The Gateway Effect

Impact of Transportation Improvements on Housing Values in the Lower Mainland and Fraser Valley

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EXECUTIVE SUMMARY AND REPORT HIGHLIGHTS

- The Gateway project will deliver a 10%–20% enhancement of real estate values in the regions most affected. In the future, these Gateway areas will outperform the rest. If the market goes up everywhere, these areas will increase by about 10%–20% more. If the values drop, these will drop by 10%–20% less.
- With four new transportation arteries being constructed, real estate prices in the Maple Ridge/Pitt Meadows area will benefit the most from improved transportation linkages.
- Other regions expected to benefit significantly from transportation improvements are, in descending order, (2) North Langley/Fort Langley/Abbotsford and (3) Port Moody/Coquitlam.
- Secondary benefits will be delivered to (4) Surrey/Delta, (5) Mission/Chilliwack, and properties located along (6) the Canada Line Rapid Transit Line.
- In studies of the effect of transportation improvements on real estate in other jurisdictions around the world, it was found that real estate value increases occur for properties located within 500-800 metres of stations on the new transportation lines.
- Real estate prices in key neighbourhoods will increase more quickly than other regions due to the improved transportation linkages provided. Improved accessibility drives real estate demand. As with rapid transit, accessibility to major highway and highway improvements proved to be a major determinant for increased property values in all studies. Studies show that, as highway networks are created and existing corridors to the CBD are improved, the value of real estate in the area increases.
- Values in older and more established neighbourhoods are impacted more significantly than in newer developments.
- There are negative effects (nuisance, property crime, noise, increased traffic, etc.) on properties located in the immediate vicinity of many stations.
- The decision of which particular investment properties to acquire within a region still requires extensive analysis of the fundamentals of the specific property.

ABOUT THE REAL ESTATE INVESTMENT NETWORK™

Founded in 1993, the Real Estate Investment Network (REIN™) has grown over the years to become Canada's leading real estate research, investment and education organization. It serves more than 3,000+ member clients who own more than 27,150 properties (valued at over $3 billion) across the country. Members use the unbiased research and proven systems to invest in properties in economically strong regions across the country.

REIN™ does not sell or market real estate to its members or the general public, but instead conducts objective and unbiased research, analysis and investor education.

The foundation of REIN™'s work is the research and analysis of current real estate trends and patterns. This information is then disseminated to members through regular workshops in Toronto, Vancouver, Calgary and Edmonton, and via research reports that detail current and emerging trends. REIN™'s primary purpose is to provide expert assistance to its members and other Canadians to assist them in making sound decisions about purchasing principal residences and investment/recreational real estate in order to grow their real estate portfolio. This Gateway Report is one such educational report, as are the bestselling books *Real Estate Investing in Canada 2.0* (2009), *97 Tips for Canadian Real Estate Investors* (2006) *51 Success Stories from Canadian Real Estate Investors* (2007) and *81 Financial and Tax Tips for the Canadian Real Estate Investor: Expert Money-Saving Advice on Accounting and Tax Planning.* One hundred per cent of all of Don Campbell's author Royalties are donated directly to Habitat for Humanity Edmonton and to date has raised over $500,000 for this worthy cause.

All research can be accessed at www.myreinspace.com.

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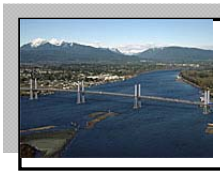


OVERVIEW TO THE GATEWAY EFFECT REPORT

As populations continue to grow in areas across Canada, governments and private sectors attempt to meet the infrastructure needs of its residents by providing road improvements and an increase in mass transit options. With these transportation improvements comes much discussion around the environmental, economic and social impacts of these projects; however, the effects of these changes on real estate are overlooked. The Real Estate Investment Network™ (REIN) first recognized the need to examine the impact of transportation changes on housing values with the BC Transportation Minister's announcement of the Gateway and Translink infrastructure additions of new bridges and additional rapid transit lines in the Greater Vancouver Regional District. From this examination, the Real Estate Investment Network™ has completed detailed research into current and proposed transportation improvements in Calgary, Edmonton, the Greater Toronto Area, Hamilton, and the Kitchener-Waterloo-Cambridge region (KWC).

Throughout, two very important questions have not been addressed, even though the answers will have a direct financial impact on tens of thousands of Lower Mainland residents. These questions are as follows:

1. How will this major transportation project affect residential property values in the Lower Mainland?

2. Which areas will be negatively impacted and which will see a positive effect?

For many Lower Mainland residents, a vast majority of their personal net worth is tied to the value of their homes, so the answers to these questions are very important planning tools. As with our previous reports and books, the goal of this research is not to assist investors and homeowners in gaining knowledge about how a project may affect their personal net worth, but to cut through the emotions and debate that surround a transportation project of this size, and answer these two key questions from an objective, research-oriented point of view. This will enable readers to see clearly how the Gateway and Translink Projects will affect their personal real estate portfolio today and in the future, allowing them to plan long in advance of the program's completion.

For the purposes of this report, we will be considering the following component projects (both completed and in progress) as part of this Gateway Transportation Program and the South Coast B.C. Transportation Authority:

1. Canada Line Rapid Transit

This rail-based Rapid Transit line opened ahead of schedule in August 2009 in time for the 2010 Winter Olympics. The 19.5 km line with 16 stations links central Richmond, the Vancouver International Airport, and Vancouver along the Cambie corridor to central Broadway, the downtown business district and Waterfront Station.

2. Evergreen Line Rapid Transit

This rail-based Rapid Transit line will feature twelve stations spread over 11 kilometres, linking neighbourhoods between Coquitlam, Port Moody and Lougheed city centres, and connecting with

buses, SkyTrain, West Coast Express and points beyond. Expected to be completed in 2014, the Line is anticipated to be "fast tracked" in order to stimulate the local economy. The Federal Government announced that it would chip in another $350 million towards construction[1].

3. UBC Rapid Transit

This transportation improvement project will run from the existing Broadway Station to the University of BC and is slated for completion by 2020. At time of press, station locations have yet to be determined.

4. Expo Line Rapid Transit

The proposed extension of the Expo Line from the King George terminus to the Guildford area is slated for completion in 2020. The track would extend 6 kilometers, likely running along 104th Ave, down 152nd St, and ending at 168th St[2]. The plan also includes lengthening the platforms to hold six train cars and a storage track. Expo Line plans in the distant future include extending the line into Langley; from Guildford to Willowbrook Mall, slated for a tentative completion in 2030[3].

5. RapidBus

In the Lower Mainland there will be seven different lines of faster high efficiency buses with dedicated traffic lanes. Proposed areas for Metro Vancouver include: Highway 1 between Langley and Lougheed; Hastings Street between Simon Fraser University and downtown Vancouver; 41st St. to UBC; Highway 99 from White Rock to Richmond; King George Highway from Surrey Centre to White Rock; Fraser Highway from Langley to the extension of the Expo line in Surrey; and Highway 7 in Coquitlam across the Golden Ears Bridge.

Artist's rendering Port Mann Bridge. Source: Province of BC

[1] Vancouver Sun. (2009). "Evergreen Line Illustrates both Value and Pitfalls of Stimulus Spending*" in The Vancouver Sun* (Feb. 27, 2009). http://www2.canada.com/vancouversun/news/editorial/story.html?id=7b77d104-6e60-4d1d-8317-5d190b88fe27

[2] (2008). "Expo Line Expansion" in *Surrey Now (Jan. 16, 2008)*. CanWest Media Works Publications Inc.

[3] Government of British Columbia. (2008). *Rapid Transit*. The Provincial Transit Plan.

6. South Fraser Perimeter Rd

The South Fraser Perimeter Road Project is a $1 billion component that is part of British Columbia's Gateway Program and the Government of Canada's Asia-Pacific Gateway and Corridor Initiative. Construction has begun on this new, 40 km, four-lane, 80 km/h route along the south side of the Fraser River, extending from Deltaport Way in southwest Delta to 176th Street and the Golden Ears Bridge connector road in North Surrey/Langley. It will link current port facilities, rail yards and industrial areas to Highways 1, 91 and 99.

7. New North Fraser Perimeter Road

The North Fraser Perimeter Road is a set of proposed improvements to existing roads along the north shore of the Fraser River, designed to provide an efficient, continuous route between the Queensborough Bridge in New Westminster and the new Golden Ears Bridge in Maple Ridge/Pitt Meadows.

8. Port Mann Bridge

The original proposal was the twinning of the Port Mann Bridge. In 2009, the project morphed into a single $3 billion dollar tolled, 10-lane span bridge with improvements to 37 km of Highway 1 on either side, with a completion date of 2013. The Project includes HOV lanes, transit and commercial vehicle priority access to highway on-ramps, and cycling lanes. As well, the proposed new Port Mann Bridge will be built to accommodate light rail transit in the future.

9. Expansion and widening of HOV lanes on Highway #1

As part of the Port Mann Bridge project, 37 kilometres of Highway 1 from McGill Street in Vancouver to 216th Street in Langley will be widened and have improved access and egress points. Construction is currently underway.

10. New Pitt River Bridge and Maryhill Bypass

The Pitt River Bridge and Maryhill Interchange Project includes a new bridge to replace the existing swing bridges and an interchange to replace the existing Lougheed Highway and Maryhill Bypass intersection. The project is a standalone component of the North Fraser Perimeter Road Project and is nearing completion

11. Golden Ears Bridge Construction

This is a new Fraser River crossing between Maple Ridge and Langley, connecting to both the North Perimeter Road on the north shore with Highway 1 and the South Perimeter Road on the south shore. The bridge is completed and is already easing the commute for many.

Golden Ears Bridge. Source: www.translink.bc.ca

Although these projects are in various states of completion and planning, we will assume for the purposes of this report that they will be completed as proposed. If the details of the Gateway Program or Translink Projects change, this report's findings will be updated to reflect the adjustments.

Peer-Reviewed Studies on Transportation and Real Estate Values

Underpinning our analysis is a synopsis of detailed studies conducted on transportation changes implemented in other regions across North America and Europe. These peer-reviewed journal articles provide us with a snapshot of what we can expect in terms of the impact on real estate prices in the Lower Mainland as the transportation projects are initiated and completed.

Table 1 - Effects of Light Rail Systems on Commercial Property Values

Light Rail System / Authors	Effect on Property Values
Dallas	
2003 Lyons & Hernandez	Value of properties rose 39% more than the control group not served by rail
2002 Weinstein & Clower	Proximity to DART resulted in a 24.7% increase vs. 11.5% for non-DART properties for office buildings
2002 Weinstein & Clower	Median values of residential properties increased 32.1% near DART compared to 19.5% in the control group areas
1999 Weinstein & Clower	There was a 5% penalty over time for units nearer stations, less than 1/4 mile
1999 Weinstein & Clower	The value of offices less than 1.4 miles from a station increased by 10% & retail property increased by 30%
San Diego	
2002 Cevero & Duncan	A 72% premium resulted for parcels near stations in the Mission Valley
2002 Cevero & Duncan	17% and 10% premiums resulted respectfully for multi- family homes near East Line and South Line stations
2001 Cevero & Duncan	The value of condos and apartments from 1/4-1/2 mile from a station increased 2-18%; the value of single family homes decreased 0-4%
1997 Ryan	No significant premium in 3 market areas; a penalty in 2; and a small premium for industrial areas
1995 Landis & Huang	There were no significant premiums for property 1/4-1/2 mile from stations
1995 Landis et al.	The typical home sold for $272 more for every 330 ft. closer it was to a light rail station
1994 Landis et al.	For every 1,000 ft. closer to a station, prices increased $337 or 1%, but decreased 4% for units closer than 900 ft. to a station
Santa Clara/San Jose	
2000/01 Cevero & Duncan	Properties less than 1/4 mile from a station experienced a 23% premium
2001/2000 Weinberger	Rent for units within a 3/4 mile of a station increased 4-12%
Los Angeles	
2002 Cevero & Duncan	Values rose 103.5% for apartments and homes 1/4-1/2 mile from a station, but decreased 6% for condos
San Francisco	
1997 Lewis-Workman & Brod	Property value decreased $1578 for every 100 feet further from station
1995 Landis et al.	Property value decreased $197 for every 100 metres closer to station (may be due to effect of commercial and industrial uses)

St. Louis, MO	
2004 Garrett	Property value increased 32% or $140 for every 10 ft closer to station beginning at 1460 feet.
Washington, DC	
1996 Benjamin & Sirmins	Apartment rent decreased 2.5% for every 1/10 mile further from station
Portland (Eastside)	
1999 Dueker & Bianco	Median house values rose at increasing rates the closer to the station. The largest change, $2,300, was for homes up to 200 ft. from a station
1998 Chen et al.	Property value decreased $32.20 per metre further from station beginning 100 metres from station
1998 Al-Mosaind et al.	A 10.6% premium for homes 500 meters from a station was observed
1997 Lewis-Workman et al	Property values increased by $76 for every 100 ft. closer to the station (within 2,500 - 5,280 ft. radius)
1996 Knapp et al.	The value of parcels located 1/2 mile of the alignment rose the farther they were from the line; values rose the closer parcels are to stations
1993 Al-Musaind et al.	The value of homes within 500 metres increased by 10.6% or $4, 324
Sacramento	
1994/95 Landis et al.	There was no discernable positive or negative impact to property values (not statistically significant). Single family homes rose 0.4% for every 1, 000 ft. closer to a station, and 6.2% if very near a station
Santa Clara/San Jose	
1994 Landis	The price of single family homes increased by 0.1% for every 1, 000 ft. closer to a station, but decreased 10.8% if closer than 900 ft.
Toronto	
1983 Bajic	There was a $2,237 premium for the average home
Vancouver	
1998 Ferguson	A $4.90 premium per foot associated with proximity to station was found
London	
2007 Savills	A one-minute reduction to commuter rail journey increased the average home value by £1,000
Buffalo, NY	
2007 Hess & Almeida	Every foot closer to a light rail station increases average property values by $2.31

Primary Source: Huang, H. (1996). "Land Use Impacts of Urban Rail Transit Systems" in Journal of Planning Literature, vol. 11, iss. 17.

BACKGROUND: Greater Vancouver and the Fraser Valley

According to the B.C. government, the population of the Lower Mainland has increased by 750,000 in the past twenty years and is anticipated to exceed three million by 2021. At the same time, the number of vehicles on the road is rising faster than the population - 20,000 cars a year. The volume of goods moving through the Port of Vancouver is expected to quadruple in fourteen years. These increases have not been met by improvements to transportation infrastructure at the same rate; in fact, there have been few significant improvements since EXPO '86.

As the population of the Metro Vancouver area continues to rise, one of the main problems it faces is keeping its infrastructure up to date with the amount of people living in the region. A recent report by Get Moving BC cites bridge congestion as a large concern for Vancouver. The report compared the metropolitan areas of Vancouver, Portland, Edmonton, Winnipeg, Calgary, and Saskatoon and noted that 8 of the 10 most congested bridge crossings in the compared cities were in Vancouver. When compared to Calgary, Vancouver has 1.2 more million people, but 74,194 residents per bridge lane in comparison to Calgary's 14,667 people per bridge lane. In the report, the Port Mann ranked as most congested bridge, with a daily volume of 124,745. The Pitt River Bridge ranked number 9, with a daily volume of 80,000 people[4].

The average price of a detached home in the city of Vancouver is now $1 million! According to the Affordability Report released by the Royal Bank of Canada, the average price of a standard townhouse is $484,400 requiring a purchaser to have an annual income of $95,900 in order to quality. The demand and subsequent high real estate prices are due in part to the tremendous growth of population without the comparable growth of transportation infrastructure, making the outlying (and less expensive) areas a difficult commute and therefore less desirable. Yet, even given this difficult commuting situation, we continue to see growth in the more "affordable" housing areas outside the Central Business District (CBD) in downtown Vancouver. The major symptom of this outward move is dramatically expanding congestion on our current transportation networks throughout the Lower Mainland and Fraser Valley regions. Although we have seen a strong demand for real estate in these outlying regions, it continues to be constrained by this constant congestion. People who work and play in Vancouver realize the isolation and the difficulty of traveling on the GVRD's outdated highway and transportation systems, and therefore choose their residences based on commute times.

4 Get Moving BC. (September 2008). *Bridging the Infrastructure Gap: A Comparison of Bridge Infrastructure Crossing the Fraser River to Bridge Infrastructure in Four Major Western Canadian Cities.* http://www.getmovingbc.com/press_release/BRIDGING%20THE%20INFRASTRUCTURE%20GAP.pdf

The sheer mass of in-migration into the GVRD cannot be contained within the confines of the urban centre or even the Lower Mainland. High-density living is no longer a choice in Vancouver; it is the principal option, and residents who desire alternatives are restricted by the inability to commute any distance in a reasonable length of time. This increased traffic congestion has had negative impacts in several areas:

1. The ability of our economy to grow at peak potential, as our ports are constrained by the inability to move goods in a timely and consistent manner. This decreases our Gross Domestic Product (GDP) growth.
2. A continuing deterioration of our local airshed due to the increase in idling vehicles.
3. Quality of life for residents of the region.
4. The desirability of the region for potential new major employers.
5. The demand for real estate, both residential and commercial, in key potential growth areas in the Lower Mainland and the Fraser Valley.

This report deals strictly with #5: the demand for real estate.

DIRECT EFFECTS OF TRANSPORTATION IMPROVEMENTS ON REAL ESTATE VALUES

Distance is Now Measured in Minutes, Not Kilometres

Over the past eighteen years, our research has revealed that real estate values are driven both up and down by eight clear fundamentals, of which transportation change is one of the most dramatic catalysts[5]. The basic theory in real estate is that the more attractive the location, the higher the value of the home. As the demand for homes in that area expands, the result is higher housing values. This location theory is often misunderstood, as location is not just a subjective desire (e.g., to be close to the beach), but is actually a combination of all eight fundamentals, each of which contribute to desirability. The key fundamental we are studying in this report is **Transportation Accessibility.**

Golden Ears Bridge Jan. 29, 2009.
Source: www.translink.bc.ca

Accessibility Drives Real Estate Prices

South of the Fraser River.
Source: http://www.gatewayprogram.bc.ca

Generally, one of the attributes coveted by home buyers is nearness to the central business district (CBD). As saturation occurs and homes are no longer affordable, people begin to find locations outside the vicinity. Access to good highway systems, mass transit and commuter rail is sought in order to afford easy access to the CBD. Accessibility is a critical determinant of residential land values, and the improved access between urban centres and residential neighbourhoods greatly improves the value of homes[6].

As fuel prices continue to rise across the globe, commute times, commute costs and accessibility to job centres become key determinants for potential home-buyers and commercial enterprises. Residents now measure their commute distances in minutes, not kilometres, a process that leads to higher demand for properties that are located farther from their jobs in distance, yet closer in terms of commute time.

5 Campbell, Don R. (2005) *Real Estate Investing in Canada* ISBN 0-470-83588-5 John Wiley & Sons Publishers: Toronto.

6 Smersh, G.T. & M.T. Smith. (2000). "Accessibility Changes and Urban House Price Appreciation: A Constrained Optimization Approach to Determining Distance Effects" in *Journal of Housing Economics, Vol. 9, No. 3*, pp. 187–196.

This focus on time and accessibility has been confirmed in studies conducted in major urban regions, whether the access improvements have been new rail transit or new highway expansion. We'll deal with the light-rail portion of the Translink Project first.

Walkability

Further proving that minutes are becoming more important than kilometres is the growing popularity of walk scores. Launched in 2007, www.walkscore.com calculates an address's walkability by bestowing points for amenities located within a one mile (or 1.6 kilometre) radius. Such amenities include schools, nearby stores, restaurants, and parks. Although much more valid at the address level, walkscore.com rates the city of Vancouver as very walkable (72/100); Surrey as car-dependent (20/100); Richmond as a walker's paradise (94/100); and Port Coquitlam as somewhat walkable (52/100).

Realtors are increasingly using walk scores as part of their MLS listings for homes for sale or as part of the advertising for homes for rent. Using an algorithm, the walk score provides a quantitative alternative to the traditional feature often found in ads of properties for sale or rent of "close to amenities". A high walkability score is a big draw for potential buyers. Current market turbulence means people are looking to save money any way they can. The option of saving gas by using mass transit such as bus and LRT adds allure to a property. Advertising nearness to transit and amenities is a huge draw and smart marketers are taking this free walking measure and running with it. Research indicates that a "walk and rider" living close to transit saves over $1,200 per year[7]. The research further posits that the group reaping the largest benefits are renters; wherein, the prices of real estate in areas with improved transit have not increased proportionately to the cost savings of using transit over car commuting and hence the premium has historically not been reflected in higher rents for these areas. Renters in these areas can save money in commuting and generally do not pay that difference in rent.

As demonstrated throughout this report, this focus on time and accessibility has been confirmed in other studies conducted in major urban regions, whether the access improvements have been new rail transit or new highway expansion.

7 Baum-Snow, N. & M.E. Kahn. (2000). "The Effects of New Public Projects to expand Urban Rail Transit" in *Journal of Public Economics, Vol. 77*, pp. 241-263.

IMPACT OF LIGHT RAIL TRANSIT ON RESIDENTIAL PROPERTY PRICES

The benefits of light transit expansions go beyond the expected decreased commute times and a reduction in carbon emissions. In studies conducted across North America, the values of homes in neighbourhoods close to mass transit had premiums ranging between 3% and 40%, depending on the different types of housing and socioeconomic positions of the real estate owners[8].

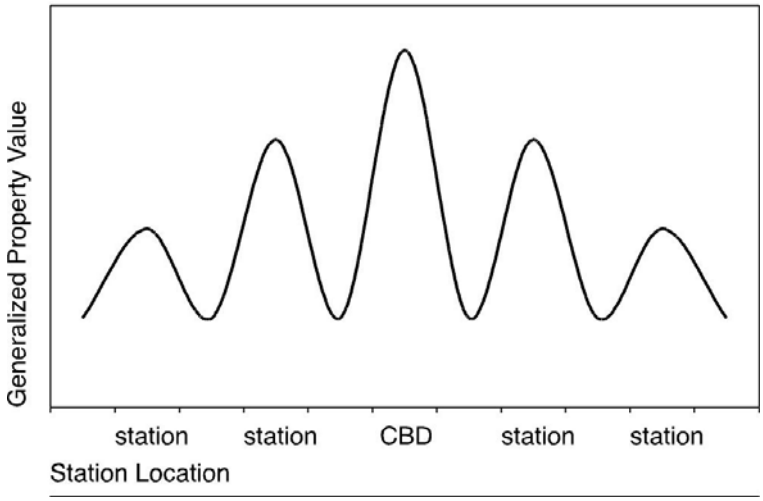
Studies show that there appears to be a higher positive impact on property values located near commuter railway stations over light and heavy railway[9]. The positive effects of proximity to rail transit, however, were limited to homes located within a one-half mile radius of stations. Even announcements of improvements that will shorten and ease commutes have resulted, historically, in high-valued housing developments — in comparison to new developments located a distance from these opportunities. Additionally, development sites near rail stations have tended to draw a higher density of development, resulting in a higher value or rent for these homes.

Areas in which the average income of the residents was at or below the median incomes of the whole region received the largest percentage increase in property values. As the average income of an area increased above the median, rail links did not have as much effect. This is due generally to increased reliance on transit as a means of primary transportation for people with incomes at or below the median.

As detailed in Figure 1[10], the property values nearest to the stations had a dramatic increase in their average value. This effect was maximized in a zone of 500 metres surrounding each station.

One study on the impact of the Los Angeles Metro Rail system revealed that properties located within one-quarter mile of a rail station enjoyed a value premium of $31 per square foot[11].

Figure 1. Peaks and Valleys of Property Values at Rail Stations in relation to the CBD



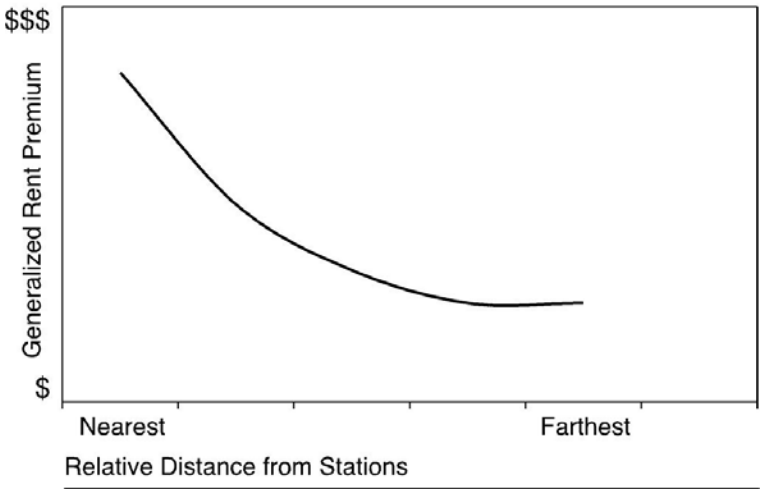
8 Diaz, R. (n.d.) *Impacts of Rail Transit on Property Values*. www.apta.com/research/info/briefings/documents/diaz.pdf.
9 Debrezion, G., E. Pels, & P. Rietveld. (2003). *The Impact of Railway Stations on Residential and Commercial Property Value*. Tinbergen Institute Discussion Paper.
10 Ibid.
11 Fejarang, R. A. (1994). Impact on Property Values: A Study of the Los Angeles Metro Rail, Transportation Research Board, 13th Annual Meeting, Washington, D.C.

Proximity to Rail Transit and Housing Values and Rents

In areas in which the average incomes were at or below the median, the closer a dwelling was located to transit, the higher its resale value and rent. In San Francisco, for example, one-bedroom apartment units located within one-quarter mile of a suburban Bay Area Rapid Transit System (BART) rented for 10% more per square foot than other one-bedroom units in similar neighbourhoods[12]. The demand for two-bedroom units was even stronger, and they were renting for a 16% premium over similar two-bedrooms not directly associated with the BART station.

Overall, studies have found that rent decreased by approximately 2.5% for every one-tenth of a mile distance from the station[13].

Figure 2. Residential Rental Premium versus Distance from Commuter Rail Station



A study examining the long-term effects of the BART system on housing prices over a twenty-year period indicated that homes closer to the system were valued 38% higher than similar homes not located near any BART services[14]. In Alameda County, house prices rose by $2.29 for every metre a house was located closer to a rapid transit station. In Buffalo, NY, in spite of declining city population and ridership, a home located within one-quarter of a mile radius of a light rail station can earn a premium of $1300-3000, or 2.5% of the city's median home value[15]. In St. Louis, MO, property value increased 32% or $140 for every 10 feet closer to a station beginning at 1460 feet[16]. In Eastern Massachusetts, single family homes located in municipalities with commuter rail stations have values ranging between 9.6% and 10.1% higher than similar homes in communities without a commuter rail station[17]

New Jersey experienced similar positive effects. The median prices for homes located in census tracts immediately served by the rail line were 10% higher than those in other census tracts[18]. Similar effects were seen in Portland, where homes within 500 metres of light rail sold for 10.6% more than houses located 500 metres or more away.

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12 Cervero, R. (1996). “Transit-Based Housing in the San Francisco Bay Area: market Profiles and Rent Premiums”, in *Transportation Quarterly*, *Vol. 50, No. 3, pp. 33-47.*

13 Benjamin J.D., Sirmans G. S. (1996). “Mass Transportation, Apartment Rent and Property Values” in *The Journal of Real Estate Research,* Vol. 12, Issue 1.

14 Landis, J. & R. Cervero. (1995). “BART at 20: Property Value and Rent Impacts.” Transportation Research Board, 74th Annual Meeting, Washington, D.C.

15 Hess, D. & T. Almeida. (2007). “Impact of Proximity to Light Rail Rapid Transit on Station-area Property Values in Buffalo, New York” in Urban Studies, Vol. 44, No. 5-6, 1041-1068.

16 Ibid.

17 Armstrong, R. & D. Rodriguez. (2006). “An evaluation of the accessibility benefits of commuter rail in Eastern Massachusetts using spatial hedonic price functions” in Transportation Vol. 33 pp. 21-43.

18 Voith, R. (1991). “Transportation, Sorting and House Values” in AREUEA Journal, Vol. 117, No. 19.

In anticipation of the implementation of Chicago's Midway Line, one study found that the collective increase in the value of homes located near new transit stations was US$216 million more than properties located farther away[19]. A study conducted in the 1980s in Ontario found that, in Metropolitan Toronto, the savings realized from living in an area that afforded a shorter and easier commute using transit translated into a willingness to pay more for homes that delivered these time savings[20]. This is true even today, with a premium being placed on both rents and market values for properties located within walking distance (500 metres) of the subway and commuter train stations.

A report by Savills published in 2007 shows that a one-minute reduction in commuter rail journey in London increases the average value of a home by approximately £1,000. At the same time, the report noted that homes right next to a commuter rail station or a main road may experience a decrease in the average home price as buyers are less attracted to these areas. The Savill report shows a positive correlation between the precentage of commuters in the area and average house prices[21].

In the majority of the studies reviewed, commuter railway stations have had a significantly higher impact on property values than light or heavy railway stations. This allows us to analyze the impact of Greater Vancouver's Canada and Evergreen lines with a significant degree of accuracy.

Negative Effects of Rail Transit on Property Values

There were some impacts from transit that negatively affected housing values as well. Noise, nuisance, associated crime and increased traffic combined to decrease property values in the *immediate* vicinity of stations. In two communities in Atlanta, there were two very different effects of rail on housing prices, based solely on the existing median incomes of the areas.

In a neighbourhood south of the tracks, whose population had a lower median income, residents put more value on access to rail transit. Therefore, home values increased by $1,045 for every 100 feet closer to a rail station. Conversely, in a neighbourhood north of the tracks with a higher median income, housing prices dropped by nearly the same amount the closer they were to the stations. This is likely explained by this group's reliance on personal vehicles versus mass transit, in addition to increased noise and associated crime. In the southern (lower median income) neighbourhood, these issues were mitigated by the ease of travel using mass transit.

In studies that found transit accessibility had little impact on home values — such as that conducted on the Dallas Area Rapid Transit system — it was determined that these cities had well-maintained, efficient highway networks already available to the residents[22].

19 McMillen, D. & McDonald, J. (2004). "Reaction of House Prices to a New Rapid Transit Line: Chicago's Midway Line, 1983-1999" in *Real Estate Economics, Vol. 32*, p. 463.
20 Bajic, V. (1983). "The Effects of a New Subway line on Housing Prices in Metropolitan Toronto" in *Urban Studies, Vol. 20, No. 2 May*, pp. 147-158.
21 Cook, L., Barnes, Y., Ward, J., Hudson, N., Rose, L. (2007). "Commuter impact on property". Savills Research. http://www.savills.co.uk/PdfStream.aspx?url=http://www.savills.co.uk/cmsoutput/pdfs/uber_research/pdfs/commuting%20note.pdf.
22 Weinstein, B. & T. Clower. (1999). *The Initial Economic Impacts of the DART LRT System*. Prepared for Dallas Area Rapid Transit.

The design of rail stations has an impact on crime, nuisance behaviour and fear of crime. Stations designed with these issues in mind can mitigate them using clear sightlines, proper lighting, appropriate landscaping and well designed pathways.

Impact of Commuter Rail on Commercial Property

Studies indicate that the proximity to mass transit has even more impact on the values of commercial properties[23]. The movement of a large number of people is conducive to increased retail activities, expanding the attractiveness of the area to commercial investors and retailers. Whereas the value of homes located immediately adjacent transit stops is often less than areas beyond eyesight, the value of retail property is only higher when directly adjacent to rail stations[24].

Free Transit Passes may now be used as a Selling Feature

Announced in Toronto in April 2010 as a new city policy, condo developers are now required to include a year's supply of Metropasses in each new unit sold[25]. The rule applies to condos in downtown locations near transit stations and is expected to increase ridership on Toronto's public transit lines. If the program does indeed increase ridership as expected, other cities may follow Toronto's lead.

23 Debrezion, G., E. Pels, & P. Rietveld. (2003). *The Impact of Railway Stations on Residential and Commercial Property Value.* Tinbergen Institute Discussion Paper.

24 Ibid.

25 Kalinowski, Tes.. (April 21, 2010). "Free Metropasses latest condo perk". *Toronto Star.* http://www.thestar.com/news/gta/article/798820--free-metropasses-latest-condo-perk?bn=1

IMPACT OF HIGHWAY AND BRIDGE CONSTRUCTION ON PROPERTY PRICES

As with rapid transit, accessibility to major highway and highway improvements proved to be a major determinant for increased property values in all studies. Studies show that, as highway networks are created and existing corridors to the CBD are improved, the value of real estate in the area increases[26].

North of the Fraser River. Source: http://www.gatewayprogram.bc.ca

The Gateway Project's main purpose is the expansion or creation of major highway arterial routes, and to ease the crossing of the Fraser River. These massive changes in traffic patterns will directly affect property demand and subsequent values across the Lower Mainland.

Under-priced Property

Classical economic theory posits that when a highway is initially built, large parcels of land that previously had poor accessibility — or none at all — are suddenly considered underpriced[27]. This results in a rapid correction in the market, driving up the value of the land. Development is usually quick and the impact significant. Additionally, improvements to existing highways showed a positive increase to land prices, although to a lesser degree.

However, during the construction phase of the improvements, prices of homes fell[28]. Noise, emissions, dust, and traffic delays negatively impact the sale price of land in areas immediately adjacent the construction; this price decrease ranges from $0.05 to $0.50 per square foot of land[29]. In fact, one study showed that values did not reach pre-construction levels until *five years* after construction was completed[30].

When studying four key residential areas being affected by new major highway expansion (using over 18,800 property sales as research data), a direct correlation was determined between the accessibility increases provided by the highway and the value of residential property.

The results showed that when a highway increased accessibility to the region by providing new access or shorter commute times, residential property values rose by 12%–15% over similar

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26 ten Siethoff, B. & K. Kockelman. (2002). Property Values and Highway Expansions: An Investigation of Timing, Size, Locations, and Use Effects. Transportation Research Board, 81st Annual Meeting, Washington, D.C.

27 Giuliano, G. (1989). "New Directions for Understanding Transportation and Land Use" in *Environment and Planning* A21, pp. 145-159.

28 Mikelbank, B. (2001). "Spatial Analysis of the Relationship between Housing Values and Investments in Transportation Infrastructure." Western Regional Science Association, 40th Annual Meeting, Palm Springs, CA.

28 ten Siethoff, ibid.

29 ibid.

30 Downs. A. (1992). *Stuck in Traffic*. The Brookings Institution: Washington, D.C.

properties not affected by the new highway[31]. This is a significant and permanent lift in values. In fact, according to one Texas study, of all types of land use, single-family residences showed one of the largest per-square-foot increases (approximately $35.00 per square foot)[32].

Difference Between Light-Rail Improvements & Highway Improvements

Surprisingly, the main difference between the rapid transit findings and the highway findings is the impact of the noise factor from operating highways. The value increases on residential properties located closest to the highways were partially offset by up to a 1.2% reduction for every two-decibel increase in highway noise level[33]. However, counter-intuitively, houses with highway noise were not found to take any longer to sell than those farther removed.

Artist's Rendering, South of the Fraser River. Source: http://www.gatewayprogram.bc.ca

This same study revealed that properties located in commercial–industrial areas serviced by these highway improvements experienced a 16.7% increase in value after the highway was opened. Research into the impacts of specific projects indicates some very pointed effects:

- Design of the freeway is important:
    - Depressed freeways contributed the most to residential property values, yet had limited impact on commercial property values, except for those located adjacent to exit and entrance ramps.
    - At-grade designs had the most positive impact on commercial property values, while still providing a strong positive impact on residential values.
    - Elevated highways had the least impact on all land values[34].

Commercial Property Values

Values of commercial properties located 800 metres or more from a freeway exit were valued at $50,000 per acre of land and $3 per square foot of structure less than properties located closer, proving once again that accessibility is key.

Overall, the completion or expansion of major arterial highways has a significant positive impact on accessibility and therefore, property values. This impact ripples across all types of property from single-family and multi-family residential to commercial and industrial.

31 Palmquist, R. (1980). *Impact of Highway Improvements on Property Values in Washington*, US Department of Transportation, Federal Highway Administration.

32 Lewis, C.A., J. Buffington, & S. Vadali. (1997). "Land Value and Land Use Effects of Elevated, Depressed, and At-Grade Level Freeways in Texas." Texas Transportation Institute Research Report Number 1327-2. Texas A&M University: College Station, TX.

33 Palmquist, R. (1980). Ibid.

34 Lewis, C.A., J. Buffington, & S. Vadali. (1997), ibid.

EFFECT ON PROPERTY VALUES: PRIMARY IMPACTS

Which Regions Will Experience a Positive Impact?

There will be some very clear winners and some potential losers in the property-value equation once the Gateway Project is completed. The impact will be felt across the Lower Mainland and into the Fraser Valley. As we analyze the region, we are currently witnessing a major boom in property values. As discussed at the beginning of this report, a real estate market's values are driven and supported by eight economic fundamentals, of which transportation is only one (albeit a very important one). Our focus in this report is to eliminate the other seven fundamentals and provide a long-term (10+ years) perspective on which region's property values will be most impacted by these major transportation projects.

Values across the region will go up and down as the Lower Mainland's fundamentals change over the coming decade. However, in some key regions of the Lower Mainland and Fraser Valley, these Gateway transportation projects will mute any potential property-value decreases and magnify any increases experienced by the rest of the region.

Based on our findings, we have ranked the following regions in order of expected impact on accessibility and property-value increases:

#1 Maple Ridge & Pitt Meadows

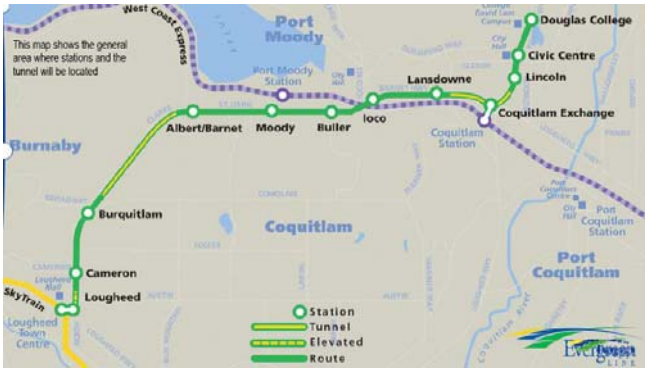
This region has been hampered by poor transportation infrastructure for decades. Thus, property values have been lower historically than other areas located the same distance from the CBD. Once all the Translink/Gateway Project components are competed, Maple Ridge and Pitt Meadows will be among the most accessible regions in the Lower Mainland; this will drive demand for both residential and commercial/industrial property as values rise. Impacting directly on the region will be a number of initiatives: the new Golden Ears Bridge; the new Pitt River Bridge; the South Fraser Perimeter Road; the expansion of Highway 1; and the new Port Mann Bridge. A decade from now, as the transition begins to take hold, this area will become known as "The Place To Live For Lifestyle."

#2 North Langley, Fort Langley & Abbotsford

Despite the obvious growth in the Lower Fraser Valley, the current Highway 1 and Port Mann Bridge congestion have held back the potential of this region. The expansion of the HOV lane on Highway 1, the new Port Mann Bridge and the completion of the South Fraser Perimeter Road will relieve this congestion for both commuters and commercial vehicles. This will drive explosive growth to the region for commercial enterprises and residential units alike. RapidBus, with a direct route to the Guildford area in Surrey, will also make this a more attractive area in which to live.

#3 Port Moody & Port Coquitlam

Although real estate prices in these regions are already higher than the first two on this list, this region will experience an increase in demand from commuters wishing to stay on the north side of the Fraser. The largest impact will come from Translink's Evergreen Rapid Transit Line and the improvements to the North Fraser Perimeter Road. The increase in property values due to these transportation upgrades will occur mostly on residential properties in this region. The Evergreen line is slated for completion in 2014 and will encompass 12 stations over an 11 kilometre track that links Coquitlam, Port Moody and Burnaby.



SECONDARY-IMPACT REGIONS

#4 Surrey & Delta

The completion of the South Fraser Perimeter Road and the new Port Mann Bridge will help to alleviate the traffic issues now facing the Surrey and Delta regions, moving much of the commercial truck traffic off the city's arterial streets. Surrey has already enjoyed an increase in demand from the extension of the Skytrain light-rail system and the Alex Fraser Bridge; the new Gateway Project highway improvements will help maintain this momentum. Still constraining growth in this region will be the aging Patullo Bridge and the George Massey Tunnel, both of which will continue to act as constraints on demand. The station locations have yet to be determined for the proposed six kilometre extension of the Expo Line along 104th Avenue. The new extension is slated to run down 152nd Street to Fraser Highway and terminate at 168th Street. The extension of the Expo Line will result in higher property values for homes located near the new stations. Commercial properties will also benefit from the increased accessibilty provided by the proposed RapidBus service between Langley, the future Guildford SkyTrain station and eventual stops beyond. Additionally, residents in Delta and South Surrey are benefitting from the Canada Line, which is already operating nearly at capacity three years ahead of schedule.

#5 Mission & Chilliwack

Although quite far removed from the immediate Gateway Program components, these regions will feel the impact both in residential (Mission and Chilliwack) and commercial/industrial (Chilliwack). Reduced congestion on Highway 1 and access to the South Fraser Perimeter Road will make these outlying areas more desirable to both commuters and commercial enterprises. The RapidBus expansion out to Langley that will connect with the extension of the Expo Sky Train Line in Surrey will bring the Fraser Valley closer to the Lower Mainland by providing alternative and faster transportation options. The extra lanes along Highway 1 (at 216th St.), the expansion of the Port Mann Bridge, and the Golden Ears Bridge will also bring these two cities closer to the Lower Mainland. Property values here are lower than in most regions in southwestern B.C., making this area a magnet for first-time

home-buyers seeking ground-oriented properties instead of condominiums. The majority of the commuters living here will be traveling to other outlying regions such as Langley, Abbotsford or Surrey, rather than all the way into the downtown Vancouver CBD.

#6 Canada Line Rapid Transit (Vancouver, Richmond)

Source : http://www.translink.bc.ca

The reason for the lower ranking of regions around the Canada Line is due to the very high values of the real estate around these stations. However, properties will still be affected in a long-term positive fashion by the Skytrain. As previous studies have shown, the positive impact will be felt on residential properties located within 500 - 800 metres of each station, with the largest demand increases being in regions where *the median income is lowest*.

The station is reaching capacity three years ahead of schedule[35]. More riders than anticipated from South Surrey and White Rock are using the line. This demonstrates the ripple effect that transportation projects have on real estate values, as the transit line reduces the commute time and the convenience of getting to work for residents living in communities south of the line bringing their homes "closer" to their work.

The Canada Line begins at the Waterfront Station (connecting the SeaBus), down Granville Street and beneath Cambie Street. The first station is the Vancouver City Centre Station, which is linked to Pacific Centre Mall. The line leaves Vancouver at the Marine Drive station and enters Richmond at the Bridgeport Station where it splits west to the airport and south the Richmond-Brighouse Station.

Vancouver Section Stations

- Waterfront (Granville Street between Pender and Hastings)
- Vancouver City Centre (Granville Street at Georgia Street serving Pacific Centre Mall)

35 Sinoski, K. (2010). "Canada Line Races Towards Capacity" in the Vancovuer Sun (June 1, 2010). http://www.vancouversun.com/sports/thought+crowded+Canada+Line+racing+toward+capacity/3100040/story.html

- Yaletown–Roundhouse (Davie Street near Mainland Street)
- Olympic Village (Cambie Street at West 2nd Avenue)
- Broadway – City Hall (Cambie Street at West Broadway)
- King Edward (Cambie Street at King Edward Avenue)
- Oakridge – 41st Avenue (Cambie Street at West 41st Avenue, next to Oakridge Centre)
- Langara – 49th Avenue (Cambie Street at West 49th Avenue, near Langara College)
- Marine Drive (Cambie Street southside of Southwest Marine Drive)

Richmond section

- Bridgeport (River Road at Great Canadian Way, adjacent to River Rock Casino Resort, major transit exchange for suburban buses, link to Airport branch)
- Aberdeen (No. 3 Road at Cambie Road, adjacent to Aberdeen Centre)
- Lansdowne (No. 3 Road at Lansdowne Road, adjacent to Lansdowne Centre)
- Richmond–Brighouse (No. 3 Road at Saba Road, adjacent to Richmond Centre)

Airport section

- Templeton (located north of Grant McConachie Way and east Templeton Street)
- Sea Island Centre (near the Air Canada service centre)
- YVR–Airport (adjacent to the International terminal of Vancouver International Airport)

Three future stations have been announced, which investors and property owners should be aware of and watch for updated information.These stations are: 33rd Ave. station south of the King Edward station and near Queen Elizabeth Park; 57th Ave. station south of 49th Ave; and YVR station located east of the terminal.

As evidence supporting REIN's belief that it is necessary to wait for the "dirt to be turned" before investing based on announcements, the Capstan Way station at No. 3 Road was cancelled in March 2009. Funding could not be raised by the the developers and hence, the station was cancelled by Translink and the City of Richmond[36]. The track can still accommodate a station at this location and it is anticipated that at a future date, this neighbourhood will become an "Artists District".

Conclusion: 10%–20% enhancement in real estate values

Based on our research and experience observing the positive effects of transportation improvements elsewhere, we project the Gateway Project will deliver a 10%–20% increase in real estate values in the above areas over and above the rest of the Lower Mainland and Fraser Valley. In effect, this means these Gateway areas will outperform the others. If the market goes up everywhere, these areas will rise by about 10%–20% more. If real estate values drop, they will drop by 10%–20% less.

Please Note: Not ALL properties in these six regions will make for great investments, so make sure you complete your due diligence on all properties before you purchase.

[36] Campbell, A. (2009). "Sun to Set on Sun Tech City" in *Richmond News* (March 4, 2009). www.richmond-news.com/business/Tech+City/2881005/story.html..

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Don is also author of the best-selling Canadian real estate book *Real Estate Investing in Canada***.** Published in May 2005, *Real Estate Investing in Canada* has just been updated to "Version 2.0" and with over 50,000 copies sold, it is the all-time best-selling real estate book in Canadian history. He is also the author of *97 Tips for Canadian Real Estate Investors*, released in April 2006, 51 Success Stories from Canadian Real Estate Investors, released in 2007, and *and 81 Financial and Tax Tips for the Canadian Real Estate Investor: Expert Money-Saving Advice on Accounting and Tax Planning* released in 2010. He is highly sought by national, regional and local media to provide expert opinions on current topics and trends in real estate.

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Melanie joined REIN™ in 2006 as a research analyst and has contributed in many areas including Top Investment Towns; the Impact of Transportation Improvements on the Lower Mainland, Calgary, Edmonton and Greater Toronto and the Hamilton region; grow-ops and methamphetamine labs in rental housing and crime prevention through environmental design. Melanie holds a Master's Degree in Criminal Justice from California State University, San Bernardino and a Bachelor's Degree in Criminology from Simon Fraser University. She has worked with law enforcement agencies in southern California on many projects including a methamphetamine task force and Community Oriented Policing initiatives. In Canada, Melanie consulted with local transit agencies to help reduce crime at rapid transit stations along the Millennium line and has helped develop crime prevention and safety projects with various law enforcement agencies around the Lower Mainland.

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Allyssa is one of the latest additions to the research team and has contributed research to the Top BC Investment Towns report, Top Alberta Investment Towns report, Top Ontario Investment Towns report, The Gateway Effect, and Calgary and Edmonton Transportation Effect projects with REIN™. She is currently pursuing her Bachelor of Arts Degree at the University of the Fraser Valley.