223,129	408,034	(0.9)	(0.3)
2008	220,519	404,870	(1.2)	(0.8)
2009	217,763	401,476	(1.2)	(0.8)
2010	217,358	400,207	(0.2)	(0.3)
2011	217,104	399,724	(0.1)	(0.1)
2012	218,308	401,171	0.6	0.4
2013	220,964	405,080	1.2	1.0
2014	221,539	406,797	0.3	0.4
2015	222,192	407,791	0.3	0.2
2016	224,487	412,050	1.0	1.0
2017	225,539	415,308	0.5	0.8
2018	228,894	421,687	1.5	1.5
2019	233,278	426,474	1.9	1.1
2020	235,428	430,945	0.9	1.0
Change 2001-2020	17,206	40,136	7.9	10.3

Source: Altus Economic Consulting based on Statistics Canada Population Estimate, 2001-2020

Figure A- 14 **International Immigration by Age Cohort, City of Windsor, 2002-2020**

Year	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-90+	Total
					Persons					
2002	1,017	644	1,240	739	240	140	97	24	2	4,143
2003	642	443	792	446	169	117	67	14	-	2,690
2004	755	485	923	541	192	121	82	21	-	3,120
2005	807	532	893	587	174	56	49	14	-	3,112
2006	749	487	907	539	215	112	64	8	5	3,086
2007	594	468	742	432	195	92	44	16	-	2,583
2008	550	442	682	410	199	121	63	26	-	2,493
2009	436	342	566	306	174	103	68	16	2	2,013
2010	502	404	501	335	195	98	55	9	-	2,099
2011	498	314	469	350	180	92	54	12	4	1,973
2012	363	267	391	296	146	98	75	28	6	1,670
2013	436	295	482	311	178	122	103	26	2	1,955
2014	378	322	496	276	167	121	71	32	2	1,865
2015	301	221	464	227	127	83	44	13	2	1,482
2016	846	381	723	439	210	121	78	22	1	2,821
2017	487	205	592	302	124	88	55	27	2	1,882
2018	529	345	857	365	163	108	65	33	6	2,471
2019	521	359	964	376	142	124	83	34	11	2,614
2020	598	379	1,023	345	164	105	60	16	1	2,691
Total	11,009	7,335	13,707	7,622	3,354	2,022	1,277	391	46	46,763

Source: Altus Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

Figure A- 15

Emigration by Age Cohort, City of Windsor, 2002-2020

Year	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-90+	Total
					Persons					
2002	102	89	247	186	70	43	15	13	-	765
2003	215	114	500	371	128	76	29	25	1	1,459
2004	330	217	502	403	147	85	18	9	-	1,711
2005	373	163	574	421	153	80	23	10	-	1,797
2006	383	188	601	441	197	117	20	5	2	1,954
2007	478	178	653	512	202	99	32	26	3	2,183
2008	477	307	634	498	233	118	22	16	-	2,305
2009	408	197	516	403	206	110	20	9	-	1,869
2010	374	168	416	319	170	92	27	16	-	1,582
2011	401	152	425	336	232	116	48	25	-	1,735
2012	396	152	407	314	176	86	53	29	6	1,619
2013	302	148	344	253	187	97	35	17	5	1,388
2014	298	165	349	248	200	101	26	14	-	1,401
2015	239	136	289	196	160	82	46	22	4	1,174
2016	241	155	331	225	176	95	41	20	1	1,285
2017	208	98	259	176	166	93	43	24	6	1,073
2018	178	111	237	157	124	72	30	18	4	931
2019	180	112	242	160	125	74	30	18	4	945
2020	138	85	177	122	96	55	25	15	1	714
Total	5,721	2,935	7,703	5,741	3,148	1,691	583	331	37	27,890

Source: Altus Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

Figure A- 16

Net Immigration by Age Cohort, City of Windsor, 2002-2020

Year	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-90+	Total
					Persons					
2002	915	555	993	553	170	97	82	11	2	3,378
2003	427	329	292	75	41	41	38	(11)	(1)	1,231
2004	425	268	421	138	45	36	64	12	-	1,409
2005	434	369	319	166	21	(24)	26	4	-	1,315
2006	366	299	306	98	18	(5)	44	3	3	1,132
2007	116	290	89	(80)	(7)	(7)	12	(10)	(3)	400
2008	73	135	48	(88)	(34)	3	41	10	-	188
2009	28	145	50	(97)	(32)	(7)	48	7	2	144
2010	128	236	85	16	25	6	28	(7)	-	517
2011	97	162	44	14	(52)	(24)	6	(13)	4	238
2012	(33)	115	(16)	(18)	(30)	12	22	(1)	-	51
2013	134	147	138	58	(9)	25	68	9	(3)	567
2014	80	157	147	28	(33)	20	45	18	2	464
2015	62	85	175	31	(33)	1	(2)	(9)	(2)	308
2016	605	226	392	214	34	26	37	2	-	1,536
2017	279	107	333	126	(42)	(5)	12	3	(4)	809
2018	351	234	620	208	39	36	35	15	2	1,540
2019	341	247	722	216	17	50	53	16	7	1,669
2020	460	294	846	223	68	50	35	1	-	1,977
Total	915	555	993	553	170	97	82	11	2	18,873

Source: Altus Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

Figure A- 17

Interprovincial Migration by Age Cohort, City of Windsor, 2002-2020

Year	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-90+	Total
					Persons					
2002	33	(60)	(8)	14	10	(18)	(8)	(4)	(3)	(44)
2003	(39)	(61)	(8)	14	-	(22)	(8)	1	(3)	(126)
2004	(30)	(106)	(33)	(7)	(23)	(30)	(7)	-	(3)	(239)
2005	(126)	(173)	(168)	(84)	(41)	(38)	(10)	(3)	(3)	(646)
2006	(300)	(281)	(348)	(186)	(47)	(43)	(9)	-	(5)	(1,219)
2007	(406)	(491)	(626)	(283)	(102)	(75)	9	(10)	(4)	(1,988)
2008	(318)	(656)	(698)	(323)	(114)	(80)	14	(1)	(4)	(2,180)
2009	(269)	(643)	(670)	(315)	(122)	(84)	25	4	(3)	(2,077)
2010	(27)	(322)	(479)	(212)	(62)	(42)	19	(2)	(6)	(1,133)
2011	20	(209)	(299)	(124)	(17)	(15)	28	5	(4)	(615)
2012	(56)	(309)	(343)	(194)	-	(11)	(1)	(1)	3	(912)
2013	(108)	(308)	(387)	(217)	(45)	(40)	11	10	3	(1,081)
2014	(15)	(328)	(251)	(147)	(28)	(29)	1	2	3	(792)
2015	55	(228)	(297)	(179)	24	(8)	8	3	13	(609)
2016	225	(50)	(56)	(53)	43	12	(1)	-	10	130
2017	289	31	(170)	(48)	73	44	5	3	2	229
2018	202	(29)	104	68	59	36	(11)	(3)	(1)	425
2019	186	(5)	53	42	39	22	10	4	4	355
2020	165	(33)	13	24	29	13	6	1	2	220
Total	(519)	(4,261)	(4,671)	(2,210)	(324)	(408)	81	9	1	(12,302)

Source: Altus Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

Figure A- 18

Intraprovincial Migration by Age Cohort, City of Windsor, 2002-2020

Year	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-90+	Total
					Persons					
2002	52	140	(234)	312	99	(49)	13	(28)	(13)	292
2003	(31)	109	(246)	310	65	(87)	-	(37)	(17)	66
2004	(61)	33	(437)	205	50	(81)	(4)	(31)	(14)	(340)
2005	(181)	(210)	(554)	136	40	(89)	13	(30)	(13)	(888)
2006	(320)	(255)	(623)	56	15	(93)	14	(30)	(15)	(1,251)
2007	(390)	(242)	(629)	(409)	(125)	28	76	(1)	(42)	(1,734)
2008	(387)	(313)	(724)	(455)	(157)	23	71	(14)	(61)	(2,017)
2009	(415)	(363)	(818)	(521)	(178)	-	136	31	(36)	(2,164)
2010	(186)	(337)	(621)	(399)	(78)	72	125	12	(51)	(1,463)
2011	(92)	(164)	(410)	(279)	(41)	91	93	3	(48)	(847)
2012	174	(153)	(305)	(144)	102	69	27	11	2	(217)
2013	143	(285)	(268)	(122)	72	44	44	17	2	(353)
2014	105	(296)	(314)	(148)	127	88	73	27	6	(332)
2015	106	(275)	(317)	(150)	95	65	65	25	7	(379)
2016	193	(198)	(375)	(182)	140	92	74	28	6	(222)
2017	381	(138)	(235)	(95)	109	101	61	23	6	213
2018	415	(171)	(10)	28	231	205	152	54	17	921
2019	381	(445)	(207)	(81)	171	152	76	27	8	82
2020	387	(478)	(207)	(80)	172	155	80	30	6	65
Total	274	(4,041)	(7,534)	(2,018)	909	786	1,189	117	(250)	(10,568)

Source: Altus Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

Figure A- 19 **Non-Permanent Residents by Age Cohort, City of Windsor, 2002-2020**

Year	0-14	15-24	25-34	35-44	45-54	55-64	65-74	75-84	85-90+	Total
					Persons					
2002	138	494	65	37	(6)	(4)	(1)	(2)	-	721
2003	152	540	187	94	23	(11)	(10)	(8)	(2)	965
2004	31	306	(32)	(35)	(16)	(20)	(13)	(3)	-	218
2005	23	229	(111)	(54)	(35)	(10)	(11)	(7)	-	24
2006	(180)	(329)	(862)	(169)	(29)	13	(6)	(3)	4	(1,561)
2007	96	446	104	117	66	4	(11)	3	(1)	824
2008	180	134	(150)	(152)	(188)	(88)	(6)	(8)	(1)	(279)
2009	(45)	198	(147)	(234)	(205)	(70)	(12)	(4)	(3)	(522)
2010	(72)	140	(182)	(141)	(77)	(33)	(9)	(6)	1	(379)
2011	(31)	106	(176)	(92)	(18)	(25)	1	1	2	(232)
2012	10	907	363	164	(35)	(27)	(13)	(3)	(3)	1,363
2013	64	2,311	938	289	89	2	(14)	(4)	1	3,676
2014	106	1,316	(202)	83	34	(23)	9	7	(1)	1,329
2015	(10)	10	(237)	271	309	140	8	(4)	-	487
2016	(27)	442	(7)	796	559	153	(7)	(7)	2	1,904
2017	158	2,038	(89)	(210)	(255)	(152)	(14)	2	(2)	1,476
2018	105	5,261	79	(848)	(972)	(419)	(44)	3	-	3,165
2019	236	3,212	(100)	(318)	(294)	(139)	(30)	(1)	(2)	2,564
2020	70	2,653	(375)	(28)	(119)	(73)	(23)	(4)	-	2,101
Total	1,004	20,414	(934)	(430)	(1,169)	(782)	(206)	(48)	(5)	17,844

Source: Altus Economic Consulting based on Statistics Canada Estimates of the Components of Demographic Growth, 2002-2020

Figure A- 20 **University and College Enrollment, City of of Windsor, 2012-2025**

School Year (Fall/Winter)	University of Windsor	St. Clair College	Total
		Students	
2012-2013	13,710	6,755	20,465
2013-2014	14,103	7,004	21,107
2014-2015	14,028	7,135	21,163
2015-2016	13,560	7,164	20,724
2016-2017	13,610	7,148	20,758
2017-2018	14,078	7,662	21,740
2018-2019	14,506	10,086	24,592
2019-2020	14,769	9,102	23,871
2020-2021	16,880	7,213	24,093
2021-2022	17,200	9,228	26,428
2022-2023	17,285	9,888	27,173
2023-2024	17,305	10,108	27,413
2024-2025	17,331	10,284	27,615
Change 2012-2020	3,170	458	3,628
	23.1%	6.8%	17.7%
Change 2020-2025	451	3,071	3,522
	2.7%	42.6%	14.6%

Note: Student enrollment projections for St. Clair College between 2020-2025 have been discounted to account for campuses outside of Windsor

Source: Altus Economic Consulting based on University of Windsor, St. Clair College, and Ministry of Colleges and Universities