

Preliminary Evaluation of Station Oriented
Development Opportunities
Stage 2 LRT Expansion

Ottawa, Ontario

The conclusions contained in this report have been prepared based on both primary and secondary data sources. NBLC makes every effort to ensure the data is correct but cannot guarantee its accuracy. It is also important to note that it is not possible to fully document all factors or account for all changes that may occur in the future and influence the viability of any development. NBLC, therefore, assumes no responsibility for losses sustained as a result of implementing any recommendation provided in this report.

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City of Ottawa

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Stage 2 LRT Expansion

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Executive Summary

N. Barry Lyon Consultants Limited (NBLC) has been retained by AECOM on behalf of the City of Ottawa to explore the potential for Station Oriented Development (SOD) to be integrated as part of the procurement process implementing the Stage 2 LRT Expansion.

This study assesses recent SOD experiences across Canada and in some U.S. Cities, the market demand for SOD in the City of Ottawa, target areas to focus effort toward achieving SOD and a framework for implementation as part of the capital project's procurement process.

The following summarizes key outcomes of this work.

SOD Precedents

From a precedent perspective in Calgary, Vancouver, Toronto, and Ottawa, procurement for SOD as part of transit delivery has either not been a priority, or has been unsuccessful. SOD successes appear to be those that have been achieved by opportunistic and creative negotiations, rather than strategic planning. The majority of SOD occurs through private sector initiatives who work with the transit authority incrementally for new station/improvements associated with development proposals.

From our review, the lack of success in being able to integrate SOD concurrent with transit delivery has been due to the following key factors:

- A misunderstanding by transit providers/ agencies of the market and the factors that drive private sector real estate development;
- An overall priority to build transit, without an equal proactive mandate to also consider the impact on the planned function of the community surrounding station areas;

- A lack of understanding regarding the differing timelines for contract driven transit development and market-driven real estate development;
- A lack of certainty and clarity from the perspective of station oriented real estate developers in their understanding of achievable development rights and processes, combined with the dominant role of the transit provider in decision-making; and,
- In some areas, a lack of market demand has constrained the ability to support near-term SOD opportunities.

This report addresses these factors, highlighting opportunities for SOD along the Stage 2 LRT corridors and presenting a framework for including SOD objectives within the RFQ/RFP process which will deliver the Stage 2 Expansion.

Local Market Findings

New LRT service expansion outside of Ottawa's downtown areas will enhance the utility of existing transit service by improving on both the capacity and reliability of existing service. New LRT service may represent more of an incremental improvement to transit service in some areas, more than others. However, the market's general perception of rail-based transit services is more positive than bus-based models.

The market outlook for the City of Ottawa as a whole is largely positive, high density residential and commercial/ office intensification continues to proceed at a steady, measured pace. The introduction of expanded LRT service will be a valuable amenity to future intensification and a foundational infrastructure element to build upon throughout the City's continued evolution.

The market demand for new higher density development is largely concentrated within the City's established urban neighbourhoods near the

Downtown Core, with some demand stretching into neighbourhoods west of downtown. Development application activity indicates that future higher density development will continue to favour walkable urban neighbourhoods with sought-after amenities. Outside of these central market areas, pricing for low-density housing forms becomes more attainable and the demand for higher density forms is less robust.

The Opportunity to Implement SOD in Stage 2

Through a review of market and demographic indicators, policy context and an analysis of potential “soft site” opportunities for SOD, this analysis illustrates that Stage 2 station areas within the central and central-west City submarkets are likely best positioned to compete for a share of future high-density demand. This evaluation of near-term SOD potential throughout the 22 station areas reveals a short list of four station areas recommended for potential inclusion within a focused SOD initiative as part of the implementation of Stage 2. They are:

1.	Baseline Station	3.	Gladstone Station
2.	Cleary Station	4.	Pinecrest Station

Through our review of SOD precedent and local market characteristics, several key principles are apparent and necessary for successful implementation of SOD within this process, namely:

- Early in the process, identify and prioritize real estate development opportunities through proactive land use planning to ensure that transit system and station designs do not preclude opportunities to implement SOD;
- Enhance the SOD site identification and prioritization process by engaging early with adjacent property owners/ developers.

- Provide a clear mandate to the transit agency and project implementation team with respect to the integration of SOD objectives;
- Ensure strong political support for the SOD initiative;
- Scale-up the SOD opportunity to allow for multiple development opportunities at several stations to attract market interest and competitiveness;
- Provide proponents with clear direction on the planning and development potential of SOD opportunities;
- Prioritize SOD on sites that are owned, or can be acquired, by the City of Ottawa (the inclusion SOD opportunities on private land within the RFP could be problematic);
- SOD opportunities should not depend, interfere, or rely on the construction of a physical transit station. Project feasibility will be directly related to project costs; and,
- Where possible, manage and transfer risk to the proponent by separating the physical construction and timing of transit and SOD works. Agreements should include sunset clauses/ handback procedures and other provisions for managing and sustaining exposure to risk.

In short, SOD should be included within the Stage 2 capital project’s scope if the opportunities are limited to clear, controllable, uncomplicated, marketable and politically supportable development sites.

The final chapter of this report outlines a potential RFQ/RFP framework which addresses these key principles for the implementation of a SOD initiative within the scope of the Stage 2 project.

1.0 Introduction

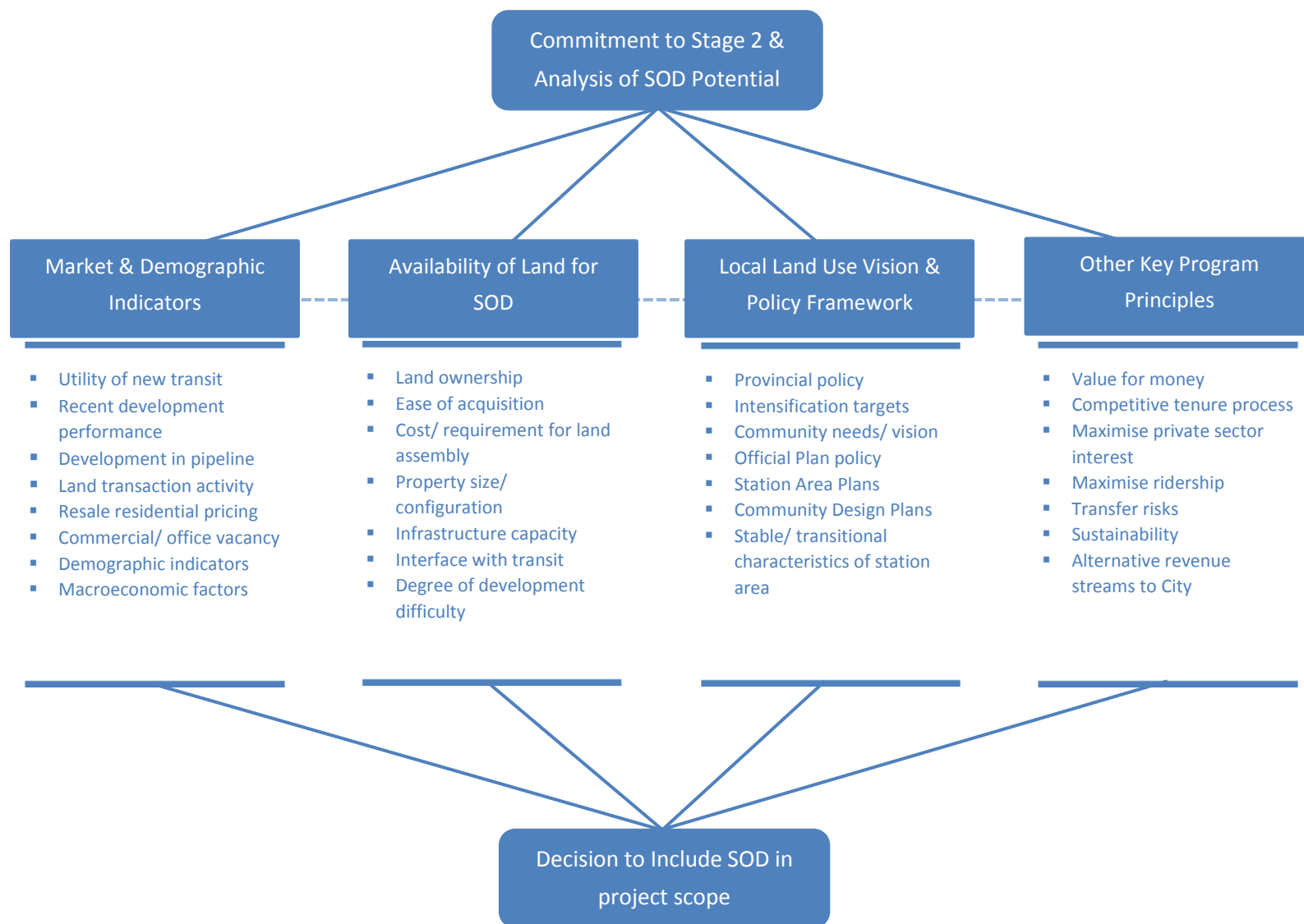
N. Barry Lyon Consultants Limited (NBLC) has been retained by AECOM on behalf of the City of Ottawa to conduct an analysis of Station Oriented Development opportunities as part of the Stage 2 LRT expansion in Ottawa. In addition to the delivery of 30 kilometres of new light rail transit infrastructure and 22 new stations, the City is considering the inclusion of Station Oriented Development (SOD) objectives – namely, opportunities for real estate development – as part of the capital project’s overall scope.

Including real estate development in this process could leverage opportunities to encourage increased transit ridership and influence a more sustainable, long-term development pattern as well as potentially offsetting the cost of transit through the sale of land and air rights around stations.

This report assesses the opportunity to integrate SOD opportunities at the Stage 2 station locations through the following key areas of research:

- A review of precedent and lessons learned through the pursuit of SOD in other North American contexts, with a focus on recent Canadian experiences;
- The utility of new LRT service from a market perspective;
- Local real estate market characteristics affecting the demand and near-term outlook for development at Stage 2 station areas; and,
- A preliminary framework and approach for the inclusion of SOD as part of an RFQ/RFP to potential transit proponents.

Figure 1 – Factors Influencing Station Oriented Development



2.0 SOD Case Studies

The following chapter highlights a review of key lessons learned from the pursuit of Station Oriented Development (SOD) objectives as observed across various jurisdictions in North America, with a focus on recent Canadian experiences. This review also includes a summary of key lessons learned gained from discussions with staff involved in first stage of LRT expansion in Ottawa.

As part of this research, NBLC conducted research and interviews with staff involved in transit delivery and SOD programming in Ottawa, Calgary, Metro Vancouver, Toronto, Minneapolis – St. Paul, and Washington DC.

The aim of this research was to develop an understanding of the general approach towards the implementation of SOD objectives alongside the delivery of new high-order transit in various jurisdictions. Our research particularly sought to understand:

- The influence of transit projects and SOD timing, market conditions and procurement mechanisms at play; and,
- The role that transit delivery consortiums have had in implementing SOD alongside, or concurrently with, the implementation of new transit services.

The following case studies are summarized based on NBLC’s research and interviews. The chapter then concludes with a summary of key methods, experiences and lessons learned in these North American examples of recent high order transit development.

2.1 Ottawa – Stage 1 LRT

Through a review of the Stage 1 real estate outcomes and discussions with project staff, we note the following key lessons learned with respect to the process for engaging and negotiating with land owners for the purposes of leveraging station oriented development objectives:

- Build the SOD opportunity into the overall project. Once the transit contract is in place, incremental SOD projects can have the impact of altering the contracted schedule or work plan which could result in penalties to the City. In the past, revisions to the LRT alignment have also compressed the available time period for securing property/ partnership agreements prior to the start of construction.
- Early in the process, establish a structured outreach program that effectively communicates the benefits of the LRT expansion and the opportunity for positive impacts on businesses/ land holdings. This process should educate land owners about the status of the LRT project and begin the process of building relationships with both the private sector and public agencies where real estate development is not a core business. This process should also create opportunities for the LRT team to gain an understanding of land owners’ businesses and visions for their land.
- Develop strong rapport with land owners/ developers with properties at key locations along the LRT corridor. These relationships should be established with senior decision-makers, rather than day-to-day property managers.
- Where possible, maintain a strategic position in negotiations in order to encourage more private sector contributions towards infrastructure development and SOD opportunities. Negotiations should also accommodate flexibility (with regard to construction schedules, cost sharing, etc.) while managing exposure to risk and maintaining cost certainty.

- Ensure that agreements with the project contractor, the successful RFP proponent commissioned with building the LRT infrastructure, are structured in a manner that allows the City/ REPDO to adjust to and acknowledge, the interests of property owners/ developers.

2.2 Calgary – C-Train

Calgary’s C-Train has been in operation since 1981. It has two lines covering 58 kilometres. The West line, an 8.2 kilometre, six-station extension, opened in 2012 and was the first addition to the system in 25 years. In addition, planning is currently underway for an extension of the City’s Green Line, scheduled for operation in 2024-26.

While most of Calgary’s LRT system is not new, there has been a renewed focus in planning for transit-oriented development around existing stations and transit corridors. Calgary has had plans in place to promote station oriented development around some stations for more than 30 years. However, market conditions have only become favourable for SOD recently.

Following are key findings and lessons learned with respect to SOD in Calgary’s recent experiences:

- The City of Calgary passed Transit Oriented Development (TOD) Policy Guidelines in 2004 and included provisions for TOD in its 2009 Municipal Development Plan and Calgary Transportation Plan. Land use studies and station area plans are in place for selected corridors and stations. Six stations underwent Station Area Planning with a view to creating more effective use of the existing transit infrastructure.
- Through interviews with City staff, it was noted that in many locations where there are underutilized lands adjacent to new transit infrastructure, market conditions have not been robust

enough for SOD to occur concurrently with the construction of transit lines. Rather, new transit service has been viewed by the development community as a potential catalyst for future redevelopment after transit is operational. The City has not had success in attracting high density residential or office development to new transit station areas without an operational LRT in place.

- The general approach taken by the City of Calgary in promoting SOD is to develop station area plans around key stations. In areas where the City has land holdings (referred to by the City of Calgary as ‘catalyst sites’), these lands are disposed of through the City’s Real Estate & Development Services’ in-house staff team. This allows the City to control development outcomes, the timing of development with the market’s evolution. This also yields an opportunity to capture any market value uplift after operation.
- However, there is one exception. At Westbrook Station, the City asked the transit provider to construct the shell of a five-storey office

Figure 2 – C-Train Network in Calgary



CTrain Map

building as part of the LRT line. This was implemented within the design-build project contract. The office building will be used for public purposes, with a library at grade and new offices for Calgary Transit above. The City of Calgary was responsible for interior finishes. The library recently opened to the public on April 23rd, 2016.

- Citing market limitations affecting the timing and absorption rates for new development, the key lesson learned in the City of Calgary has been to ensure that the design process for new transit infrastructure and stations is a joint process that acknowledges and addresses any future impediments to marketable adjacent development, wherever possible.
- The City of Calgary is also currently planning for an expansion to its Green Line, a 44 kilometre LRT corridor that will run in a north-south orientation connecting to the eastern edge of downtown. The City is in the early stages of planning along the line, however it is taking a different approach in this effort than it has in the past, considering (like Ottawa) a broader mandate for the capital project, potentially moving towards the inclusion of SOD at key locations as part of the construction contract for the line and stations.
- Through discussions with staff at the City of Calgary, it was noted that the overall objective for considering SOD as part of the Green Line capital project would be to proactively affect development patterns, implement City planning policy and to provide a catalyst for future development activity at strategic locations. However, no implementation plan has yet been established to determine how or where SOD will be included in a potential RFP.
- The City of Calgary has retained a market consultant to study the line and consider the development potential on both public and privately owned lands at key locations. It is consulting both the public and private developers throughout the process to ensure that

station siting and emerging planning policy is supportive of SOD in the near term.

2.3 Metro Vancouver – Skytrain

Translink, a regional transit authority, operates the Skytrain LRT system in Metro Vancouver. There are currently three operational lines and an extension through Coquitlam (the Evergreen Line) expected to open in 2016. The 19 kilometre, 16-stop Canada Line runs from downtown to the suburb of Richmond with a spur line serving the airport. It opened in 2009 ahead of the 2010 Olympic Winter Games. Following are key findings and lessons learned with respect to recent transit delivery and SOD experience in Metro Vancouver:

- The general approach toward achieving SOD objectives in Metro Vancouver is to have local municipalities take on precinct planning to establish appropriate locations for transit-oriented densities and redevelopment. Metro Vancouver also has a regional growth statement that directs future growth to various nodes within a hierarchy of designations.
- SOD objectives were not included in the scope for its project contractor in the creation of either the Canada Line or Evergreen Line.
- Time constraints on the Canada Line with respect to delivery through a Design Build Finance Operate and Manage (DBFOM) contract in advance of the 2010 Olympics limited the opportunity to integrate SOD and placed an emphasis on the efficient delivery of transit infrastructure. In many cases, even local station area or precinct planning lagged behind the construction of new transit.
- The project scope for the contractor implementing the Evergreen Line was also limited to the delivery of the transit line and stations (through a design-build contract). As with the Canada Line,

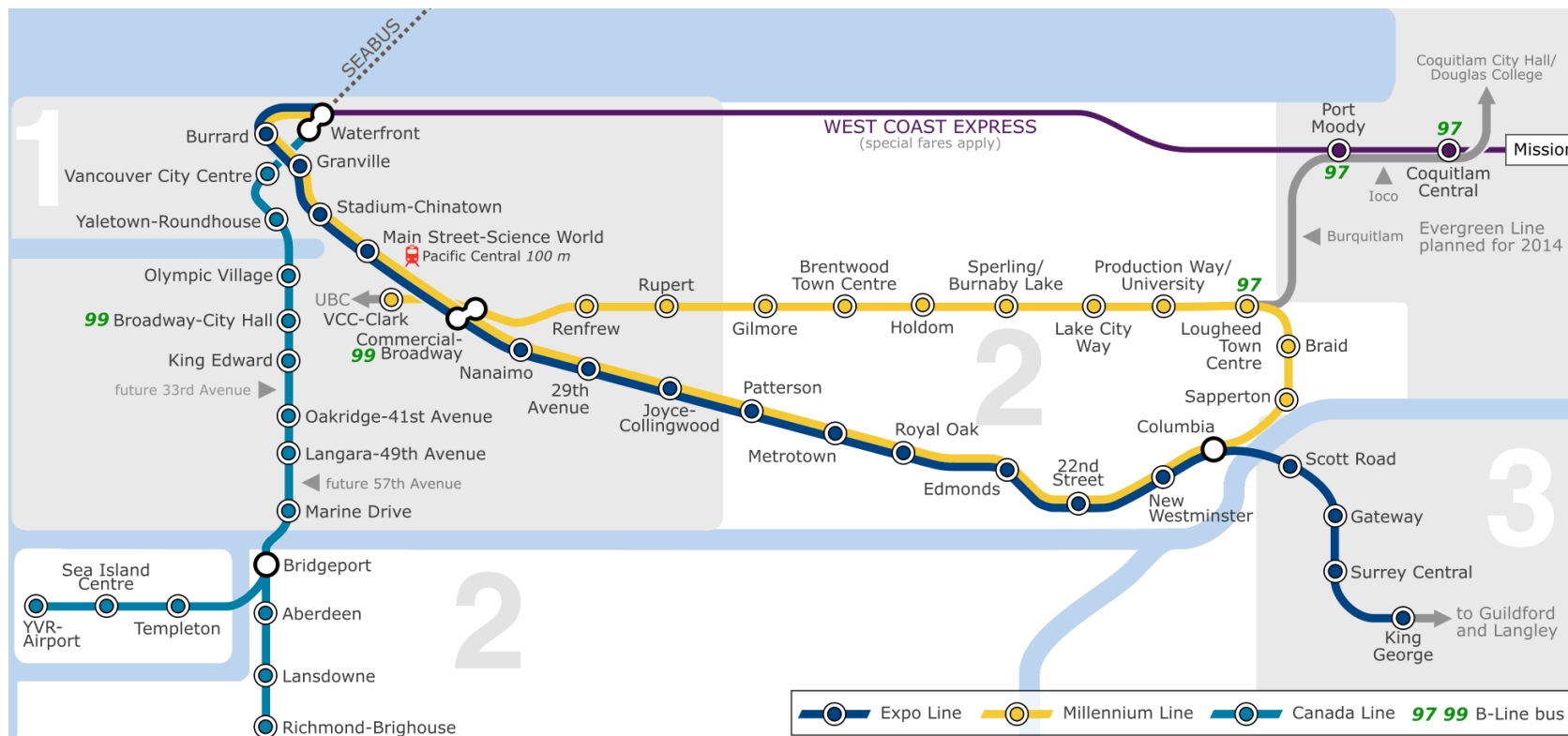
Translink’s focus in retaining its project contractor has been for the timely and cost-effective delivery of the extension and stations, not SOD.

- The Translink organization has limitations in its powers and mandate which restrict its ability to acquire land in excess of those required for transit. Therefore, while Translink does encourage SOD at and around station sites by working with local municipalities and land owners to provide integrated connections and access to stations, redevelopment around station sites is largely left up to local municipalities, through precinct planning, and to land owners

around stations. Translink does have an Adjacent & Integrated Development Program, but currently its mandate only applies to the negotiation of encroachment agreements and connections from private land to Translink’s transportation infrastructure.

- What distinguishes Vancouver from other Transit examples in Canada is its robust high-density real estate market. Generally, in the absence of an integrated process driven by the public sector, the private sector has moved in, recognizing the value that high order transit plays in capturing demand.

Figure 3 – Existing & Future Sky Train Service



- In several cases, agreements between private land owners, local municipalities and Translink have been put in place with mechanisms which allow for the creation of new ‘infill’ transit stations (some on private land) or costly additions or modifications to station designs which benefit private land owners.
- Typically, density bonusing structures or Community Amenity Contribution agreements (comparable to Section 37 of the Ontario Planning Act) are being used to leverage funds from the private sector in order to finance new stations or improvements over and above the agreed design specifications. For example, an agreement could establish the cost of constructing a new station on a private mall owners’ land, then as the land owner secures development permissions above as-of-right permissions, the developer would contribute funds (at a prescribed value per residential unit, similar to a Section 37 agreement) towards the cost of constructing the new station. Once the ‘pot’ of required funding is in place, Translink would have three years to construct and assume operation of the new station. Examples of this type of agreement are in place for the potential Capstan Way Station on the Canada Line and the Coquitlam City Centre Station on the Evergreen Line.
- Translink also noted that there have been limited public land holdings or greenfield development opportunities along the corridors where opportunities for a local municipality to leverage their real estate assets might exist. Therefore, the approach used toward securing SOD opportunities has allowed them to limit construction risk and potential delays in the delivery of transit by not directly addressing SOD, but encouraging it and remaining flexible to emerging demand for new stations or design alterations.

2.4 Toronto – Eglinton Crosstown

Metrolinx, with Infrastructure Ontario (IO) as a co-sponsor, are overseeing the construction of the Eglinton Crosstown LRT in Toronto which will travel Eglinton Avenue between Weston Road and Kennedy Road. The 19-kilometre corridor will include a 10-kilometre underground portion, between Keele Street and Laird Drive. The Crosstown is currently under construction and is scheduled to open in 2021.

Following are key findings and lessons learned regarding procurement and SOD objectives gained through discussions with Metrolinx staff.

- A key factor affecting the implementation of SOD opportunities along the Eglinton Crosstown is the Alternative Financing and Procurement (AFP) model which is being used to implement the project, similar to the Canada Line in British Columbia. The project is being implemented by Metrolinx, with Infrastructure Ontario as a co-sponsor. The project is being designed, built, financed and will be maintained by the private sector proponent for 30 years.
- Metrolinx and the City of Toronto gave SOD significant consideration leading up to the start of construction on the line with a view to ensuring that SOD was promoted from Metrolinx’s perspective, at station sites, and from the City’s perspective, along the entire line through the “Eglinton Connects” planning study, implemented through amendments to the City’s Official Plan, supporting mid-rise intensification along the Avenue.
- The AFP agreement for the Crosstown places an emphasis on the delivery of the transit line and stations. The agreement transfers risks to the private sector and includes financial penalties for the contractor if project timelines are not met, for example. However, if Metrolinx, throughout the duration of the project, requires revisions to the contractor’s approved design submissions or delays the

project contractor’s progress for other reasons, financial penalties are also leveraged against Metrolinx.

- However, Metrolinx did note that within the AFP agreement, the proponent was made aware of a SOD opportunity at Bayview Station where the landowner (a local developer) would remain on site and that the station would need to be constructed to support over-building on the site. The proponent was also made aware that other SOD opportunities may be explored and that they may be asked to work with developers at certain locations along the line.
- One clear piece of SOD related design criteria that was included in the project agreement was that the siting of stations, entrances and related infrastructure (vent shafts, traction power substations, etc.) should minimize, wherever possible, the sterilization of properties for future redevelopment. Along Eglinton, there are some locations

where fragmented parcel fabric and small lot sizes made this impossible, but there are also several locations where Metrolinx believes they have successfully protected opportunities for future redevelopment.

- After the AFP offering with the preferred proponent closed, Metrolinx then turned its attention to Transit Oriented Development (TOD) and issued a separate RFP to the development community asking for respondents to bid on potential mid-rise redevelopment opportunities at future TOD sites. The RFP targeted four locations along the Crosstown line in locations where Metrolinx had control over parcels thought to be potentially useful in accommodating station needs in addition to an integrated redevelopment. Successful developers would enter into a memorandum of understanding with Metrolinx with the objective to acquire overbuild rights for future

Figure 4 – Eglinton Crosstown LRT Route in Toronto



development. Development on these sites would have occurred after substantial completion of the Crosstown in 2021. However, the RFP response was poor, for the following reasons:

- The properties were relatively small parcels, requiring developers to assemble adjacent properties in order to create efficient development parcels within a compressed due diligence timeline.
- The RFP highlighted a general process post RFP close, where the developer would be required to work with the project contractor to establish the interplay between station and building designs. However, the framework establishing roles and responsibilities toward accomplishing this TOD integration was not clear and Metrolinx's role as a facilitator in the process was not well defined.
- There was a disconnect between the project contractor's 10% LRT design submissions, the terms of the AFP agreement and the requirement for a developer to enter the process and work out any potential changes to these designs. It became likely that it would be difficult for a developer to get a seat at the table and accomplish everything that would need to occur within the due diligence period.
- As the AFP agreement only identified Bayview Station as a definitive location for integrated redevelopment (not one of the properties identified in the developer RFP), it was also determined that any changes to the transit contractor's design submissions would result in a change order and trigger a financial penalty to Metrolinx. In some cases, these penalties could negate the potential land value of the redevelopment property.
- As a result, Metrolinx limited its efforts toward integrated TOD to Bayview Station alone where the AFP agreement required that

transit contractor design a station which would accommodate a certain number of floors of development on the site. Following are some key experiences and lessons with respect to the ongoing process for development over top of Bayview Station.

- A clear protocol was not established early on to establish the working relationship between transit contractor and the real estate developer at Bayview Station. For that reason, there have been substantial delays incurred in the distribution of detailed station designs to the developer.
- Due to these delays, the developer had to work from reference concept designs as a basis for creating development concepts. These limited inputs meant that detailed design and engineering considerations for the building's structure have been slow to evolve.
- Metrolinx has since become a de facto mediator in the process, facilitating direct discussions between the transit contractor and the developer in order to work out complicated structural design considerations on the site.
- Metrolinx's general approach toward the Eglinton Crosstown line's implementation reflects an aversion to risk and the clear prioritization of the transit infrastructure project schedule (substantial completion by 2021). The nature of infrastructure funding and implementation presented many challenges in attracting SOD opportunities. Therefore, SOD was treated as an add-on to the process, rather than an integrated component.
- Metrolinx may, in the end, be successful in implementing an integrated station and residential development at Bayview Station. Early identification and dialogue with the land owner/ developer as a party who would remain on site was a positive step toward maintaining the opportunity for SOD.

- A key lesson learned from the experience, in this case, is that there needs to be a clearly articulated protocol for coordination between the transit contractor and key development stakeholders in order to establish station designs which protect for SOD opportunities.

2.5 Washington WMATA - Metro

The Washington Metro is administered by WMATA (Washington Metropolitan Area Transit Authority) and has one of the highest ridership rates in the United States. The metro contains six lines and is currently working towards an expansion of the Silver line as well as substantial repairs to the existing system amid recent safety concerns.

WMATA has actively pursued SOD around Metro stations through joint venture developments and has completed more of these projects than any other transit agency in North America. Between 1970 and 2016, 56 joint development projects have been completed, the most recent of which occurred in 2007. Between 1970 and 2002, 38 joint development projects exceeded a value of \$2.5 billion and yield the agency approximately \$6.0 million in annual revenues through agreements such as air rights leases, land rents, and station connection fees.¹

- WMATA has developed Joint Development Policies and Guidelines that set forth the general practices of the joint development program of WMATA. Generally, joint development is defined as a program through which property interests owned and/or controlled by WMATA are marketed to office, retail/commercial, recreational/entertainment and residential developers with the objective of developing transit-oriented development projects. Priority is given to proposals that contain smart growth development

principles, attract new ridership, improve station access improvements, support other agency goals such as affordable housing, create a source of revenue for WMATA to operate and maintain the transit system, and assist the WMATA Local Jurisdictions to recapture a portion of their past financial contributions and to continue making subsidy payments by expanding the local property tax base.

- WMATA has been successful in joint development SOD due to the formation of a real-estate division within the transit agency that has,

Figure 5 – WMATA Metro Routes



¹ Transit Cooperative Research Program, Report 102. *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*. Sponsored by the Federal Transit Administration, 2004.

over time, purchased a large number of land holdings, much of which has been on the open market.

- Rather than waiting and reacting to developer proposals, WMATA's real-estate office aggressively seeks out mutually advantageous joint SOD opportunities and generally executes long-term ground and air leases with private developers as well as fee-simple sales.² The real estate group reviews agency-owned land on an ongoing basis to move forward with soliciting private-sector participation through the procedure and guidelines established in its Joint Development Policies and Guidelines.
- The real estate group within WMATA hired staff with backgrounds in real estate development. And, rather than acquiring only lands needed to build a station, WMATA acquired large amounts of real estate around stations.³ In doing so, WMATA is able to utilise large land holdings around stations that could be leveraged for SOD and potential sources of revenue.
- In addition to the leasing of ground and air rights, which provide long-term revenues to the transit agency, WMATA also engages in joint development that involves the sharing of operation and construction costs, as well as negotiating station-connection fees. While leases have been the primary form of joint development in the past, which has allowed WMATA to retain their land holdings and benefit from the long-term uplift in land value, staff note that this has frequently been cited as a challenging framework by many in the private sector who would prefer to land to be sold rather than leased.

² Transit Cooperative Research Program, Report 102. *Transit-Oriented Development in the United States: Experiences, Challenges, and Prospects*. Sponsored by the Federal Transit Administration, 2004.

- Since 2002, 13 of the 18 joint development projects have been fee-simple transactions as opposed to leases. According to staff, allowing for land sales as opposed to land and air leases has led to stronger developer responses to its RFP processes.

2.6 Minneapolis Blue Line & Minneapolis-St. Paul Green Line

The Minneapolis METRO is a network of both exclusive and shared right-of-way transitways that utilize BRT and LRT vehicles. The METRO is administered by the regional government Metropolitan Council and contains three lines (2 LRT and 1 BRT) and have plans to extend all three lines as well as create two new BRT lines. The blue line is an LRT system that began construction in 2001 and opened in 2004, it has 17 stations and runs for 19 kilometers. The Green line LRT connects St. Paul and downtown Minneapolis and opened in 2014.

In 2013, Metropolitan Council established the Metro Transit - Transit Oriented Development Office to partner and coordinate with communities and external agencies and prioritize resources to advance SOD. Following are key findings and lessons learned with respect to SOD in Minneapolis' recent experiences:

- Prior to the Green Line opening in 2014, new station area plans and zoning codes were created for the station areas that allowed for greater heights and density and eliminated minimum parking requirements. This proactive planning approach along with the provision of new transit has been attributed to increases in building permits along the corridor by 24% between 2011 and 2014, with the value of construction increasing by 80%.⁴

³ IBID

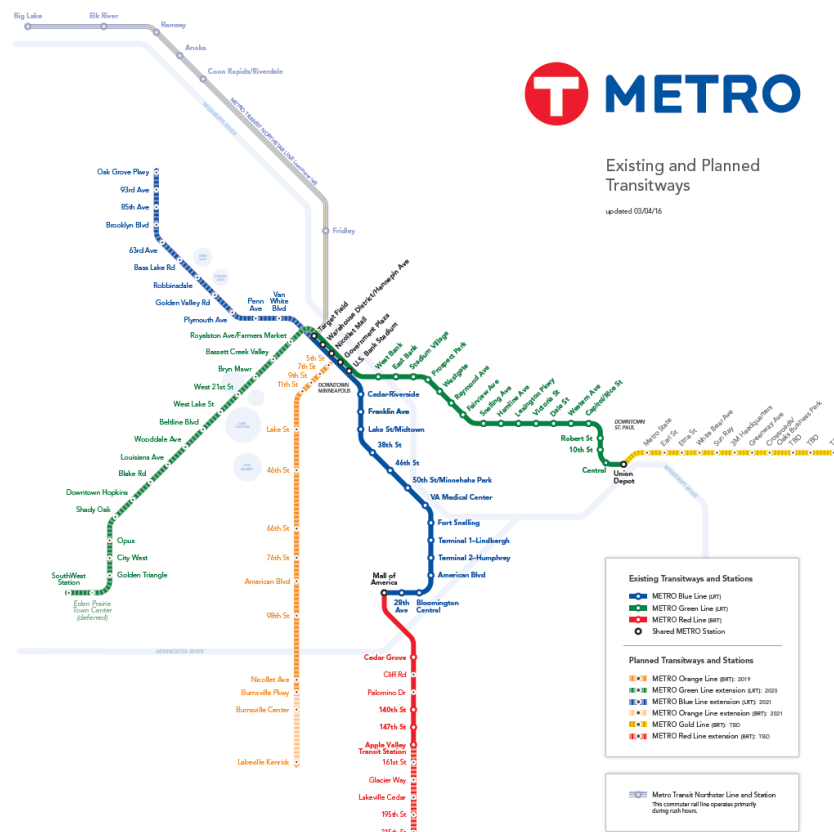
⁴ Centre for Transportation Studies. *Real Estate Development Impacts of Transitway Funding Announcements*. University of Minnesota, 2015.

- In addition to proactive planning, the Metro Transit TOD office also makes grants available for SOD projects through the Livable Communities Act. The grants promote moderate to high-density development projects located within walking distance of a major transit stop that typically include a mix of uses such as housing, jobs, restaurants, shops, and entertainment. Projects are eligible if they are within one-half mile (800 meters) of LRT, BRT, commuter rail, or high-frequency express bus stations. Proposals for SOD project funding are evaluated based on a variety of social and economic considerations and awards are granted based on the funding provided to the transit agency for the grant for that year. Typical grant values for successful projects have been in the \$1 to \$2 million range.
- In 2014, the Metro Transit TOD office initiated a process to identify all parcels owned by the Metropolitan Council and identified all parcels that could be built by 2020. The agency identified 110 such sites, including eight SOD sites that could be developed immediately. This work is the first step toward pursuing private and public partnerships to accelerate SOD along the corridor. Speaking with staff it is understood that these properties were purchased throughout the past several decades for various reasons by Metro Council but were not assessed and evaluated as assets until this exercise. The Metro Transit TOD office is primarily pursuing ground leases for both commercial and residential development. Their aim is to generate income while retaining land ownership, leveraging and future value uplift associated with the transit line and build-out of the surrounding area.
- The Metro Transit TOD office has been in place for just over two years and has so far secured one ground lease on one of their properties for a new soccer stadium. The TOD office expects

increased interest for SOD opportunities moving forward as a result of the proactive measures taken by the agency since its inception.

- Major challenges in achieving SOD were noted by Metro Transit staff as legislative barriers to fee simple transactions of Metro-owned parcels, retaining affordable housing options along the transit corridor, and the requirement for land assemblies across the corridor in areas with a weaker market context.

Figure 6 –Minneapolis/ St. Paul Rapid Transit Service



2.7 Key Findings and Lessons Learned

From our review of SOD precedent across North America, we note the following key lessons learned with respect to achieving SOD objectives alongside the delivery of new high order transit service:

- Early identification of development opportunities and proactive land use planning (station area plans/ up-zoning) is important in order to ensure that transit system and station designs do not preclude opportunities to implement SOD.
- Precedent research indicates very few examples of successful transit and SOD integration through an RFP process; even in Toronto and Vancouver where market dynamics are generally robust. Moreover, where market demand is marginal (e.g. in Calgary), transit often needs to be in place first, acting as a catalyst for development.
- A central issue in virtually every case reviewed is the alignment of the transit construction with that of SOD. Ideally, the construction of the station would occur simultaneously with SOD to maximize the use of the transit. In reality, unless the SOD is not dependent on market forces, such as the case of the city library/ office building in Calgary, this is very difficult to achieve.
- SOD, whether office or residential, can only occur where the market demand is present. Even when demand is present, as seen in Vancouver and Toronto, having both a transit constructor and SOD developer on site at the same time, especially where there is overbuilding, raises significant delivery and timing issues.
- In stronger markets, timing and coordination can still be an issue if the SOD developer has not met presale/leasing targets and financing is not available.
- The less uncertainty attached to a SOD offering, the greater the market response is likely to be. There needs to be a clear understanding of the land area, environmental and geotechnical conditions, station design, zoning, Official Plan policies, transit construction schedule and other development matters.
- Achieving SOD on private land through an integrated transit delivery and SOD procurement process adds another layer of complexity unless agreements are in place to clearly stipulate how the transit proponent must work with other private land owners/ developers. Examples of this in Toronto have revealed complicated cost-sharing considerations, communication strategies and timelines for development.
- Limitations within a transit organization's mandate can also constrain SOD opportunities in terms of the ability to acquire land which is also usable for development purposes and act as a partner in development. It is important to ensure that transit project team has a clear mandate to implement SOD within the capital project and also be given adequate lead time in order to execute plans for land acquisition and assembly once the transit route and station locations are finalized. This is very important in order to yield functional development parcels which are not unduly constrained by transit infrastructure.
- The City must also assess market risk with SOD. Offering public lands to a proponent for the purposes of executing SOD could potentially increase the costs of the line and station infrastructure and/ or delay its delivery. A downward market shift or development partner insolvency could leave the public sector exposed.
- Overbuilding examples are very limited and are found only within the most valuable real estate market areas. The cost premium for working within the envelope of the station, typically due to the increased complexity in foundation and underground parking are not typically offset by a revenue premium from a direct all-weather connection to transit.

3.0 The Stage 2 LRT

The Stage 2 Confederation and Trillium line expansions will add approximately 30 kilometres of new rail and 22 new transit stations to the Stage 1 route which is currently under construction. Bus service (rapid transit and local routes) will connect with the LRT at key locations to facilitate passenger transfers and provide an integrated network serving the City.

In assessing the Stage 2 transit corridor from a real estate market perspective, the three transit corridor expansions will travel through market areas that vary in terms of land use patterns, policy framework, and market demand characteristics. Following is a brief description of the three corridor expansions:

Confederation Line – West Extension

- The western extension of the Confederation line will extend from Tunney’s Pasture (the western terminus of Stage 1) to Bayshore Mall. A southwestern spur will also travel from south of the Lincoln Fields shopping centre to just south of Baseline Road, connecting to Algonquin College.
- The western extension includes ten new LRT stations, six of which currently exist as BRT stations within an existing transitway. The western extension’s alignment will utilise the existing transitways as well as the Richmond Road corridor.

Trillium Line – Southern Extension

- Stage 2 will add new stations at two locations along the existing O-Train line at Gladstone and Walkley Road, providing greater access to transit service in these areas.

- In addition, Stage 2 will extend existing service southward, adding new stations at South Keys, Leitrim, and Bowesville, as well as a spur to a station at the EY Centre and Ottawa’s International Airport. While the existing built up area along the corridor does not extend much further south than South Keys (Hunt Club Road), the need to extend rail transit service to Leitrim, Bowesville and the Airport was first identified in the City’s 2003 Transportation Master Plan in response to population growth projections.

Confederation Line – East Extension

- Traveling east from the terminus of Stage 1 at Blair Road, the eastern LRT extension will include five new LRT stations. The first will be at the Queensway / Montreal Road intersection, then towards Orleans through the NCC greenbelt, four other stations: at Jeanne D’Arc Boulevard, Orleans Boulevard, and Place D’Orleans. Three additional stations extending to Trim Road may also be constructed subject to additional funding.
- A key characteristic of this LRT extension east of Montreal Road is the line’s planned orientation within the central median of the Queensway/ Highway 174 corridor. From a SOD perspective this orientation and the predominantly low rise single-family residential character of surrounding neighbourhoods limits the opportunity for adjacent station oriented real estate development throughout much of Orleans, the exception being at the Place D’Orleans station.

3.1 The Utility of new Stage 2 LRT Investment

New LRT service expansion outside of Ottawa’s downtown areas will improve the utility of existing transit service by improving on both the capacity and reliability of existing service.

However, it is important to note that OC Transpo’s existing bus service currently operates frequent crosstown routes, express routes during peak hours and local routes that often use a portion of the transitway between a major transit terminal and the local neighbourhoods they serve. Existing transit service headways can vary between 20 seconds in the peak hour and 15 minutes during the less travelled hours.

Notwithstanding this existing level of service, expected benefits of the Stage 2 LRT expansion project from a market perspective are as follows:

- The LRT has the ability to provide increased speed and reliability over many existing bus routes which operate partly on local roads;
- LRT vehicles can typically accommodate approximately three times more riders than a bus, which will reduce overcrowding ensuring most riders a more comfortable trip; and,
- LRT cars can be removed or added easily, thus providing the flexibility to accommodate ridership demands;

On the core part of the new LRT network (between Trim and Lincoln Fields Stations), LRT service is planned to initially operate with an approximate three-minute headway interval in each direction during morning and afternoon peak periods. In addition, the design of the line will support the potential operation of trains as frequent as every 1.5 minutes in each direction through the downtown, to provide an ultimate capacity of 24,000 persons per hour per direction during peak hours. Train frequencies in off-peaks and on weekends are expected to range from five to 15 minutes. Just south of the Lincoln Fields Station, service will split, with half of trains serving Baseline Station and half serving Bayshore Station.⁵ As well, just south of the South Keys Station, service will split

from the Leitrim / Bowesville direction westward towards the EY Centre and Ottawa’s International Airport.

Another important market consideration in the implementation of new LRT service is the market’s general perception of rail-based transit services versus bus. Research suggests that transit users generally prefer rail systems, perceiving them to be more modern, comfortable and efficient, with fewer stops and delays. As a result, the opportunity to leverage positive market impacts, in terms of real estate investment, are typically greater through the implementation of LRT service versus bus-based systems.

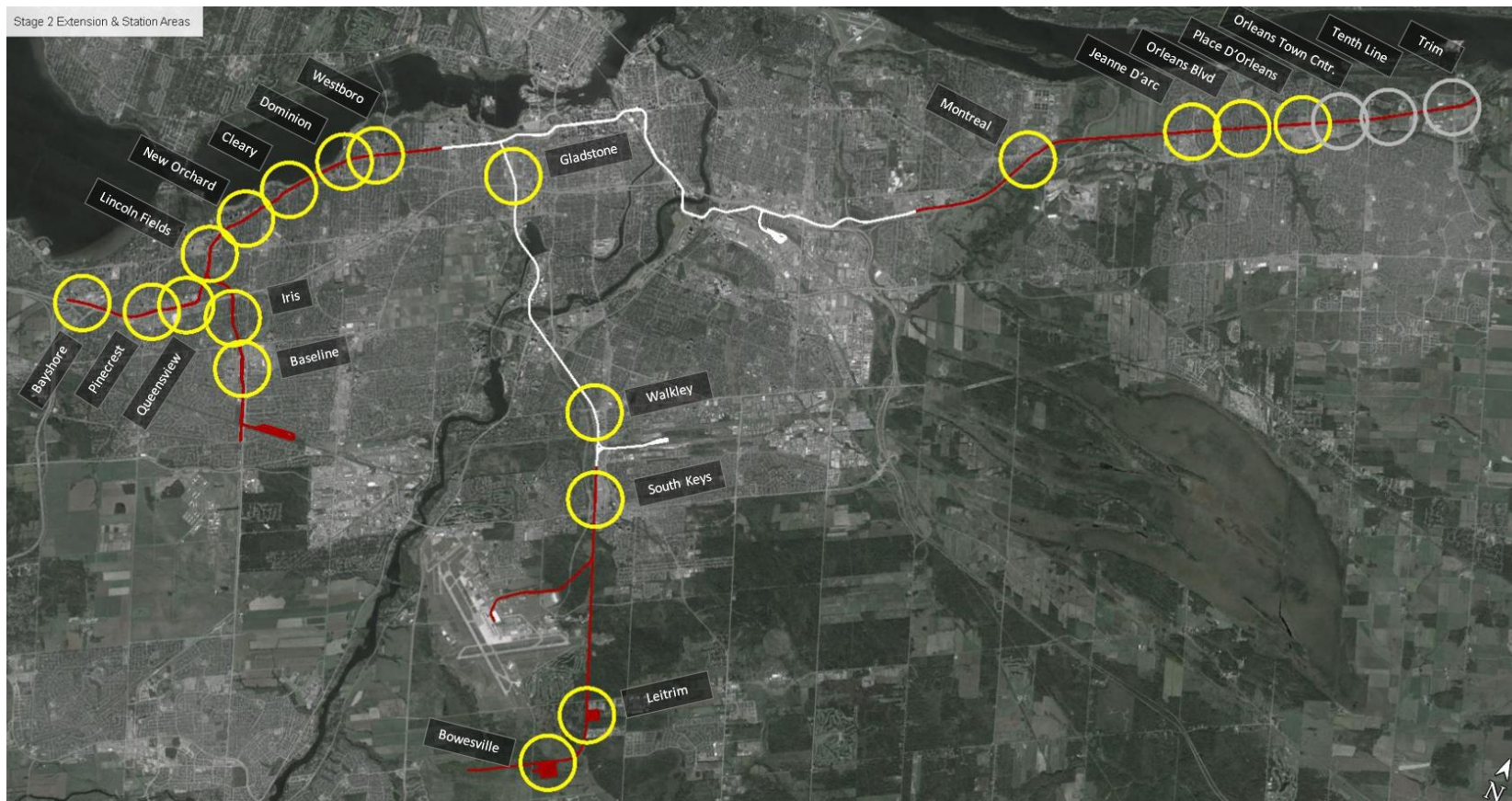
Understanding this, the utility of new LRT service, while generally positive, will likely be a significant enhancement to transit service in some areas of Ottawa, versus others.

Overall, the Stage 2 transit improvements may not have the same impact on real estate market conditions as they might in other market contexts where existing transit service is more infrequent, inefficient, unreliable and/or uncomfortable.

The following map illustrates the location of the Stage 2 and O-Train corridor alignment and associated station areas.

⁵ Information provided by City of Ottawa staff.

Figure 7



4.0 Real Estate Market Overview

Ottawa’s housing market has remained relatively consistent over the past decade and a half, averaging a little over 6,000 starts per year since 2000. However, similar to most highly urbanized Canadian Cities, there has been a gradual shift in consumer housing preferences to higher-density forms. In 2015, 57% of all housing starts in the Ottawa CMA (Census Metropolitan Area) were either townhouses or apartments, compared to just 32% in 2000, according to the Canada Mortgage and Housing Corporation (CMHC).

Following three years of record-breaking starts in the apartment sector, construction activity has slowed in 2015 and into 2016, as the market absorbs this inventory. Townhouse activity has remained consistent, while single and semi-detached homes saw a small spike in start activity in 2015, resulting from new subdivision construction in suburban areas of the market.

The trend towards medium-to-higher density development is a function of demographics, lifestyle choice and affordability. Affordability, in particular, will be an increasingly significant issue as the gap between incomes and home prices appears to be widening.

Between 2010 and 2013, median household incomes in Ottawa have increased by 7% or 1.68% per year, per Statistics Canada. In contrast, the average price of a new single-detached home has increased by 22% (about 5.5% per year) over the same time period. While the current employment outlook for Ottawa is strong, with CMHC forecasting an increase in average weekly earnings,

affordability, combined with other demographic and consumer trends will continue to underpin housing demand.

In addition to a shift towards higher densities, many home buyers have also opted to “hop” the greenbelt, in search of homes on large lots within a reasonable commute of their jobs. Most notably, areas such as Kanata in the west, Barrhaven/ Riverside Park in the south and Orleans in the east have seen substantial housing growth and continue to account for the highest proportion of housing starts in Ottawa. However, more recently, CMHC notes that outer areas such as Stittsville, Cumberland, Clarence-Rockland and Russell are attracting purchaser interest, mainly through affordable single-detached homes. Based on available land supply, these areas are expected to continue to capture low-density housing demand, although they have also begun to experience some intensification, mostly in the form of townhomes, urban flats and mid-rise apartments.

Figure 8

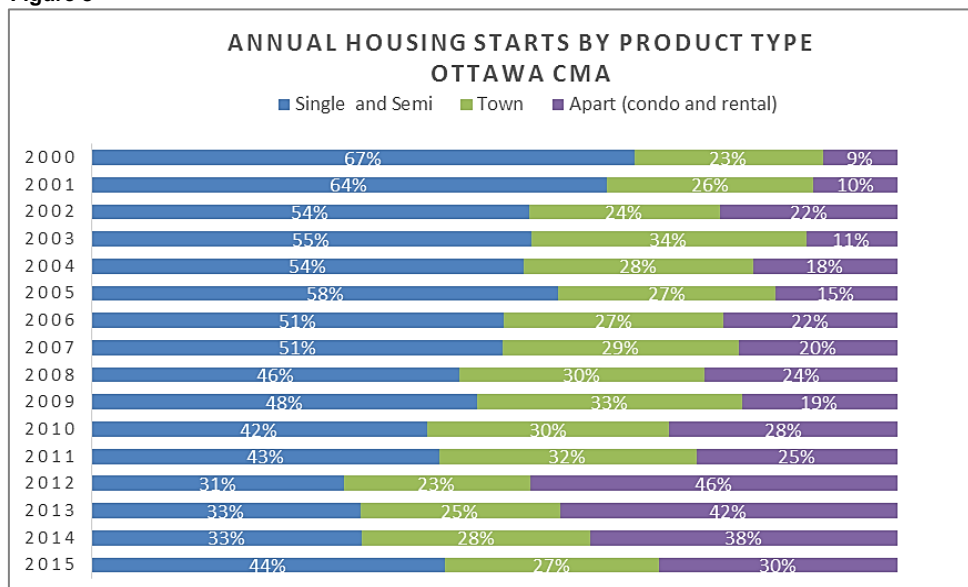
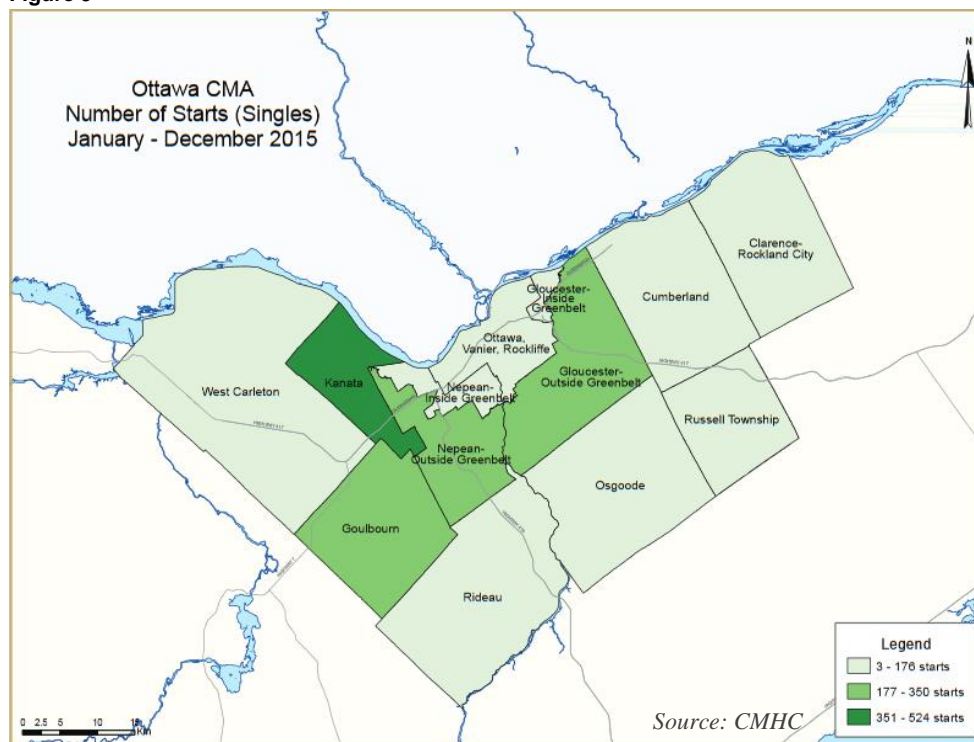
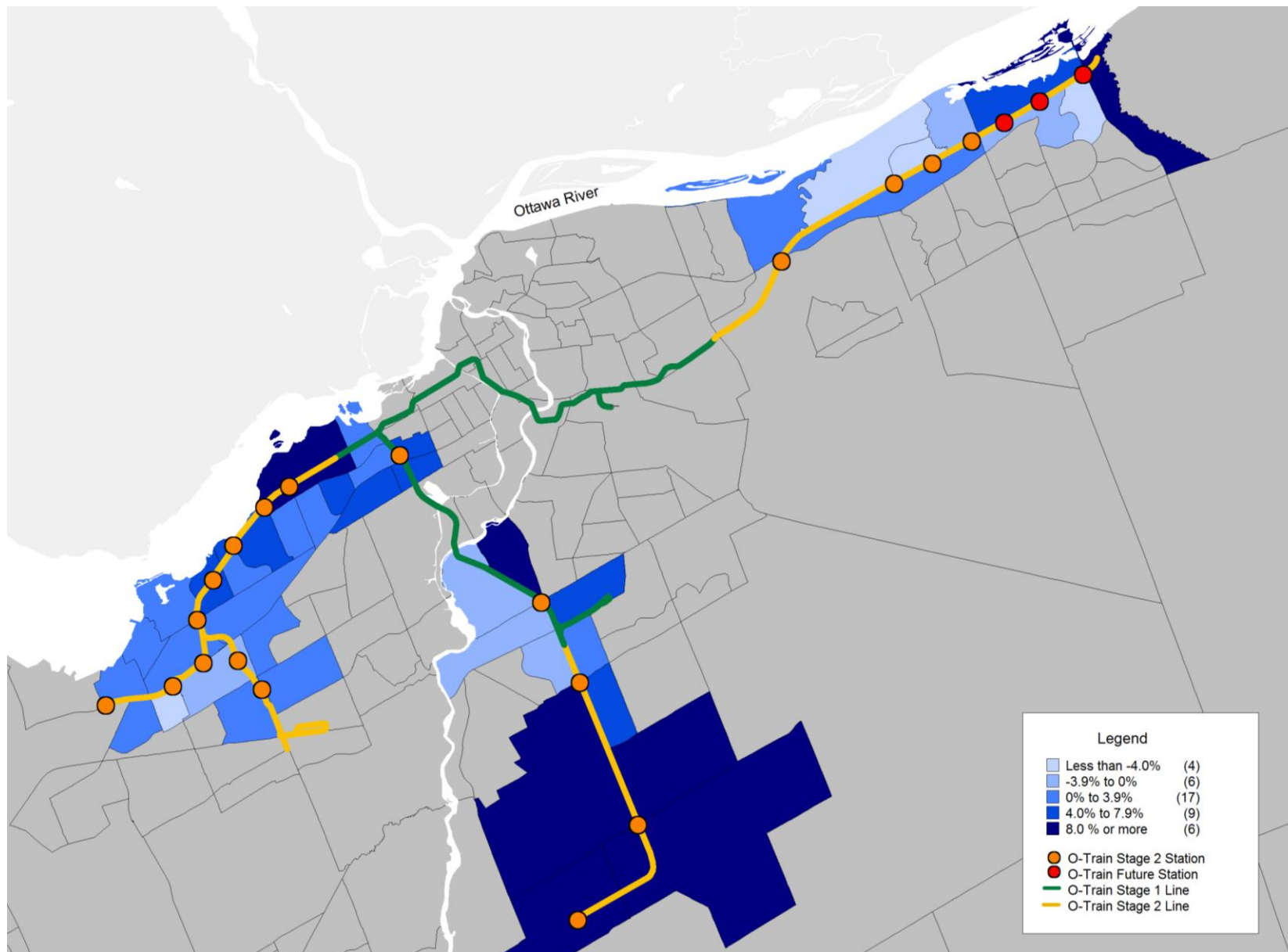


Figure 9



As a measure illustrating the distribution of recent residential growth along the Stage 2 LRT corridor, **Figure 9** highlights population growth rates within census tracts surrounding Stage 2 stations between 2006 and 2011. Areas which displayed the most growth (population growth over an 8% threshold) were observed within Census Tracts surrounding the most southern extension neighbourhoods (Bowesville, Leitrim) and Eastern extensions (Eastern Orleans). This growth can be attributed to lower density greenfield development where growth had previously not taken place. Established neighbourhoods, including the Westboro South and Hunt Club neighbourhoods also shared the largest proportion of growth where infill development has occurred. Orleans, on the other hand, has experienced less growth as compared to the Western and Southern counterparts, with the exception of the eastern-most areas of Orleans (at Trim Road), again likely as a result of growth in an area which had previously not attracted any new development.

Figure 10



In addition to those macro market considerations, the following points highlight key summary findings resulting from our review of real estate market conditions and characteristics shaping the outlook for near-term residential real estate market demand along the Stage 2 LRT corridors.

- The market's overall absorption threshold for new high-density residential development typically fluctuates around 1,000 high-density residential units per annum. Recent high-density residential absorption rates of between about one to two sales, per project, per month, are relatively modest.
- The market demand for new high-density development is largely concentrated within the City's established urban neighbourhoods near downtown, with some demand stretching west into neighbourhoods west of downtown.
- Market trends indicate that future activity is likely to follow this general trend, favouring walkable urban neighbourhoods with sought after amenities. Some expansion of market activity is also expected in the Lebreton/ Pimisi, Bayview and Wellington West/ Westboro neighbourhoods.
- Modest absorption rates are likely to limit the scale of future development and the velocity of sales outside of areas where demand is currently concentrated. Outside of the central market areas, the pricing differentials between low and high-density housing forms narrow and grade related housing forms become more attainable. Therefore, when presented with this circumstance, most purchasers will likely select lower-density, grade-related housing forms.
- Stage 2 station areas within the central and western submarkets are likely best positioned to compete for a share of future high-density residential demand. Station areas along the Richmond Road corridor (New Orchard, Cleary, Dominion, Westboro), as well as at

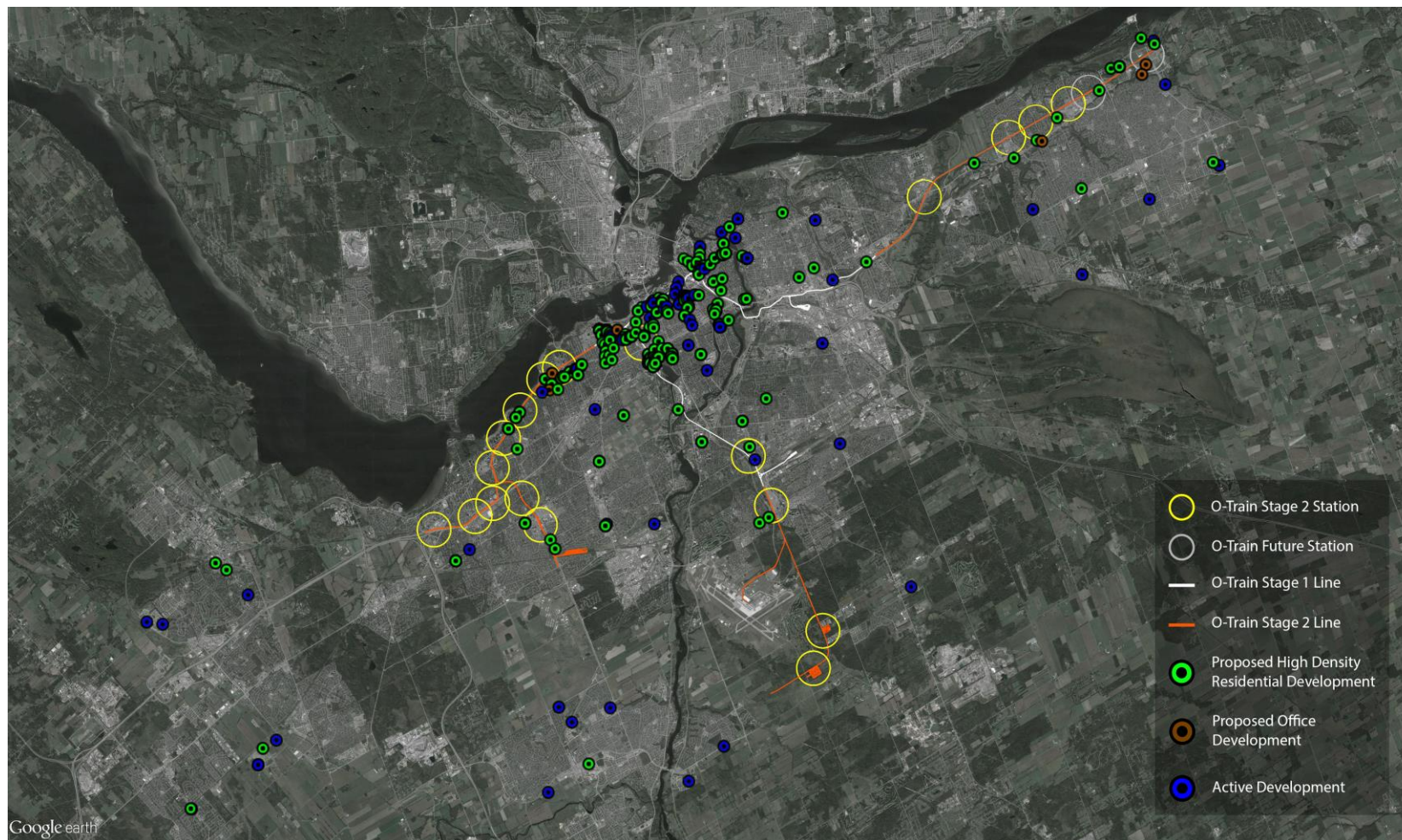
Gladstone Station likely have the best near-term potential to attract development interest, subject to land availability.

- Notwithstanding this, there is a significant amount of proposed supply throughout the market. New development along the Stage 2 corridors will also be competing with well-positioned projects in the downtown.
- Relatively high vacancy rates throughout the office market, some uncertainty with respect to the Federal government's future office needs and limited office development proposal activity indicate that the near-term outlook for a significant office use along the Stage 2 corridor may be limited. However, evolving needs of the public sector could have a significant impact on this trend.
- Significant recent investments in higher end retail centres across the market may also limit the market depth for new retail space. It is more likely that any underperforming existing retail uses along the Stage 2 corridor (such as Lincoln Fields Shopping Center) will look to diversify land uses over time.

Based on the above, we expect that the demand for higher density real estate development in close proximity to transit will grow at a steady, measured pace. The introduction of expanded LRT service will be a valuable amenity to future intensification and a foundational element of infrastructure for the City's continued evolution.

The following map illustrates the distribution of actively marketing and proposed development activity along the LRT expansions.

Figure 11 – Active and Proposed High-Density Development Activity along the LRT Expansions



5.0 Preliminary Station Area Evaluation

This chapter presents a preliminary ranking of redevelopment opportunities at future station sites, developing an initial long list of station areas for potential SOD.

Based on demographic and real estate market characteristics, NBLC has assessed the twenty-two proposed station locations along the Stage 2 LRT expansion in order to assess the opportunities for redevelopment. For each Station area, we assessed the surrounding 600-metre radius (1/3 mile) as a “walkable” distance.

These station area analyses focus on three general evaluation categories in order to prioritize SOD potential. The three screening criteria are as follows:

Real Estate Market and Demographic Evidence

- NBLC reviewed key market and demographic indicators throughout each station area and the census tracts which comprise these station areas to assess the characteristics of station areas which are attracting growth, or poised for near-term growth. Using Census data and the National Household Survey, indicators reviewed include population growth rates, household income, income throughout rental households, mix in housing tenure, age cohort distribution throughout various buyer/ tenant categories and resale pricing growth between 2010 and 2015.
- Combined with an assessment of recent development activity and development proposals (see Appendix B), we filter sites based on market and demographic evidence which might support near-term development activity.

“Soft Site” Development Assessment

- NBLC reviewed existing land uses, ownership patterns, and the parcel fabric throughout a 600-metre radius surrounding each of the proposed stations along the Stage 2 LRT routes to identify potential soft site opportunities.
- Soft sites are identified as being properties which are relatively large and generally vacant/ underutilized and with consistent ownership. Soft sites are not identified in conditions with stable land uses (e.g. low-density neighbourhoods, recently completed development, institutional or community uses) or on properties with fragmented lot fabric or ownership patterns which would require land assembly.

Policy Context

- A detailed review of planning policy and zoning was not undertaken as part of this analysis. However, our analysis does consider the Urban Policy Plan (Schedule B of the City of Ottawa’s Official Plan) to ensure that the identification of potential soft sites excludes areas that are environmentally sensitive or not otherwise appropriate for intensification.
- Based on these criteria, the review of station areas revealed several obvious locations where there are limited near-term opportunities for station oriented real estate development and are therefore not recommended for further analysis within the context of this study.

The following table and map illustrate the results of this preliminary station area evaluation. For each station area recommended for further analysis, a station area profile was prepared and is attached as an appendix to this report. The long list of station areas recommended for further analysis includes the following fourteen station areas:

- Confederation Line – Western Extension:
 - Bayshore, Pinecrest, Baseline, Lincoln Fields, New Orchard, Cleary, Dominion, and Westboro.
- Trillium Line – New Stations and Southern Extension:
 - Gladstone, Walkley and South Keys.
- Confederation Line – Eastern Extension:
 - Montreal Road, Place D’Orleans and Trim Road.

Station areas not recommended for further study are:

- Queensview – a relatively low-density employment area with few underutilised sites;
- Iris – surrounding land uses are entirely comprised of stable low-density neighbourhoods;

- Leitrim – a significant distance from the City’s urban area, land uses in the station area are generally low-intensity industrial uses;
- Bowesville – a vacant greenfield, this area represents a longer term opportunity through significant long-term master planning;
- Jeanne D’arc – no apparent immediate soft site opportunities adjacent to the proposed transit infrastructure;
- Orleans Boulevard – stable low-density residential land uses border the station site both north and south of the Queensway; and,
- It is our understanding that potential Orleans Town Centre and Tenth Line stations are not currently funded and may merit further study at a future date.

Figure 12 – Preliminary Station Ranking

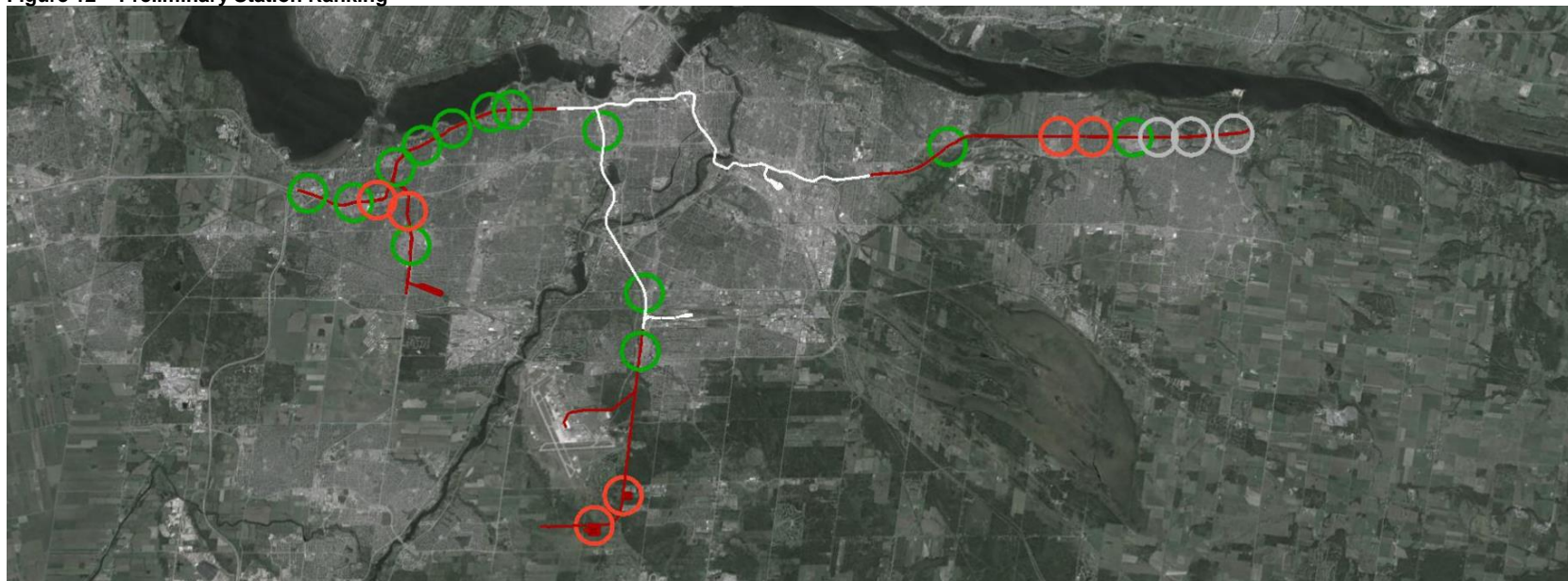


Table 1

Preliminary Evaluation of SOD Opportunities at Stage 2 LRT Stations			
Station	Criteria	Evaluation	Further Evaluation?
Confederation Line - Western Extension			
Bayshore	Market / Demographic Evidence	Yes	Yes
	Potential Soft Site Opportunities	Limited	
	Planning Context	Yes	
Pinecrest	Market / Demographic Evidence	No	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Queensview	Market / Demographic Evidence	No	No
	Potential Soft Site Opportunities	Limited	
	Planning Context	Limited	
Iris	Market / Demographic Evidence	No	No
	Potential Soft Site Opportunities	No	
	Planning Context	No	
Baseline	Market / Demographic Evidence	Limited	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Lincoln Fields	Market / Demographic Evidence	Limited	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
New Orchard	Market / Demographic Evidence	Limited	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Cleary	Market / Demographic Evidence	Limited	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Dominion	Market / Demographic Evidence	Yes	Yes
	Potential Soft Site Opportunities	Limited	
	Planning Context	Yes	
Westboro	Market / Demographic Evidence	Yes	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	

Preliminary Evaluation of SOD Opportunities at Stage 2 LRT Stations (continued)			
Station	Criteria	Evaluation	Further Evaluation?
Trillium Line - New Stations/ Southern Extension			
Gladstone	Market / Demographic Evidence	Yes	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Walkley	Market / Demographic Evidence	Limited	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
South Keys	Market / Demographic Evidence	No	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Leitrim	Market / Demographic Evidence	No	No
	Potential Soft Site Opportunities	Yes	
	Planning Context	Limited	
Bowesville	Market / Demographic Evidence	No	No
	Potential Soft Site Opportunities	No	
	Planning Context	Limited	

Preliminary Evaluation of SOD Opportunities at Stage 2 LRT Stations (continued)			
Station	Criteria	Evaluation	Further Evaluation?
Confederation Line - Eastern Extension			
Montreal	Market / Demographic Evidence	No	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Jeanne D'arc	Market / Demographic Evidence	No	No
	Potential Soft Site Opportunities	Limited	
	Planning Context	Limited	
Orleans Boulevard	Market / Demographic Evidence	No	No
	Potential Soft Site Opportunities	No	
	Planning Context	No	
Place D'Orleans	Market / Demographic Evidence	No	Yes
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Orleans Town Centre <i>(Future Station)</i>	Market / Demographic Evidence	Limited	No
	Potential Soft Site Opportunities	Yes	
	Planning Context	Yes	
Tenth Line <i>(Future Station)</i>	Market / Demographic Evidence	Limited	No
	Potential Soft Site Opportunities	No	
	Planning Context	Yes	
Trim Road <i>(Future Station)</i>	Market / Demographic Evidence	No	No
	Potential Soft Site Opportunities	Yes	
	Planning Context	Limited	

Station profiles for each of the station areas identified for further evaluation are included as an appendix to this report.

6.0 Short List of Potential SOD Opportunities

Understanding the local market context, land use fabric and high-level planning framework surrounding each of the proposed station areas, a short list of potential near-term SOD opportunities was filtered using the following key criteria:

- Shortlisted sites must have near-term market potential.
 - To determine this, NBLC examined recent market activity, and demographic characteristics which might support near-term market demand. Key indicators include recent population growth rates, household income, the proportion of renters with income over \$80,000, recent resale transaction values, and the population's distribution throughout key buyer/ renter cohorts.
 - Combined with concentrations of recent development activity or development proposal activity, instances where these indicators exceed typical market thresholds are often indicators of potential development opportunity.
- Shortlisted station areas that offer potential soft sites which are owned by the City of Ottawa or other public agency are ranked higher. A major assumption here is that properties identified are residual to the needs of the City and other public agencies.
 - Recent experience in other jurisdictions suggests that requiring transit proponents and a private landowner/developer to coordinate in achieving SOD objectives can be challenging, especially if multiple sites (and landowners/ developers) are in play. Streamlining the process to focus a potential transit proponent's attention to SOD on sites controlled by the City of

Ottawa could align interests and ensure greater efficiency in the process.

- Properties should be relatively large to allow for development adjacent to station sites and not explicitly require over-building.
 - Priority is given to development opportunities where station oriented real estate development could occur in a phased manner adjacent to transit station development, limiting potential risks and costs associated with over-building or potential project delays.

Considering these key criteria, the preliminary short list of potential SOD opportunities is as follows:

1. Gladstone – A large Federal landholding amidst a rapidly evolving urban Little Italy neighbourhood represents a key SOD opportunity. It is also understood that Ottawa Community Housing Corporation may have an interest in the property along with other community facility needs and residual SOD development potential.
2. Cleary – Subject to the ability to site residual development adjacent to station infrastructure at 747 Richmond Road, or the management of cost considerations relating to over-building, the potential acquisition of the property by the City represents a SOD opportunity worth further consideration.
3. Baseline – An institutional node with a significant amount of underutilised land, likely more resilient to market fluctuations due to stable demand from students and local employment uses. This site could represent an opportunity for student rental residential development or additional office/ institutional development including potential partnerships with Algonquin College.

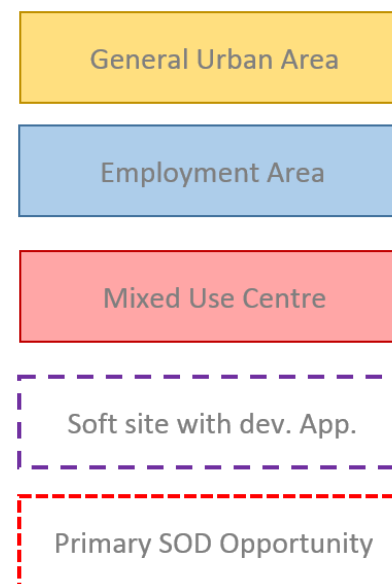
4. Pinecrest – A large MTO property, if not unduly impacted by environmental contaminants, could represent a redevelopment opportunity. The site offers a large park and good access to retail and other services. To its detriment, there has been little new market development in the immediate vicinity and the adjacent Ottawa Housing community may be a market constraint. However, there are few other opportunities for development adjacent to the LRT along this western segment of the LRT. This property may represent an opportunity to incorporate a mix of housing forms including affordable housing, other community building objectives or employment uses.

In addition to these four shortlisted potential near-term SOD opportunities, there are three other sites where SOD should be particularly encouraged, but some constraints (land use, private land ownership) may complicate the opportunity for SOD. These areas may also be worth further consideration if some of the shortlisted properties are determined to be unfeasible through further study.

- Lincoln Fields – if any of the National Capital Commission’s property becomes residual or if RioCan comes to the table with their shopping centre site.
- South Keys – if a bus loop becomes residual or other property can be acquired from, or developed by Calloway REIT.
- Montreal Road – limited residential opportunity, but may be a logical location for a gateway commercial development.

Following are summaries of the key SOD opportunities at each of the shortlisted station areas followed by a sample of key demographic and/or market indicators as referenced from our station area profiles for each station area. As noted, these station area profiles are included as an appendix to this report.

Potential soft site opportunities for SOD are identified within the following maps based on current use, with graphic elements representing the following:



6.1 Summary Profiles of the Shortlisted Potential Near-Term SOD Opportunities

6.2 Gladstone Station

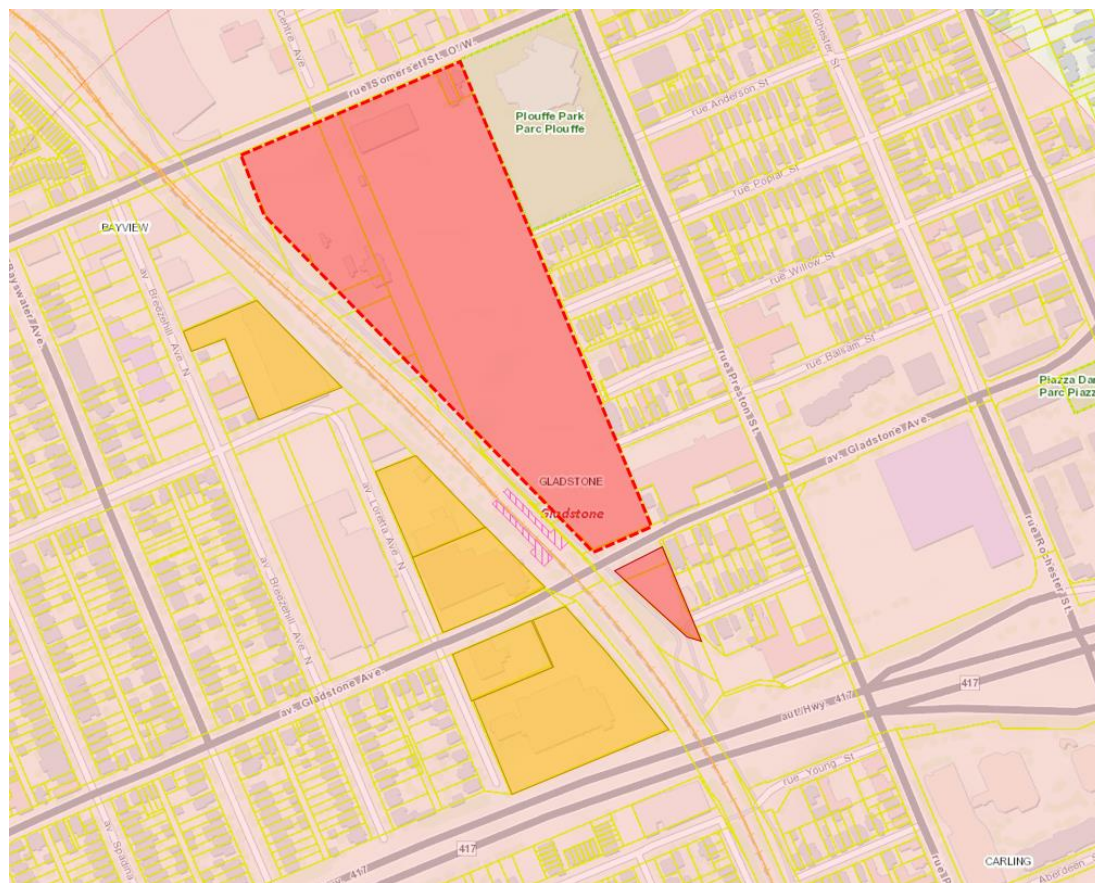
A significant opportunity for station oriented real estate development as part of the Stage 2 infrastructure expansion is the Federally-owned former PWGSC property spanning about 16 acres between Gladstone Avenue and Somerset Street West in the Little Italy neighbourhood. The Gladstone Station District Community Design Plan notes the property as an underutilized “superblock” and a location appropriate for future mixed use intensification.

The area is transitioning away from a primarily industrial function to include a mix of new and repurposed residential, commercial and artistic spaces. Of note, the immediate area’s demographic profile is progressively getting younger, the proportion of the population aged 20-35 (typically, first-time buyers) grew by 9% between 2006 and 2011. Recent high-density development activity suggests that the population growth throughout this area is likely greater than the 4.1% growth rate experienced between the 2006 and 2011 census periods.

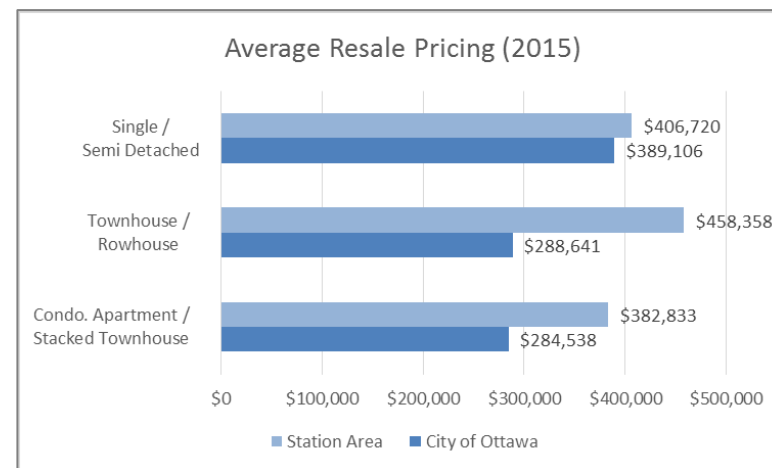
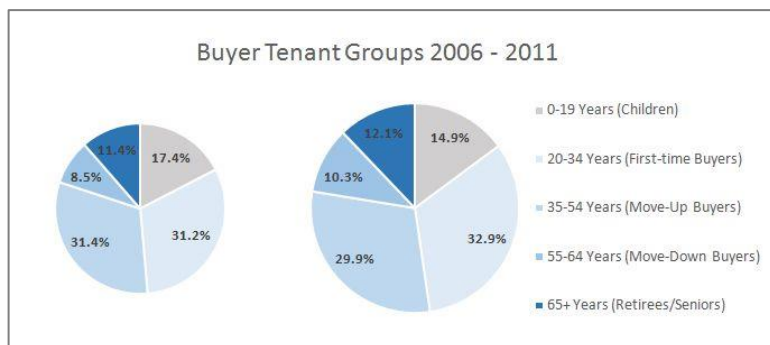
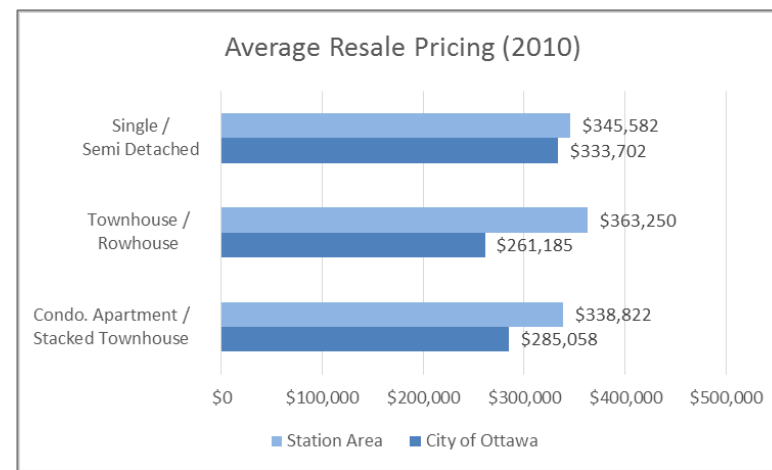
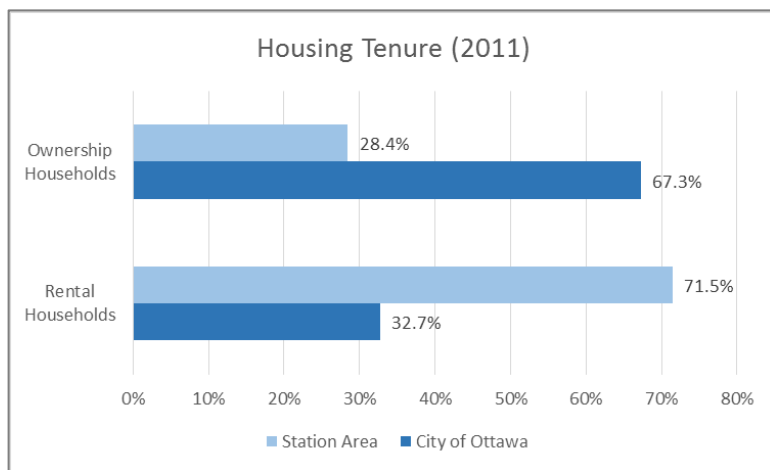
There are currently about ten applications for infill medium and higher density development located throughout the station area, with several more just outside the 600-metre radius. Moreover, some of the City’s largest actively marketing developments (Icon, Capital Hall) are located just

south of the station area closer to Carling Avenue. In 2015, a recently completed back-to-back townhome development on Young Street (just south of the 417) was fetching resale values of up to \$590,000.

The following map illustrates the location of the primary shortlisted SOD opportunity, subject to successful land acquisition or partnerships with the Federal Government, as well as other public and private properties with opportunity for redevelopment.



Key Indicators – Gladstone Station



6.2.1 Cleary Station

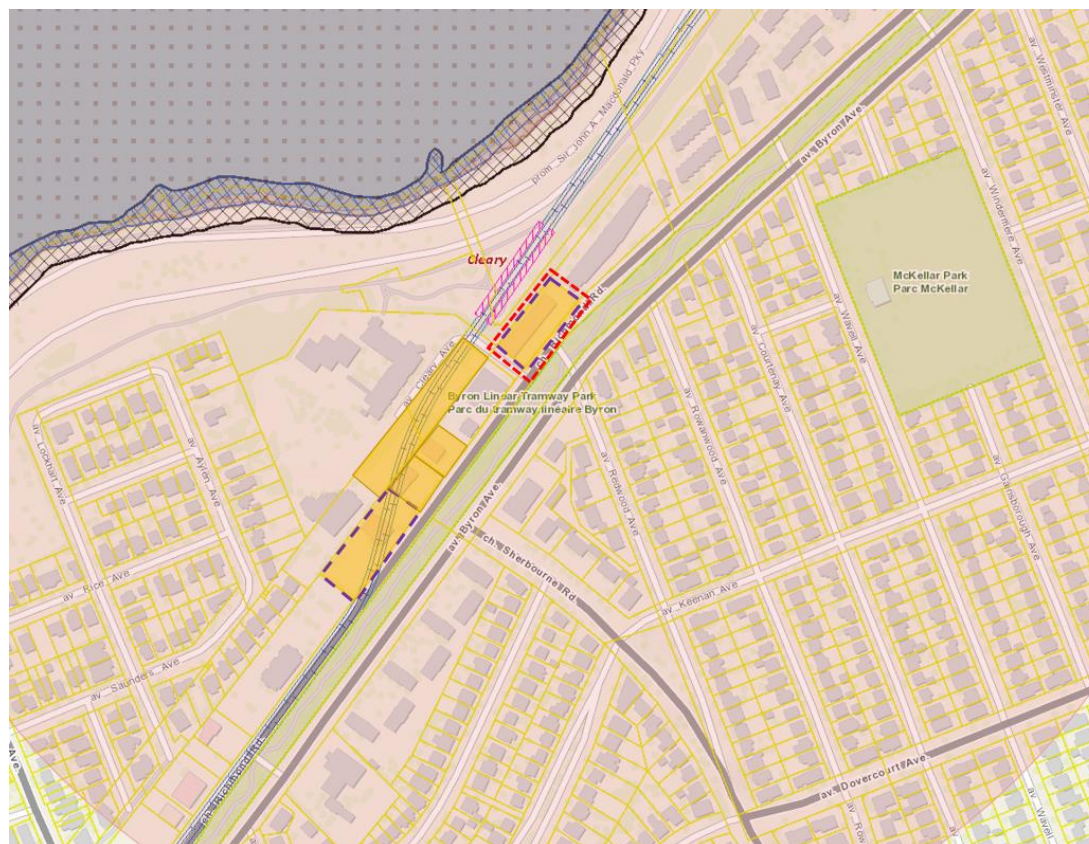
There are several underutilized properties surrounding Cleary Station which might yield opportunities for station oriented real estate development. However, the property at 747 Richmond Road is particularly notable as an alternate transit alignment recently endorsed by the City (*not* pictured in the adjacent map) will shift the alignment diagonally below grade, under the property (outlined in red).

The local neighbourhood is high valued, with the average price of a detached home at \$662,600, up more than \$177,000 from the average of about \$485,000 in 2010. Also of note, the average household income in 2011 throughout local census tracts was over \$161,000, significantly higher than the City average of \$118,750.

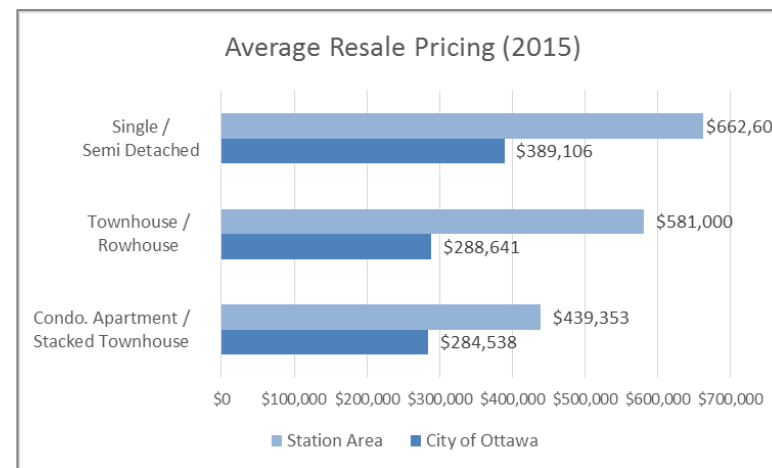
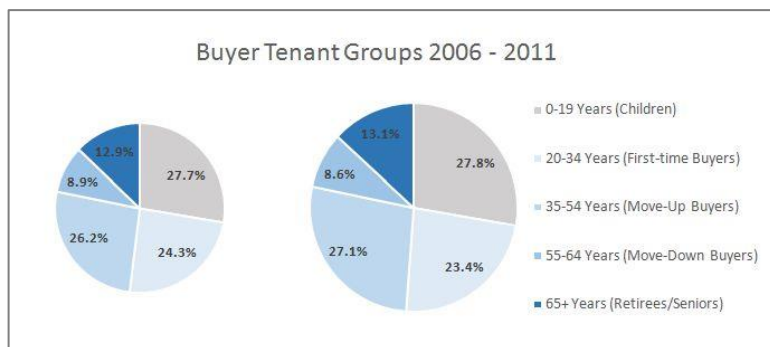
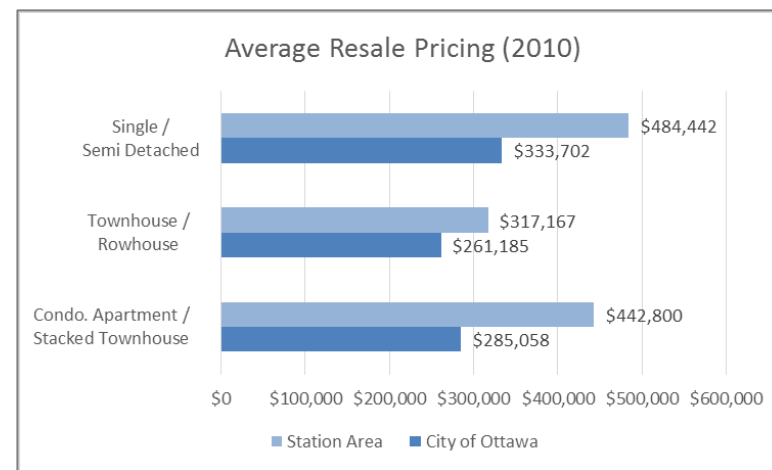
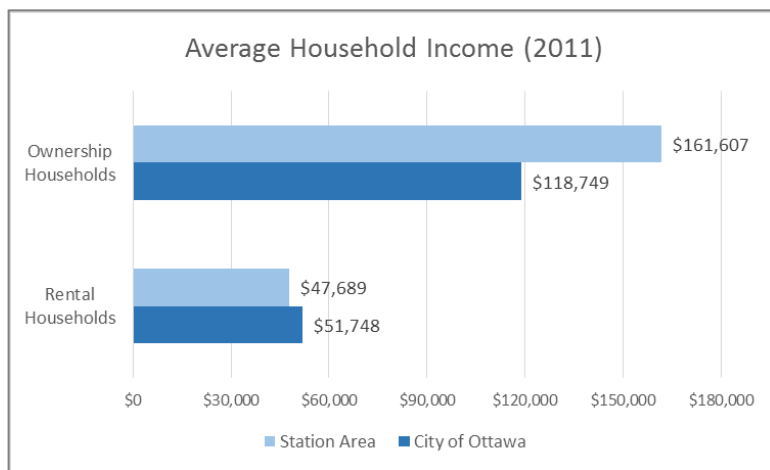
One recently completed condominium apartment development, called “The Continental Imperator” located at 75 Cleary, sold out in 2012 after selling at a pace of 1.5 sales per month. However, development activity appears to be transitioning westward, from Westboro, into this established area. Two development applications are currently under review or approved within the station area (including one on the 747 Richmond Road property).

The technical feasibility and economic implication of overbuilding on the property within the context of the corridor realignment are currently unknown but are worth further analysis.

The following map illustrates the location of the shortlisted SOD opportunity, subject to successful land acquisition, or expropriation, and further technical analysis to confirm the opportunity for integrated development on the site. Other potential SOD opportunities on privately held sites are also illustrated.



Key Indicators – Cleary Station

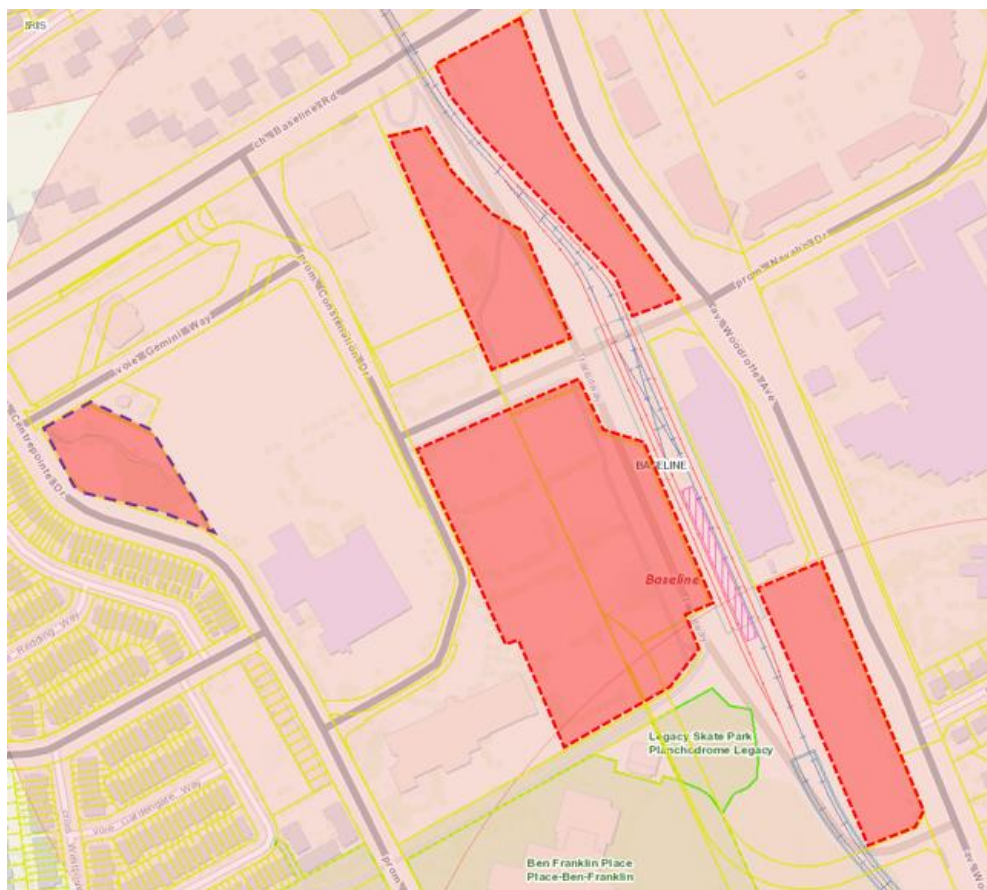


6.3 Baseline Station

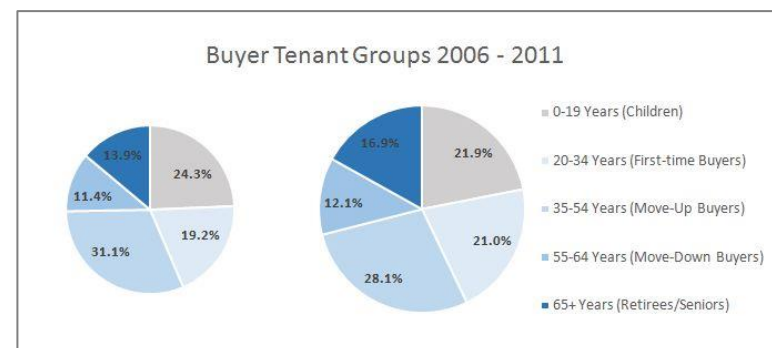
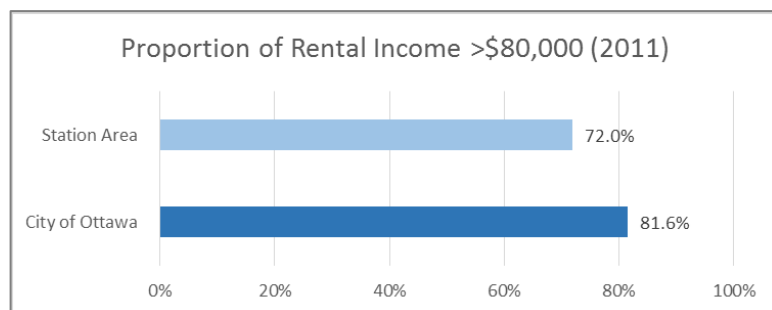
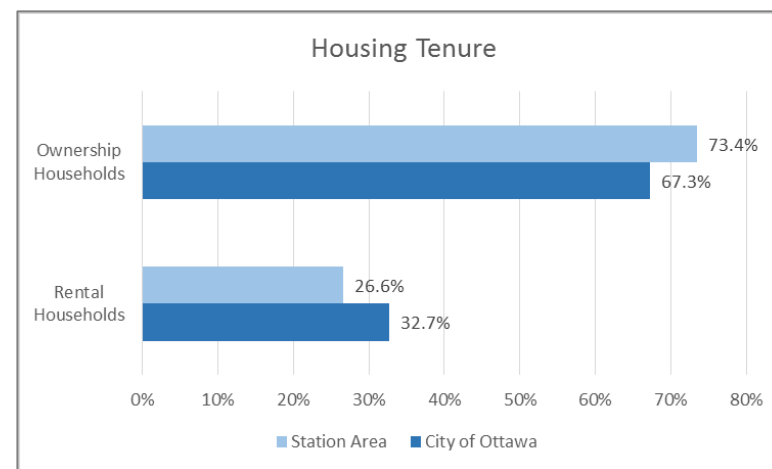
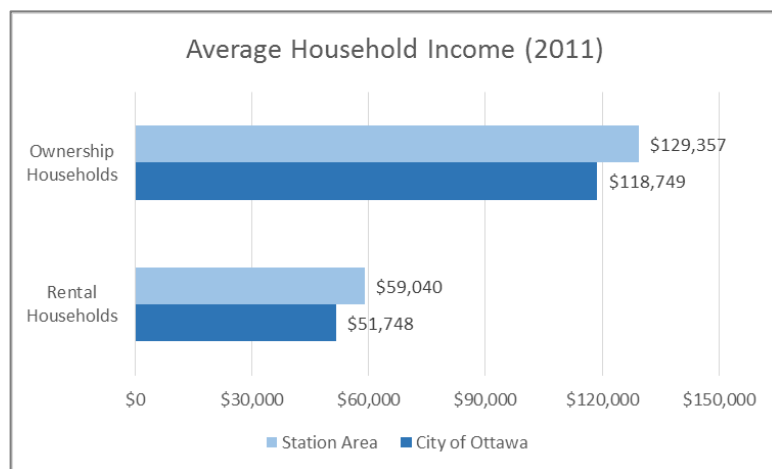
In addition to some existing City and Regional land holdings, the City has an option to purchase other privately owned lands adjacent to the station site. There is a significant amount of land surrounding the future LRT station site which is currently used for surface parking. If any of this property is acquired by the City and deemed surplus, or can be consolidated, there is the potential to create several significant blocks for future redevelopment. The immediate area is an institutional node, with several office buildings used for municipal, provincial and federal purposes, Algonquin College, a secondary school, municipal library and archives, community centre and community theatre.

The immediate market area has modest market characteristics, household incomes are slightly above the City average throughout local census tracts and the price of a detached home is relatively affordable at \$396,000 (per resale activity in 2015), with only slight appreciation since 2010. However, one notable characteristic of this market area is the income of rental households, likely due to demand from students. Statistics indicate that 28% of rental households in the immediate area have incomes greater than \$80,000 (before tax), suggesting rental demand from other less transient groups and market potential for purpose-built rental apartment development in the area.

Further analysis of this station area is warranted to determine the amount of land which might be residual to public needs for the purposes of station oriented real estate development. But given the characteristics of this institutional node, there may be market opportunities for new rental or condominium development, especially for student renters.



Key Indicators – Baseline Station



6.4 Pinecrest Station

The implementation of new LRT service at Pinecrest will make much of the existing bus transitway infrastructure redundant. Therefore, a large property, approximately 4.7 acres in size (currently owned by the Ministry of Transportation) might be available for future station oriented development.

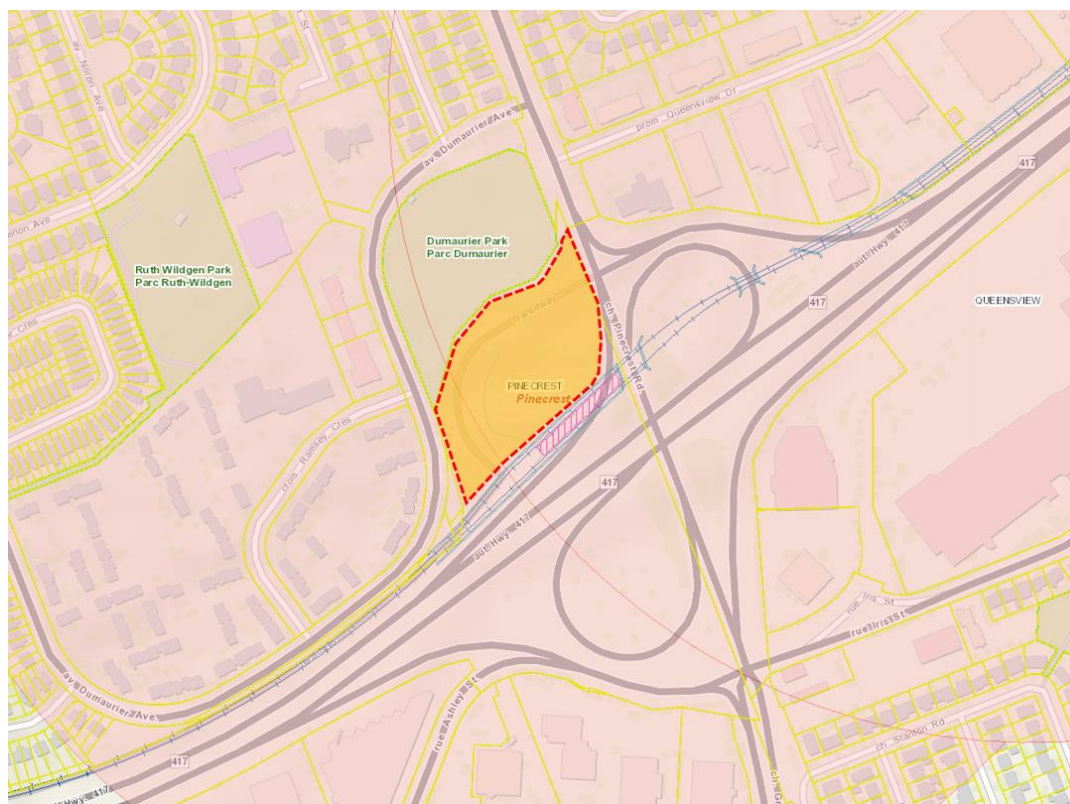
The immediate market area has not experienced any significant growth or reinvestment in terms of new residential development, in part likely because the area is relatively built up and established low-density neighbourhood with few infill development opportunities. In addition, the area has modest market characteristics, including relatively affordable housing prices and average household incomes below City averages. A large nearby Ottawa Housing community likely creates some negative market perceptions, putting some downward pressure on many market and demographic variables.

However, significant investments in commercial office and retail properties nearby (notably, the large-scale renovation of the IKEA Shopping Centre and the upscale Bayshore Shopping Centre) present an interesting contrast to these modest characteristics. The site's location, with immediate access to future LRT service, proximity to large nearby shopping centres, a large park and a concentration of employment uses nearby along Queensview Drive and on either side of Highway

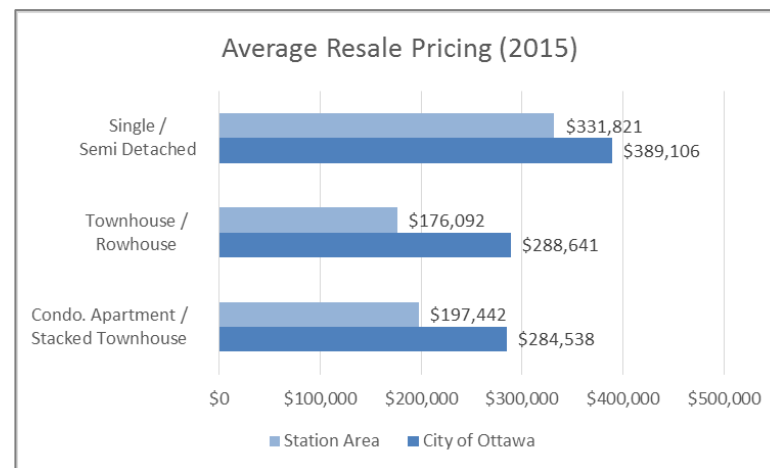
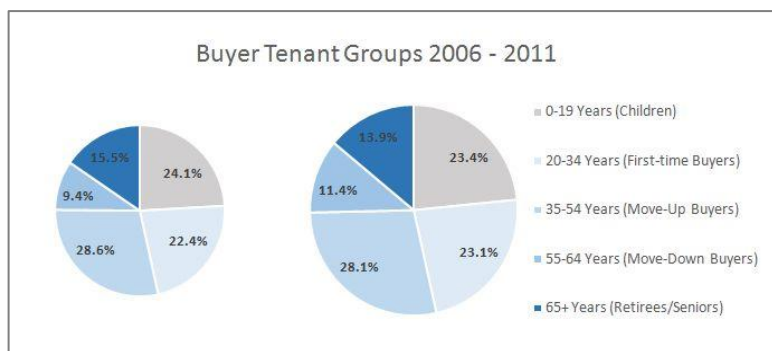
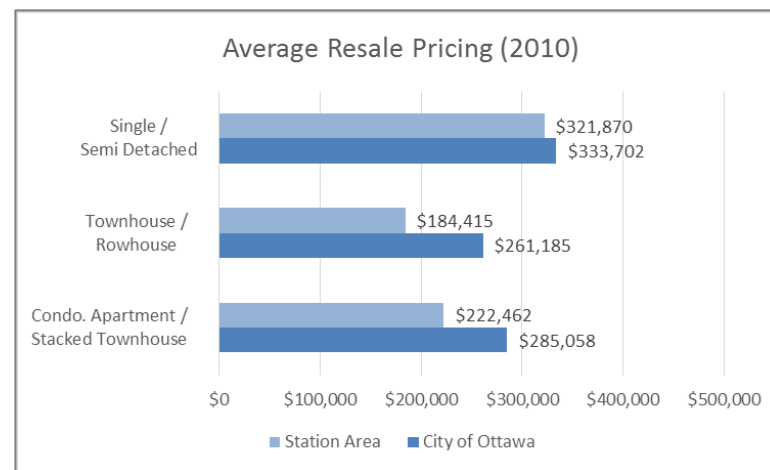
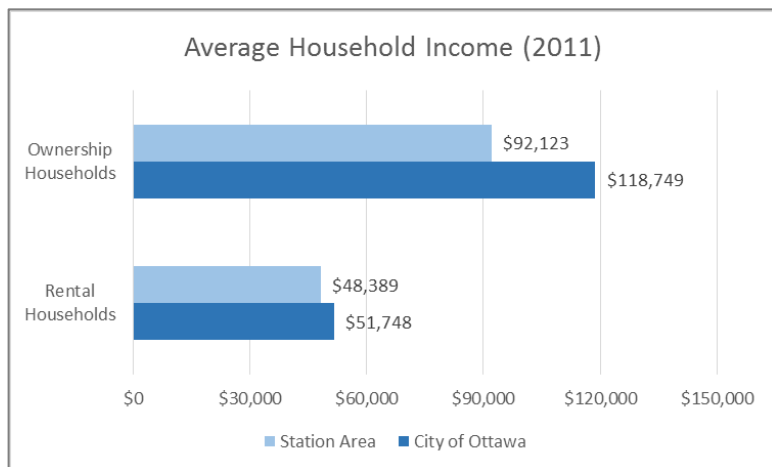
417, may present opportunities for an affordable townhome or stacked townhome project.

Other opportunities may also exist for the development of other community facility needs or employment uses on the site.

The following map illustrates the location of the shortlisted SOD opportunity, subject to successful land acquisition or partnerships with the Provincial Government.



Key Indicators – Pinecrest Station



7.0 Request for Proposal Framework for SOD Implementation

7.1 Key Issues

In order to facilitate opportunities for successful SOD implementation along the Stage 2 expansion route as part of an RFP to potential transit developer, our research indicates that there are several broad issues that must be acknowledged and anticipated within the initial RFQ and later RFP framework.

- High-density residential development in the City of Ottawa has historically averaged between 850 and 1,500 units per annum; in 2015, the City absorbed a total of about 977 new high-density units. Most of this demand has been accommodated in the downtown core and within other small submarkets in and around the City’s central area (e.g. Centretown, Little Italy, Wellington West, and Westboro). Office development is similarly focused in several traditional areas, mainly in the Downtown Core. Despite the amenity that the Stage 2 expansion will bring to the neighbourhoods it serves, the majority of high-density demand will likely continue to be focused in the downtown and existing submarkets. Fully realizing SOD opportunities will therefore take time and be focused at key stations that offer the strongest market characteristics.
- Each station area has its own subset of market conditions that will similarly shape the ability of the market to respond to SOD opportunities.
- Project feasibility is linked directly to construction costs. In the Stage 2 station areas, there is little evidence that the additional costs linked to foundations and other over-building issues associated with an integrated SOD program could be supported by higher prices. Market real estate developments are also subject to different project

timelines to that of transit infrastructure. These issues are significant barriers to SOD over-building on transit station sites in parallel with station construction. As well, the potential miss-match between the timing of public and private sector investment decisions is an obstacle even when both sectors are motivated to integrate.

- The need for certainty with respect to the land holdings available for redevelopment and to the utility of the site for redevelopment from a City perspective will be an important factor in private sector decision making, particularly in areas outside of the Downtown core. Developers will need clarity in understanding the development potential of the site, including the provision of any relevant planning permissions and the timeline for SOD to occur on those sites. Any areas of uncertainty will erode value and market interest in the RFP given the relative certainty available in more traditional developing areas of the City.
- The logistics of requiring zero interruptions to LRT station service operation during SOD construction (especially in a potential overbuild scenario) could impact viability of some development projects.

7.2 Principles

Understanding these broad issues, the following overarching principles are designed to guide the development of the RFP document and inform the decision-making process as to whether to proceed with the inclusion of SOD in the RFP:

- Scale-up the opportunity to allow for multiple development opportunities at several stations to attract market interest and competitiveness – the more sites the better for a developer.
 - To attract the most market interest, the SOD opportunity, as part of the broader offering, must form a substantial opportunity for

the proponent. Several SOD opportunities, of significant market interest, are likely required to reconcile the added complexity brought to the RFP.

- Eliminate or reduce uncertainties. Ensure strong political support for the SOD initiative in the RFP or don't do it all.
 - Certainty equals value. The RFP document must provide clarity and certainty with respect to the lands involved, the ability to execute SOD and the seriousness of the City's interest in tapping into the value of the SOD opportunities that have been identified. Land ownership, easements, servicing, municipal requirements and other factors must be clearly articulated to receive the best bids and developers will need to be assured that the political support for the inclusion of SOD initiative in the RFP is strong. If the development industry senses that the City is merely "testing the waters" then the interest in the SOD opportunities in the RFP could be weak.
- Proponents will need to be provided with clear direction on planning and development potential. The City should provide illustrative massing images and achievable built form statistics in order to give proponents comfort that a development will be considered feasible by the City. Planning uncertainty will erode value and market interest.
 - The City will need to be an integral "partner" in providing a streamlined/ prioritized planning approval process in scenarios where amendments are required. The provision of near development-ready parcels will be part of the incentive and attraction for proponents to participate in this process.
- SOD should be prioritized and encouraged to occur on sites that are owned by the City of Ottawa, or those which can be controlled or acquired by the City of Ottawa.
 - This principle again relates to certainty. Recent experience in other jurisdictions suggests that requiring transit proponents and a private landowner/developer to coordinate in achieving SOD objectives can be challenging, especially if multiple sites (and landowners/ developers) are in play. Streamlining the process to focus the proponent's attention to SOD on sites controlled by the City of Ottawa could align interests and ensure greater efficiency in the process.
- The City should not explicitly include opportunities for SOD on privately owned land. The integration of SOD RFP opportunities associated with adjacent private land owners may raise issues with fairness that may undermine the overall SOD initiative.
 - Stations that rely on privately owned development sites for SOD may face fairness issues from proponents seeking to exploit SOD opportunities. In an RFP process, private land owners may agree to only work with one proponent, giving that proponent an advantage over others and discouraging the SOD initiative from being considered by other major development interests.
 - Notwithstanding this, proponents should be encouraged to include SOD on privately owned properties. Commitments to implement real estate development on privately owned lands immediately adjacent to station sites should be evaluated in the same manner as on public landholdings identified in the RFP. However, there would be no financial impact to the City unless proposals seek to penetrate or build over top of transit infrastructure.
- SOD opportunities should not depend, interfere or rely on the construction or physical structure of a transit station.
 - By focusing proponents' attention on SOD to properties with development potential adjacent to new station properties (as

opposed to over-building), many of the complex design and construction considerations can be mitigated without diminishing the marketability and utility of development outcomes as opportunities to enhance and maximize the investment in transit.

- The private sector must bear any incremental costs related to overbuilding or direct connections to new transit stations.
 - The City and its preferred proponent should agree at the outset on the market value of development land (based on a calculation of developable gross floor area, if publicly owned). If incremental costs are incurred through a proponent’s initiative to overbuild or directly connect to a station, these costs should be borne by the private sector.
- The City cannot compel proponents to build market-based buildings without the risk of that proponent assuming a financial loss due to unforeseen adverse market conditions in the future.
 - While the market conditions at the time of RFP identifying market opportunities at shortlisted stations sites might be positive, macroeconomic factors such as rising interest rates or employment market factors could create a shift in market conditions and impair the financial capacity of the developer to execute SOD. If the RFP compels a developer to proceed, the developer could rightfully seek compensation. This is likely an unacceptable position for the City.

By framing the potential for SOD with these guiding principles, we believe that many potential obstacles toward successful SOD implantation within the larger transit delivery RFP can be mitigated.

Other SOD opportunities on privately owned sites and City-owned parcels not immediately adjacent to future LRT station sites should still be considered as potential opportunities to leverage the City’s investment in high order transit. However, their explicit inclusion of such opportunities in an RFP is problematic. Instead, further consideration of these opportunities should occur through the lens of the City’s Planning and Real Estate groups to ensure that appropriate land use policies are in place to encourage private sector development interest and investment over the life of the rapid transit asset.

Moreover, while private sites should not be identified in the RFP document, proponents should still be encouraged to engage early with private land owners in their consideration of SOD opportunities. Overall, limiting the SOD opportunities in the RFP to clear, uncomplicated, near-term and politically supportable property parcels will go a long way to ensuring private sector interest in the RFQ/RFP process.

Within this context, the following is a suggestion of a preliminary RFQ/RFP framework for building station oriented real estate development into the overall solicitation of bids for the implementation of Stage 2 on shortlisted properties under City control at future station sites.

7.3 Objectives

A key objective of transit investment in the City of Ottawa is to aid City building through the promotion and attraction of SOD in parallel with infrastructure investment. The City categorizes TOD/ SOD as a mix of moderate to high-density transit-supportive land uses located within an easy walk of a rapid transit stop or station that is oriented and designed to facilitate transit use.⁶

⁶ City of Ottawa Planning, Transit-Oriented Development Guidelines.

People are more likely to choose transit if they can easily walk between many destinations at the beginning and end of their trip. This can be achieved through providing increased densities, mixed-uses, and pedestrian-oriented design within easy walking distances of high-quality transit. Numerous benefits result, in terms of creating healthier and more livable communities where people can live, work and shop; improved affordability by reducing the need for private motor vehicles; more efficient public infrastructure, such as water, sewer, roads, recreation, fire and police services; and greater opportunities for economic vitality through an increase in the diversity and scale of development. - City of Ottawa, TOD Guidelines

The City of Ottawa’s objectives for including Station Oriented Development within the project agreement for transit infrastructure development are to:

- Maximize transit ridership and the accessibility of both housing and jobs along the Stage 2 corridors;
- Support city-building objectives at key locations through the inclusion of community benefits/uses which benefit from adjacent access to high order transit;
- Offset the costs of transit infrastructure through the generation of non-fare revenue potential by leveraging residual station lands for mixed-use transit-oriented development; and,
- Achieve design excellence, both in the construction of transit stations and real estate development along the corridors.
- In addition to the construction of the core Stage 2 transit infrastructure (the line, stations and associated utilities) station designs at specified stations will be scored favourably where

associated real estate development is linked directly, or is immediately adjacent to the overall station design.

- The City of Ottawa, through its Real Estate Partnerships and Development Office (REPDO), will be acquiring properties along the proposed transit corridor in order to facilitate the transit right of way and the construction of stations. In several locations, the City of Ottawa anticipates that the proposed Stage 2 station infrastructure will not occupy the entire site. Therefore, the property acquisition process may yield opportunities for adjacent real estate development on lands surplus to transit infrastructure needs and/or the purchase of station sites that are larger than the footprint of the station itself. The sites that the City will be seeking integrated proposals for Station Oriented Development include:

- Baseline;
- Gladstone;
- Cleary; and,
- Pinecrest.

- On these sites selected for SOD opportunities, the City of Ottawa would provide proponents with a clear understanding of development potential by articulating, if possible:

- Permissible height, development density, and uses;
- Servicing issues;
- Property issues, easements, soils etc.;
- Municipal requirements including any other relevant criteria or guidelines shaping development potential;

(Proponents should be referred to an appendix containing summary planning permission, servicing, and development potential statistics.)

- All sites considered for potential SOD are, or will be, owned or under contract by the City;
- Station connectivity potential; and,
- Opportunities for direct and/or integrated station entrances.

7.3.1 Composition of Bid Teams

- Proponents submitting bids to the core infrastructure development components of the Stage 2 LRT proposal call are also encouraged to include partners with expertise in real estate development and construction who are qualified to market and execute mixed-use real estate development projects at shortlisted locations. This firm or collection of firms, representing the real estate development interests of the bid team is referred to hereafter as “the developer.”

7.3.2 Access to Development Sites & Development Timing

- Throughout the design and implementation of the Stage 2 LRT, the bid team will be required to work internally with the proponent’s design and construction teams and with the City, to ensure that wherever feasible, the design and development of station infrastructure preserves opportunities for successful and integrated real estate development on the identified property.
- Any mixed use real estate development on residual properties located adjacent to Stage 2 station infrastructure will likely occur after substantial completion of the LRT project. That is, the developer may not have access to the property until after the line has been constructed or is operational. Subsequent real estate development cannot impact the operation of the line, or the timeline for its completion according to the schedule agreed to within a project agreement between the bid team and the City of Ottawa.
- The City and the developer would enter into a Memorandum of Understanding establishing the structure and terms of the

development agreement, including the rights to property, the timing of land sale and timing of development and a sunset clause/handback provision for land not developed within a specified period (e.g. 5-10 years beyond the commencement of revenue service).

- Specifically, a condition within this development agreement might include the requirement for the developer to obtain building permits on development sites within up to five years (or another specified timeline) after substantial completion of Stage 2 transit infrastructure. If development does not proceed within this timeline, development land will be transferred back to City ownership at the initial land value, or perhaps at a discount to cover legal fees and other expenditures.

7.4 Submission Requirements

Following is a summary of submission requirements from teams bidding on potential station oriented real estate development opportunities.

- Developer’s company profile and expertise, including its history, size and target business markets.
- Developer experience and credentials with respect to developing projects of similar size and complexity to the project or SOD portion thereof, with a focus on similar transactions and overall real estate development experience. Include in the description any experience with respect to:
 - Integrating development into existing or proposed transit infrastructure particularly integrated station entrances;
 - Integrating public or government uses;
 - Negotiating with multiple government departments, agencies or authorities;

- Mixed-use development;
- Infill development;
- Mid-rise and high-rise development;
- Alternative housing (affordable, rental, rent to own, seniors, etc.);
- Office development.
- Examples of comparable and recent project experience including descriptions of comparable developments undertaken by the developer and its proposed key personnel. Each project example should include:
 - Description of the physical project including its design intent, programme, use, etc.;
 - Description of the project's timeline including the land acquisition process, municipal approvals process, construction timeline, current status etc.;
 - Discussion regarding whether or not the original integration objectives with transit infrastructure were achieved, and if not, explain why;
 - List of key project stakeholders, joint venture partners, negotiating partners etc.;
 - Description of which key personnel were involved with the project and what their role was;
 - Project start and completion dates;
 - Size of the project (no. units/ GFA);
 - Location of the project;
 - Target market(s); and
- Ownership structure and/or end users/ tenants.
- Description of the developer's team, including key personnel that will be engaged on the SOD project. Description and of each key personnel's anticipated role and responsibilities within the team and their curriculum vitae. Important roles may include, but are not limited to:
 - Company principal;
 - Project manager;
 - Transaction manager; and
 - Financial advisor.
- An implementation strategy which illustrates the overall transaction approach, details of sequential/ phased development timing and siting of station and SOD components.
 - Station oriented real estate development does not/ should not need to be part of the station design and/ or reliant on the construction of the station. This does not mean that integrated station/SOD opportunities are not possible; it means that such opportunities are not a requirement of the RFP or of the project as a whole. I.e., SOD opportunities should not have a negative impact on the construction schedule for station infrastructure and impact the proponent's ability to complete the transit project within the milestones specified by the City, without attracting additional financing costs due to SOD related schedule delays. The KISS principle for SOD is important, recognizing that the primary intent of the RFP is the design and construction of a rapid transit project on time and on budget. Conceptual designs that illustrate proposed land use/ mix of uses, building size, design, connections to transit infrastructure, and community benefits.

- Conceptual designs that illustrate proposed land use/ mix of uses, building size, design, connections to transit infrastructure, and community benefits.
- Demonstration of financial strength and approach, including:
 - Identification of the impact on the project’s overall financial package. Bidders should isolate financial benefits to the City accrued through the inclusion of station oriented real estate development.
 - Anticipated sources of risk capital and debt to be invested in the project or applicable portion thereof (i.e., current cash reserves, future cash inflows, banks, credit unions, private investors);
 - A plan that details how the initial property acquisition and development costs will be secured and committed prior to closing;
 - Relevant information to support the above, including, as applicable, letters of support from financial institutions demonstrating available credit lines or from other funding sources, or financial representation letters;
 - Description of financing experience for a maximum of three past projects detailing financing capabilities (debt and/or equity), including a description of the approaches and experience of the developer to real estate development consistent with the nature and scope of this potential project or applicable portion thereof;
 - Description of the proposed financing structure for this proposed project, including, but not limited to, identification of investors, typical lenders and debt/equity funding structure and supporting documentation from financial partners.

7.5 Evaluation Criteria

Following are key criteria for evaluating proponent responses to station oriented real estate development opportunities on shortlisted properties under City control adjacent to Stage 2 station properties.

7.5.1 Developer Experience

- Developers will be evaluated based on their company track record, comparable real estate development experience and knowledge of the Ottawa’s market dynamics.
- Developers will be required to provide relevant project examples, which demonstrate this experience at a similar scale, market context, and complexity. Higher scores will be provided for experience with Station Oriented Development and/or SOD that connects private sector development to station entrances.

7.5.2 Design of Transit Stations & Adjacent Real Estate Development

- Project teams will be evaluated based on their understanding and ability to execute an integrated design process yielding outcomes where core structural components of transit and real estate development opportunities are mutually beneficial, but not reliant.
 - I.e., where feasible, station designs are not to preclude real estate development opportunities on both public and privately owned properties along the Stage 2 lines. Likewise, the siting and design of real estate development should not compromise the utility or effectiveness of core transit infrastructure.

7.5.3 Linkages between Transit & Real Estate Development

- While station and real estate development should be designed in a manner which is mutually exclusive, bid teams will be evaluated based on their ability to provide linkages via below grade knock-out

panels, pedestrian connections at grade, or above grade links (similar to Calgary’s Plus 15 network).

7.5.4 Type & Tenure of Real Estate Development

- Proponents may be evaluated based on their ability to incorporate various types and tenures of development in development proposals. In addition, bidders will be asked to illustrate the market viability and resiliency of their proposals (subject to market cycles).
- Higher scores will be provided to proponents who make efforts to shorten development timelines, e.g. commitments to the implementation of office or rental residential development forms may be preferred over for-sale condominium product where the pre-sales process (typically used to finance construction loans) can prolong the start of construction.

7.5.5 Community Benefits

- The City of Ottawa may also identify locations where affordable rental or ownership housing is desired and scores will reflect a proponent’s ability to deliver in those locations. Bidders will also be evaluated based on the proponent’s experience and ability to deliver those product types or a mix of market and affordable housing.
- Developers will also be evaluated based on their ability to yield other community benefits on development sites, including publicly accessible open space, pedestrian linkages, and community spaces within buildings, among others.

7.5.6 Architectural, Urban & Sustainable Design

- The City intends to achieve excellence in architectural and urban design and maximise the resiliency and environmental sustainability of all components of the Stage 2 LRT project. Bidders will be evaluated based on their experience and ability to integrate design excellence into all aspects of the project.

7.5.7 Financial Terms

- Bids for the Stage 2 project will be evaluated based on the impact that the inclusion of station oriented real estate development opportunities have on overall contract pricing. Proponents should identify the price of the Stage 2 bid in two ways:
 - Without station oriented real estate development opportunities included; and,
 - With station oriented real estate development opportunities included; identifying any reduction in overall contract price on a site by site basis (i.e. the land value of each development site).
- The City of Ottawa may also consider opportunities for joint venture development agreements through REPDO. In addition to the two pricing categories noted above, bidders should identify any potential joint venture opportunities and pricing implications for consideration and negotiation as part of a project agreement or individual development agreements on selected properties.

7.5.8 Impact and Integration with the Overall Stage 2 Transit Implementation Program

- The City will carefully assess the importance of SOD opportunities with the context of the overall project delivery in the evaluation process.
- Any impacts affecting the overall delivery timeline, cost, and complexity of transit delivery should be considered and evaluated.

Appendix A – Stage 2 Station Profiles

The following station profiles have been created to provide insight into the market characteristics of station areas and SOD opportunities within a 600-metre radius of Stage 2 LRT stations. Based on evaluation criteria highlighted in Section 5.0 of this report, key socio-economic trends, market activity and land opportunities have been assessed throughout census tract data on a local scale.

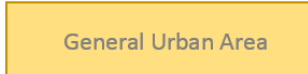

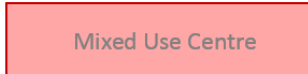
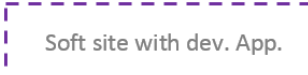
A range of data sources have been utilized to capture these insights, including the following:

- The 2011 and 2006 Census, as well as 2011 National Household Survey data, have been utilized on a Census Tract Level.
- Land registry data from Geowarehouse was been utilized to identify parcel ownership, as well as key resale statistics amongst a range of unit types during the 2010 and 2015 timeframes.
- Average resale pricing as per the Canadian Real Estate Board is utilized as a baseline for comparison against station area transactions.
- Actively marketing condominium apartment, stacked townhome and urban flat project data has been obtained through PMA Brethour’s December 2015 New Home Market Report and supplemental primary research conducted by NBLC.

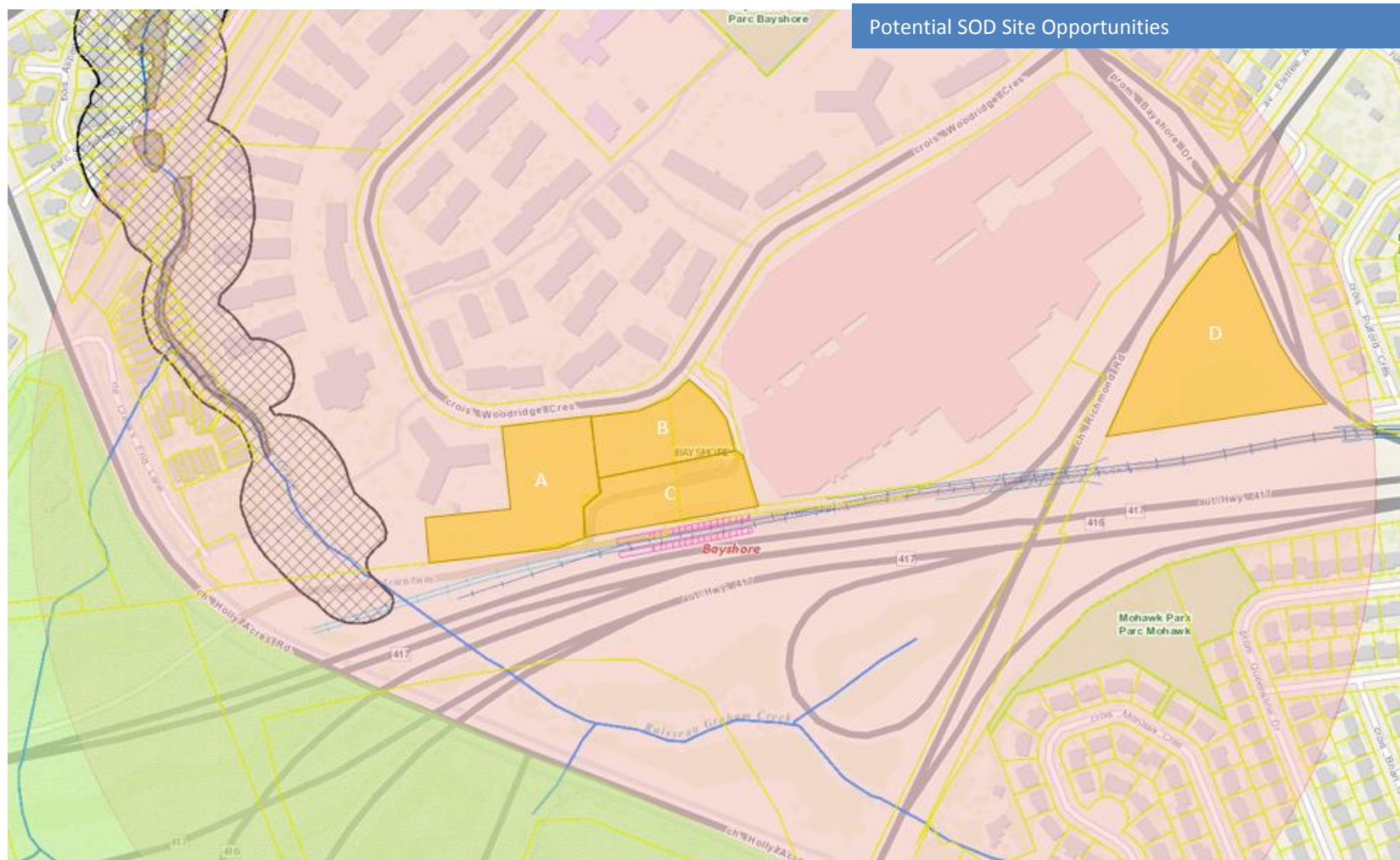
Key demographic and station boundaries, as well as active and proposed developments, have been identified within aerial snapshots surrounding each station. Graphic elements included in these images are defined as follows:

-  600 metre Radius
-  O-Train Stage 2 Line
-  Census Tract Boundary
-  Proposed High Density Residential Development
-  Proposed Office Development
-  Active Residential Development

Potential soft site opportunities for potential SOD have also identified within station areas have also been identified based on current use, with graphic elements representing the following:

-  General Urban Area
-  Employment Area
-  Mixed Use Centre
-  Soft site with dev. App.

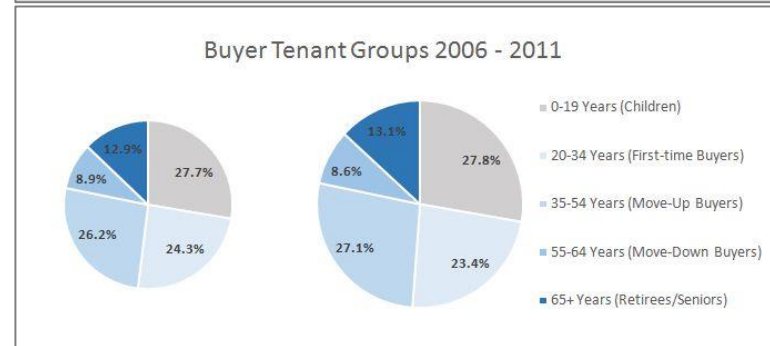
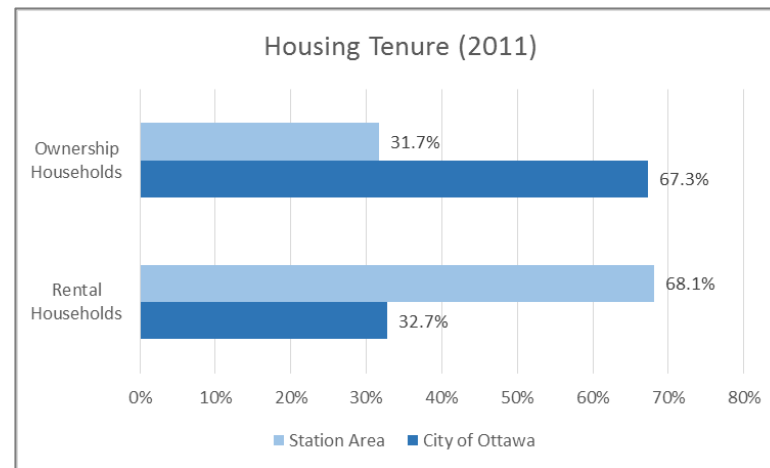
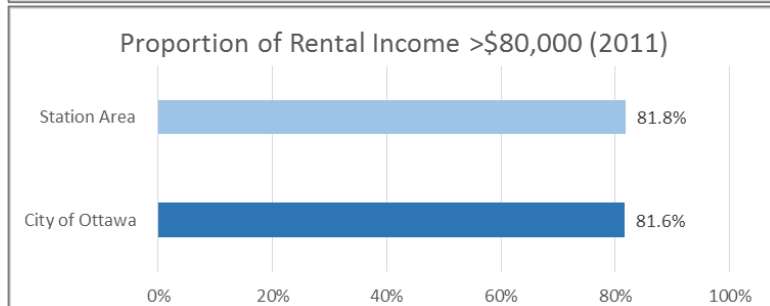
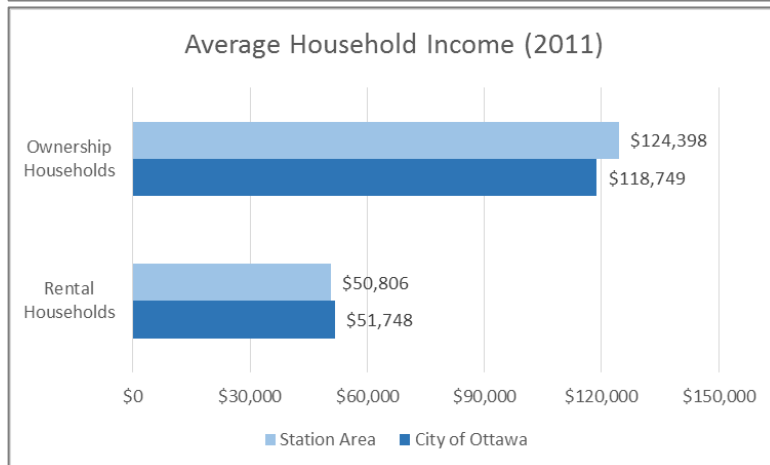
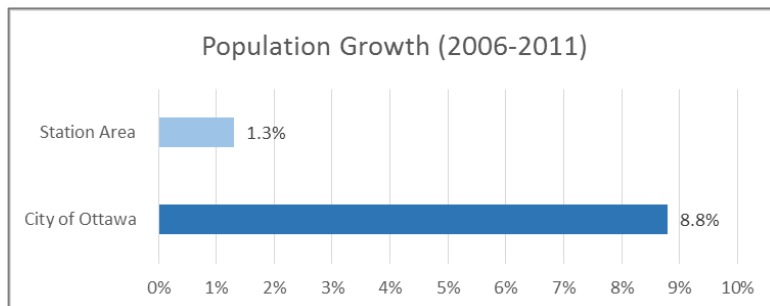
Bayshore Station



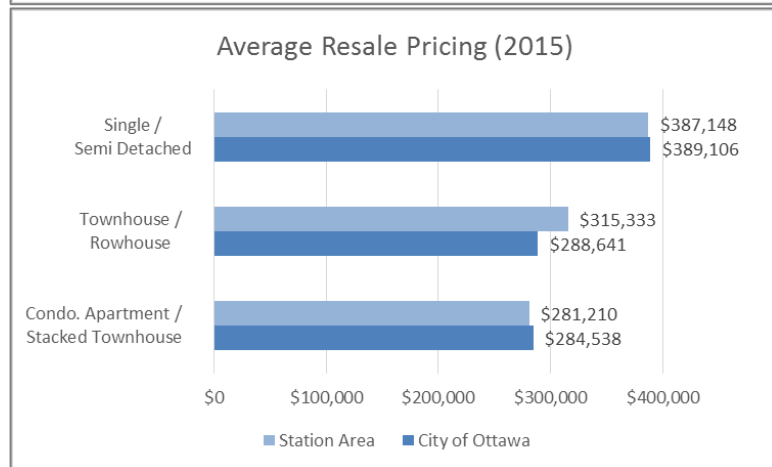
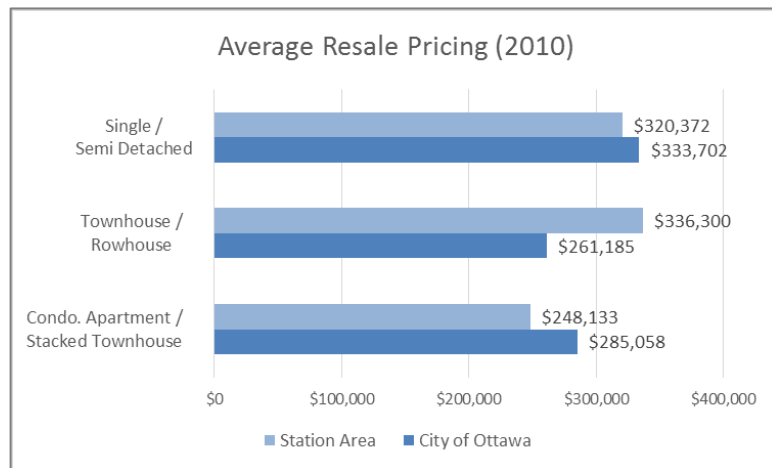
Summary Property Details			
A	Parking Lot	OTNIM Properties Limited	3.3 ac
B	Vacant	Bayshore Shopping Centre Ltd., KS Bayshore Inc.	1.6 ac

C	BRT Station	Regional Municipality of Ottawa-Carleton	2.3 ac
D	Vacant	Public Authority	4.6 ac

Bayshore Station



Bayshore Station

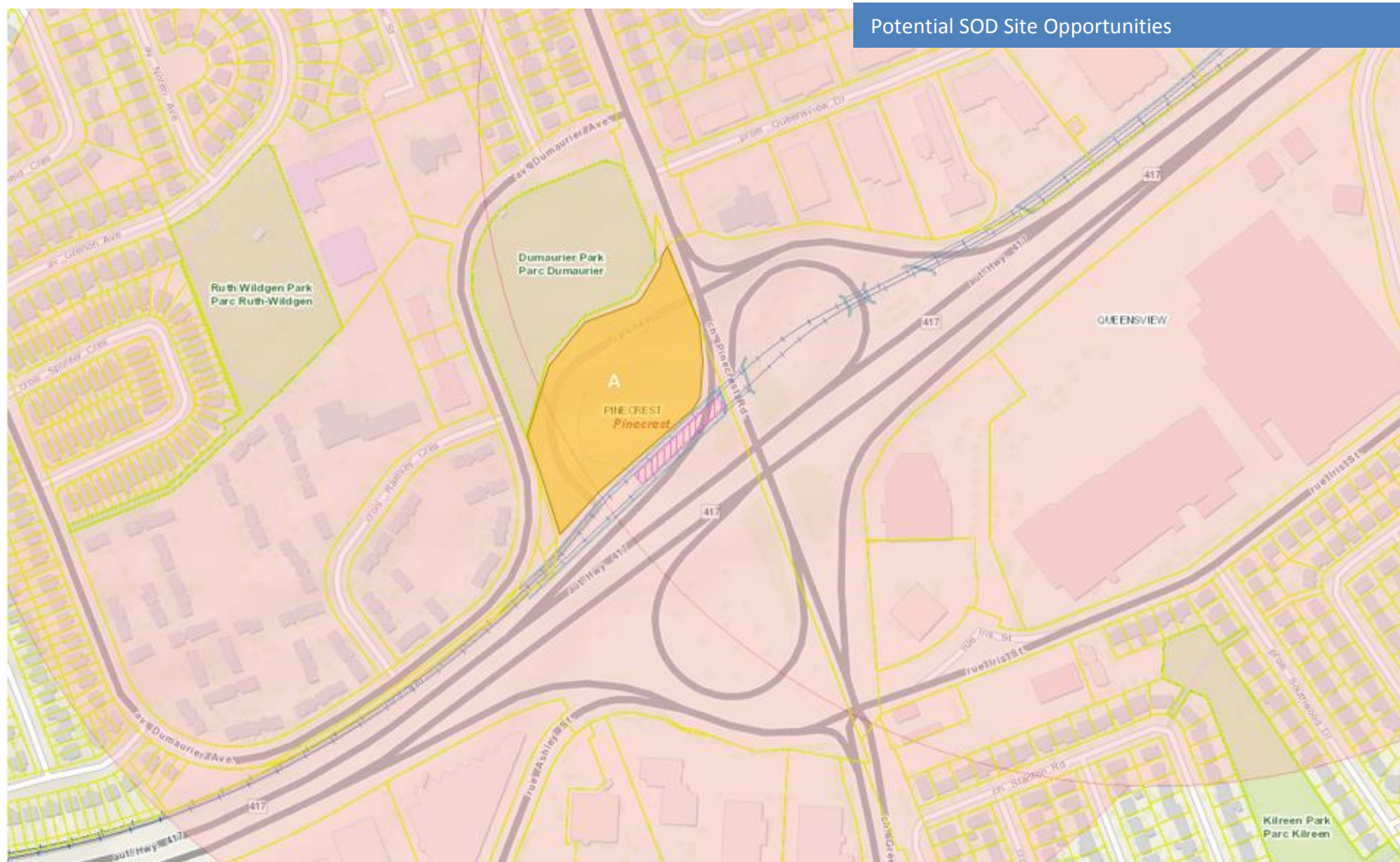


Active & Proposed Developments



None.

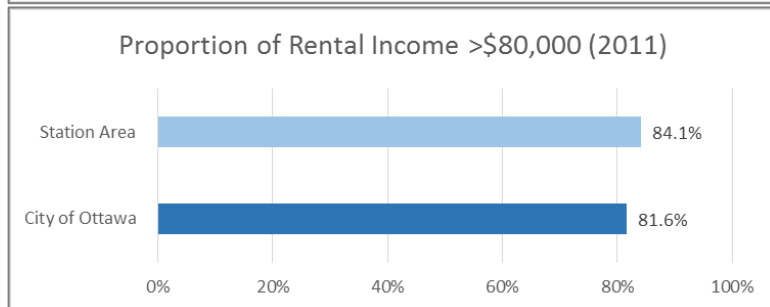
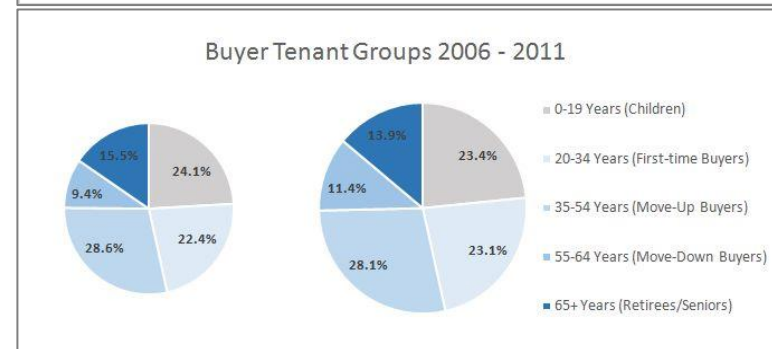
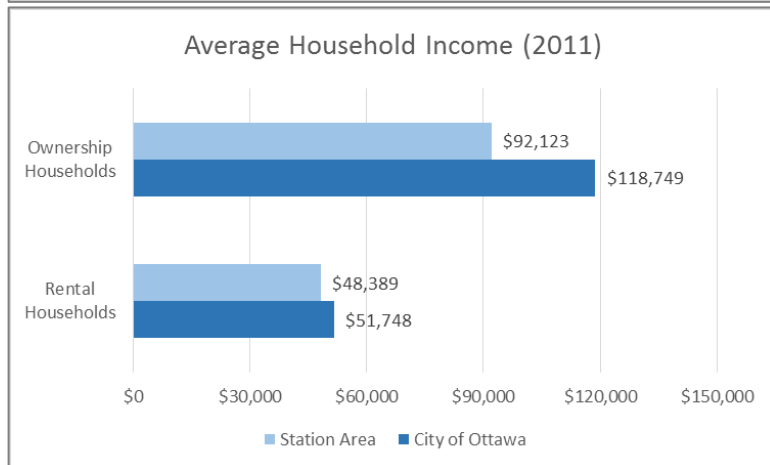
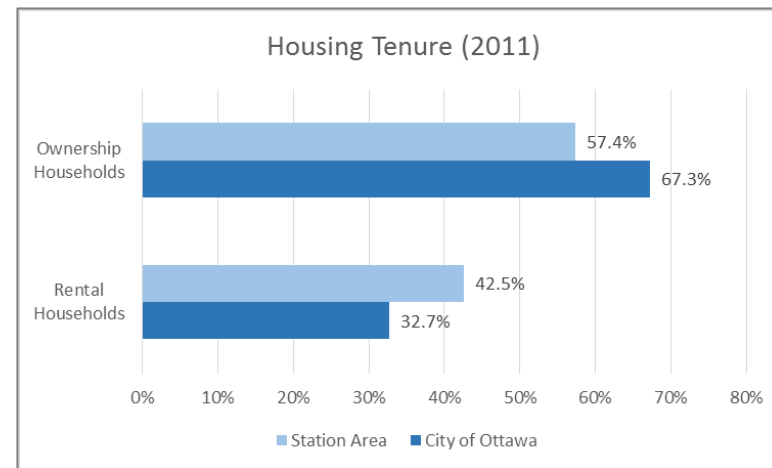
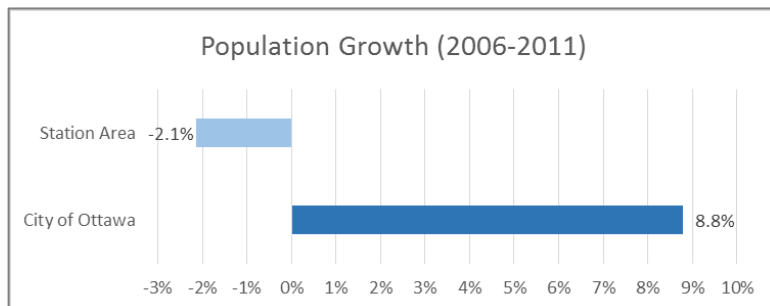
Pinecrest Station



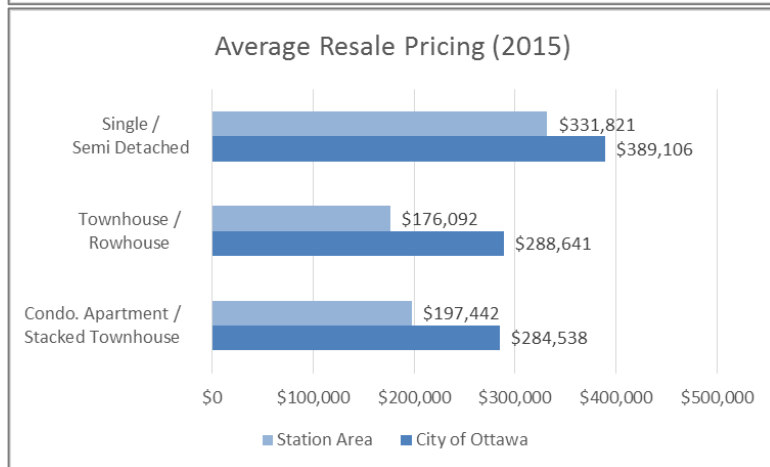
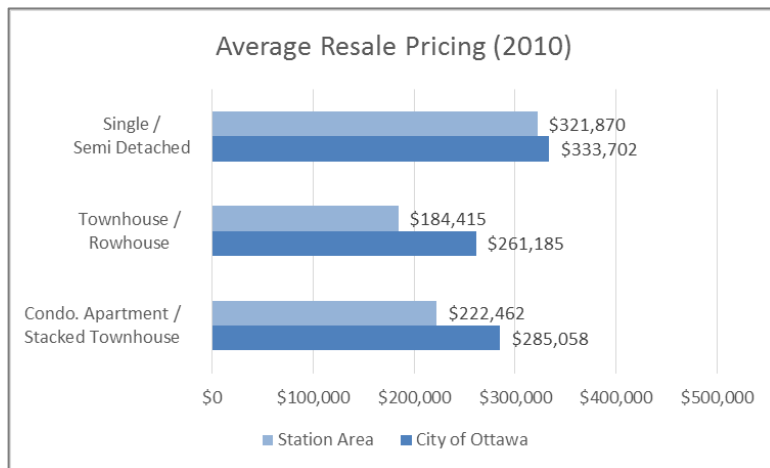
Potential SOD Site Opportunities

Summary Property Details			
A	Vacant	Ontario Ministry of Transportation	4.7 ac

Pinecrest Station



Pinecrest Station

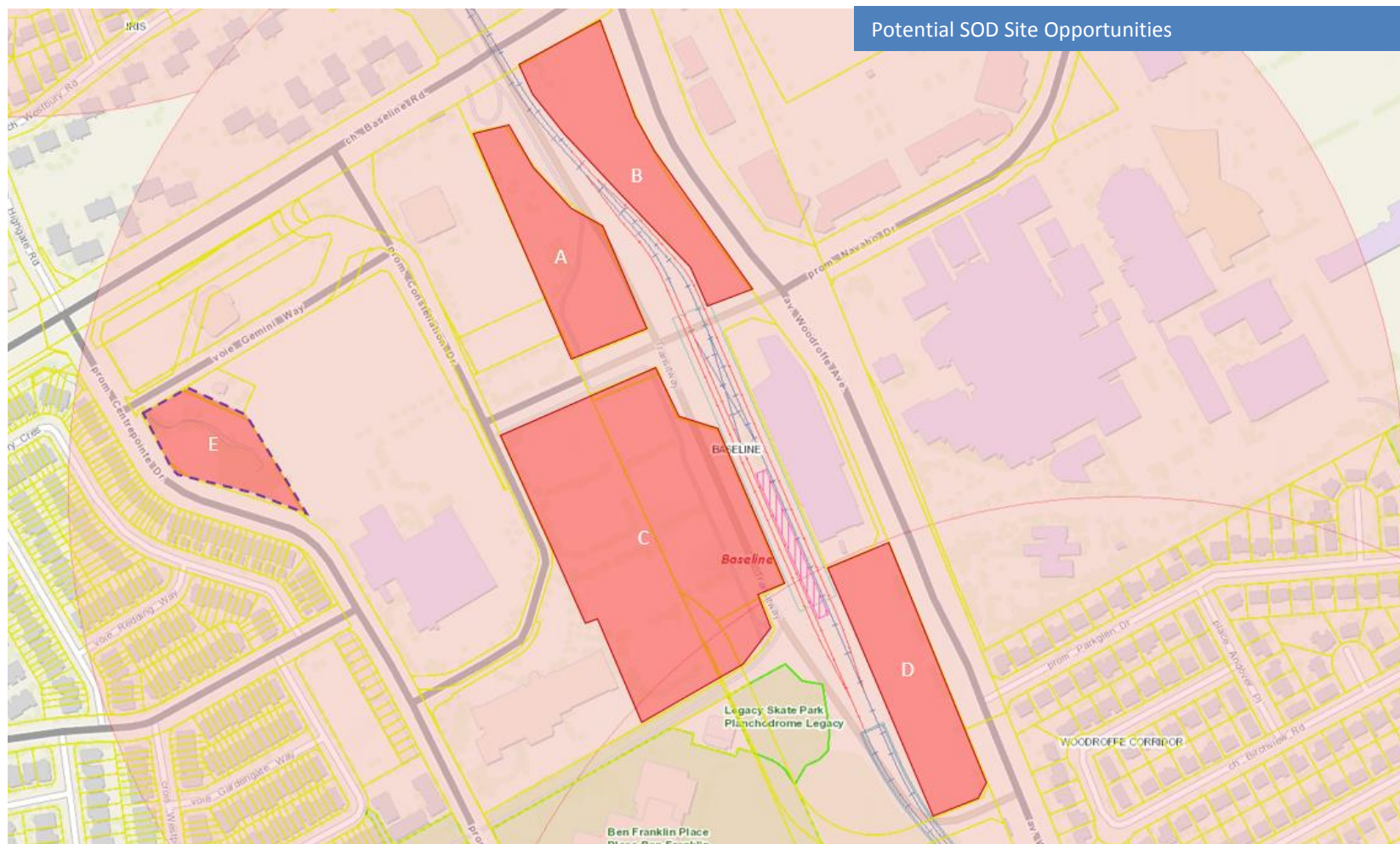


Active & Proposed Developments



None.

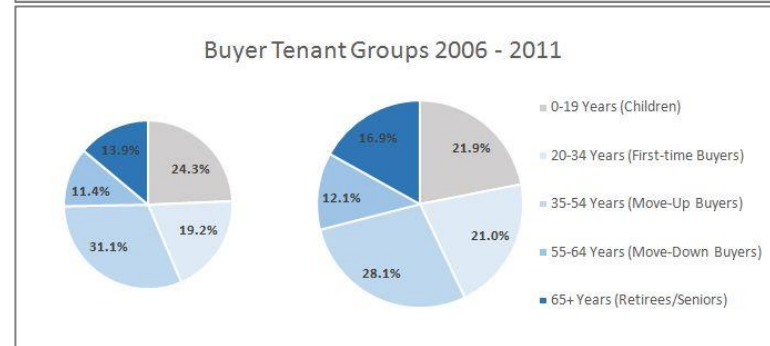
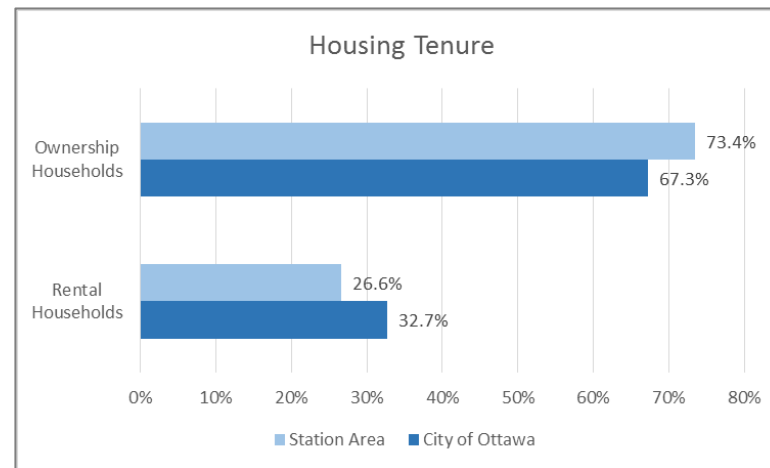
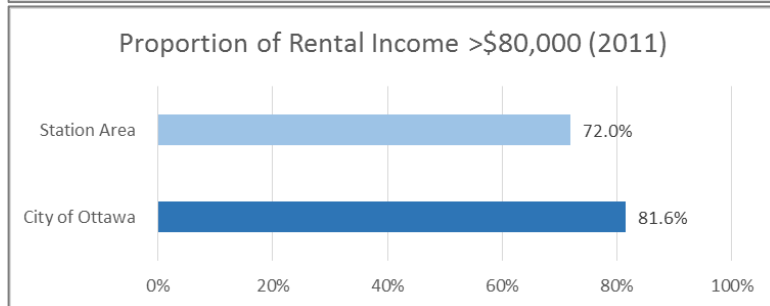
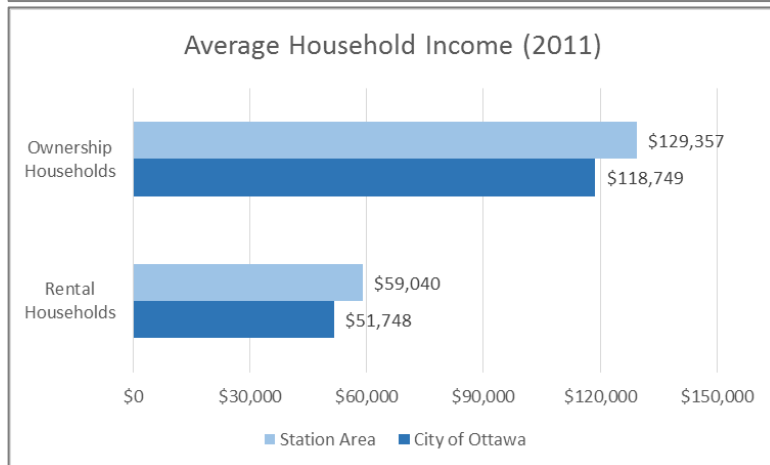
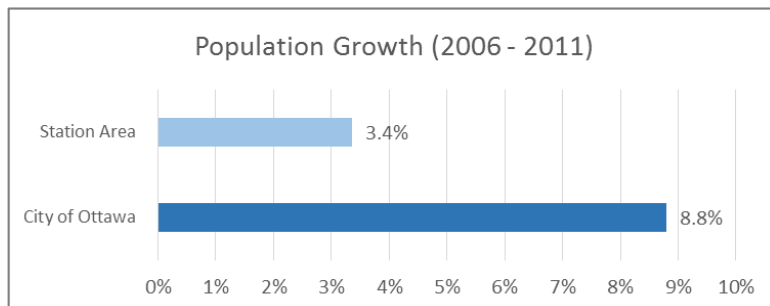
Baseline Station



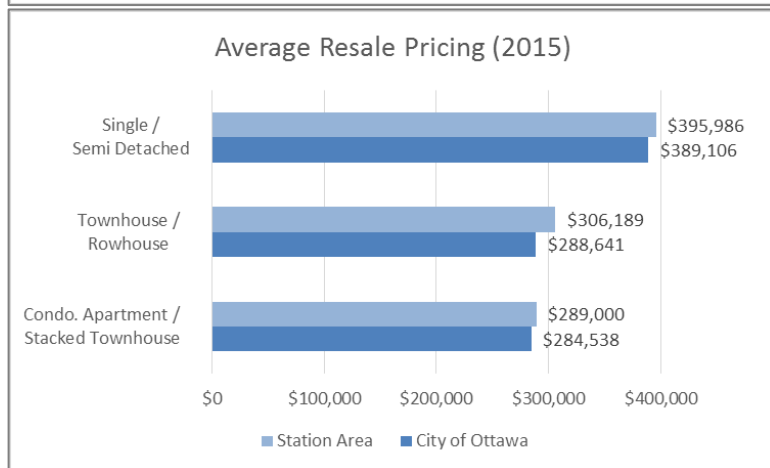
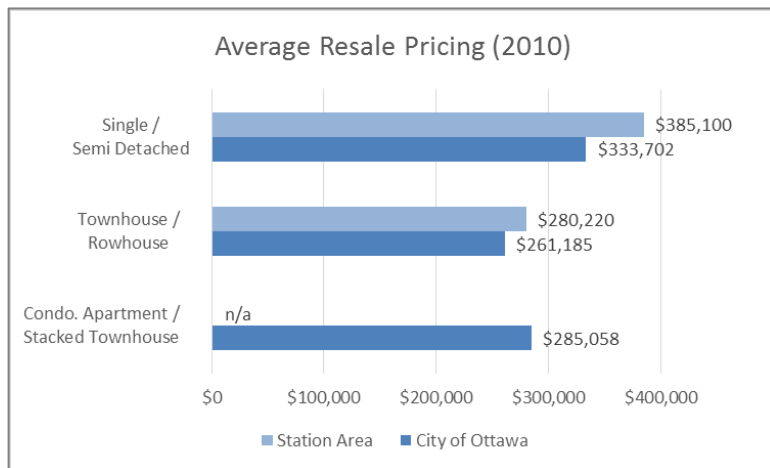
Summary Property Details			
A	Vacant	Arnon Corporation	3.1 ac
B	Vacant	City of Ottawa	2.6 ac
C	Parking Lot	Arnon Corporation	9.5 ac

D	Parking Lot	City of Ottawa	2.7 ac
E	Vacant	1514593 Ontario Inc.	1.8 ac

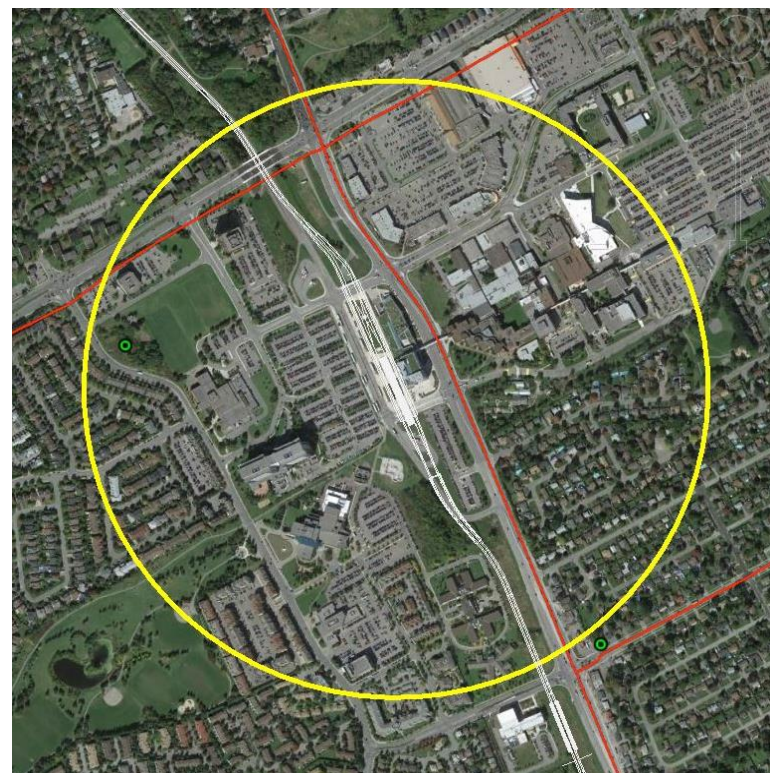
Baseline Station



Baseline Station

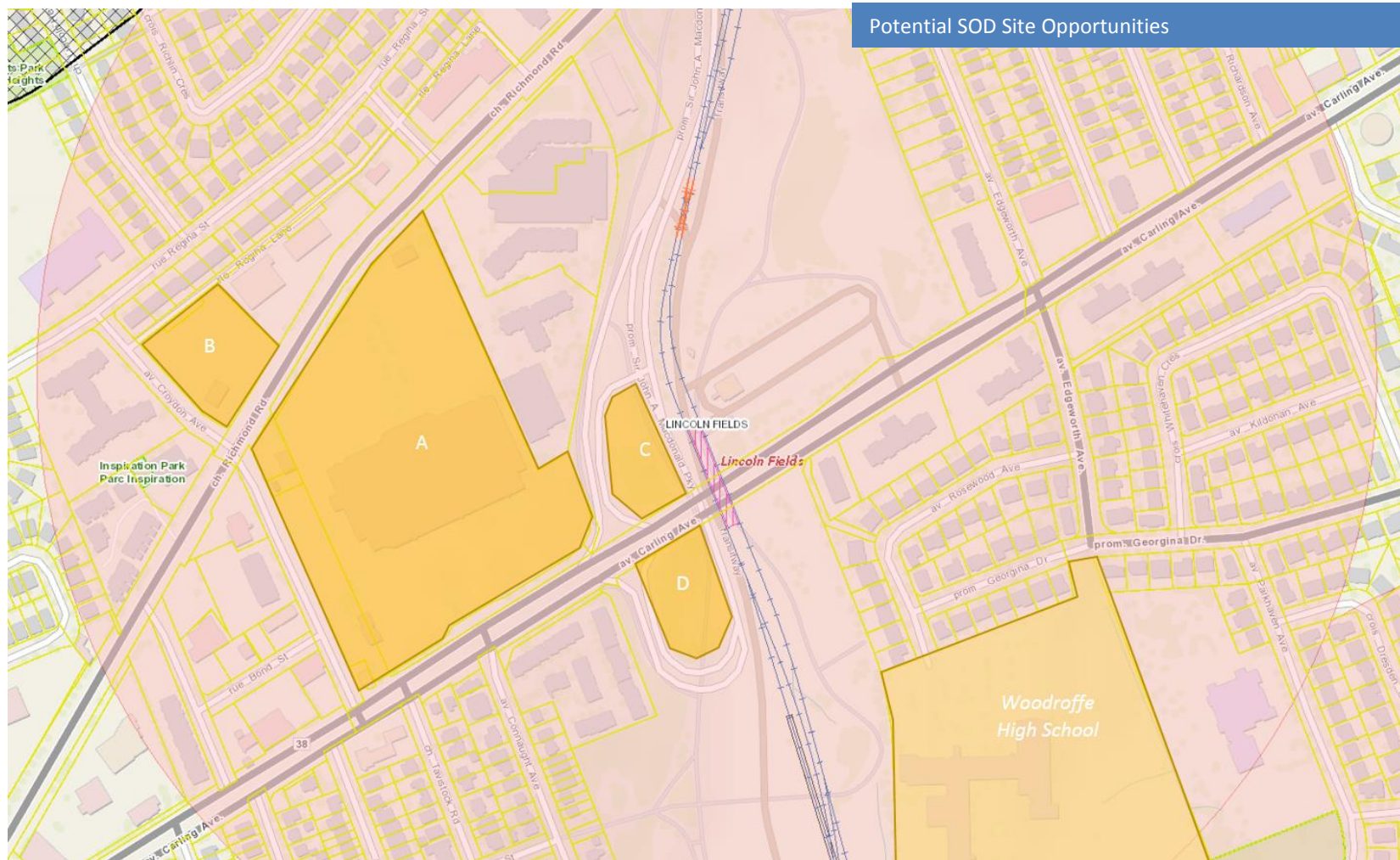


Active & Proposed Developments



There are currently two residential development applications within a 600m radius of Baseline Station, proposing three 15-storey residential towers and one 4-storey retirement residence, totalling 529 units.

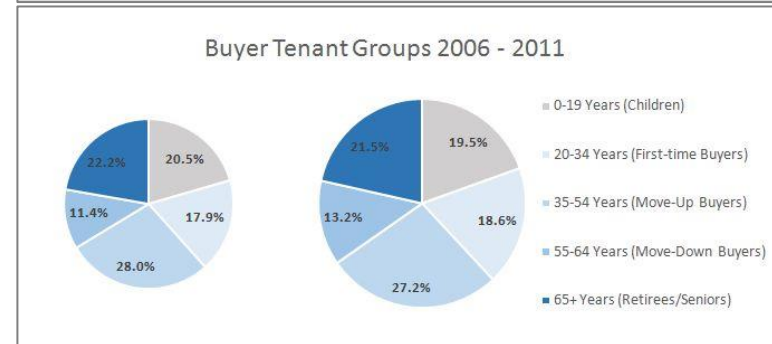
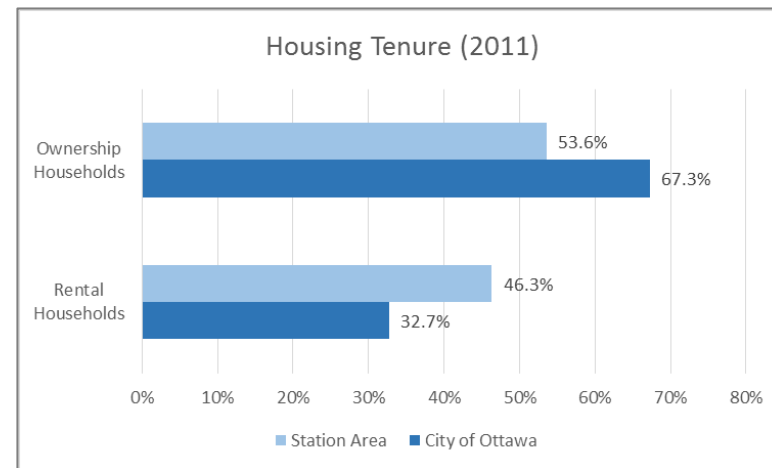
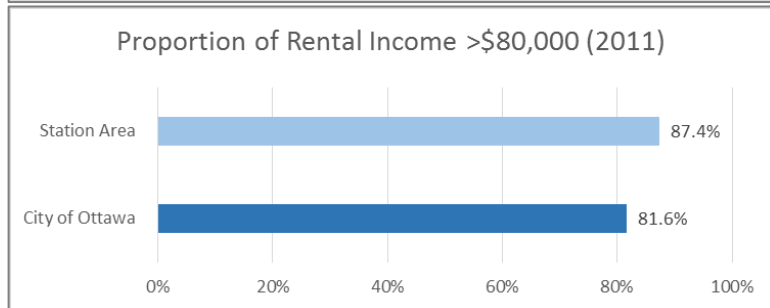
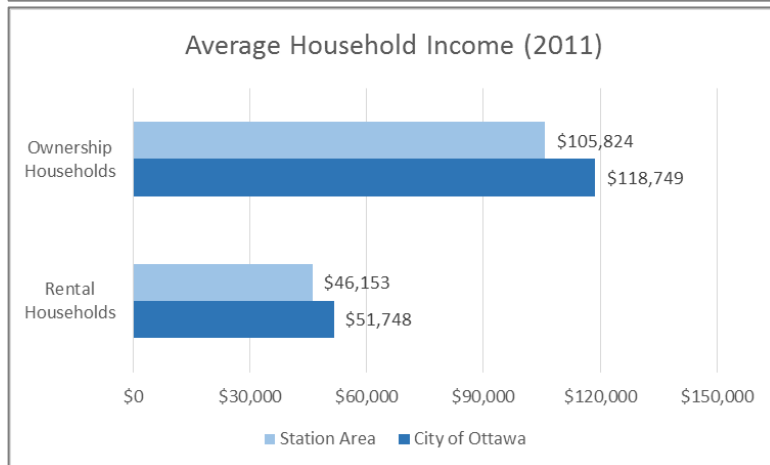
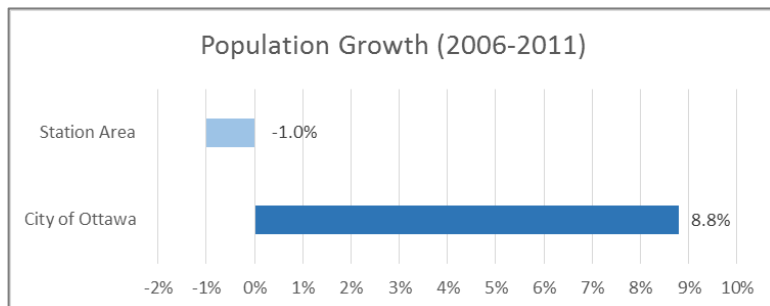
Lincoln Fields Station



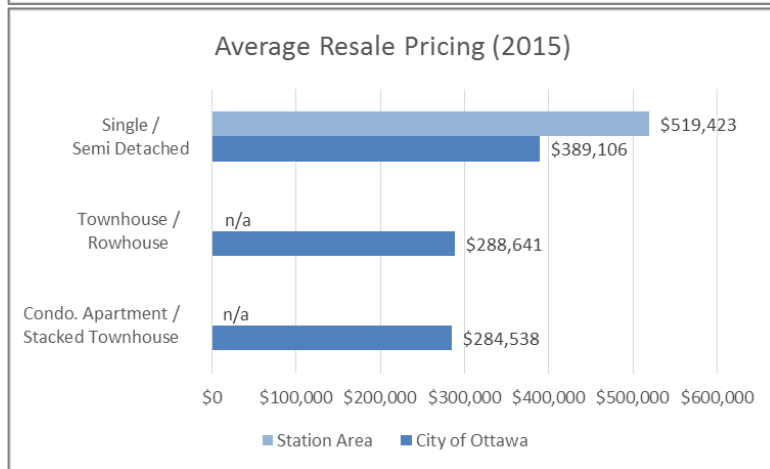
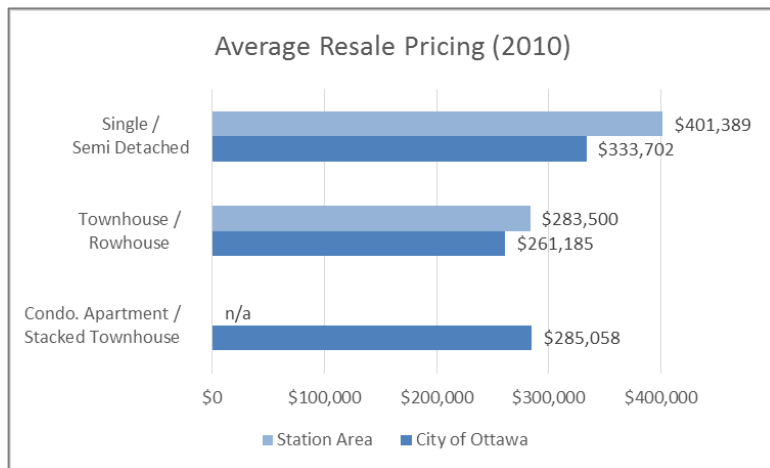
Summary Property Details			
A	Retail	Riokim Holdings Inc.	16 ac
B	Dealership	130120 Canada Ltd. (Ford Dealership)	2.0 ac

C	Vacant	National Capital Commission	0.9 ac
D	Vacant	National Capital Commission	1.3 ac

Lincoln Fields Station



Lincoln Fields Station

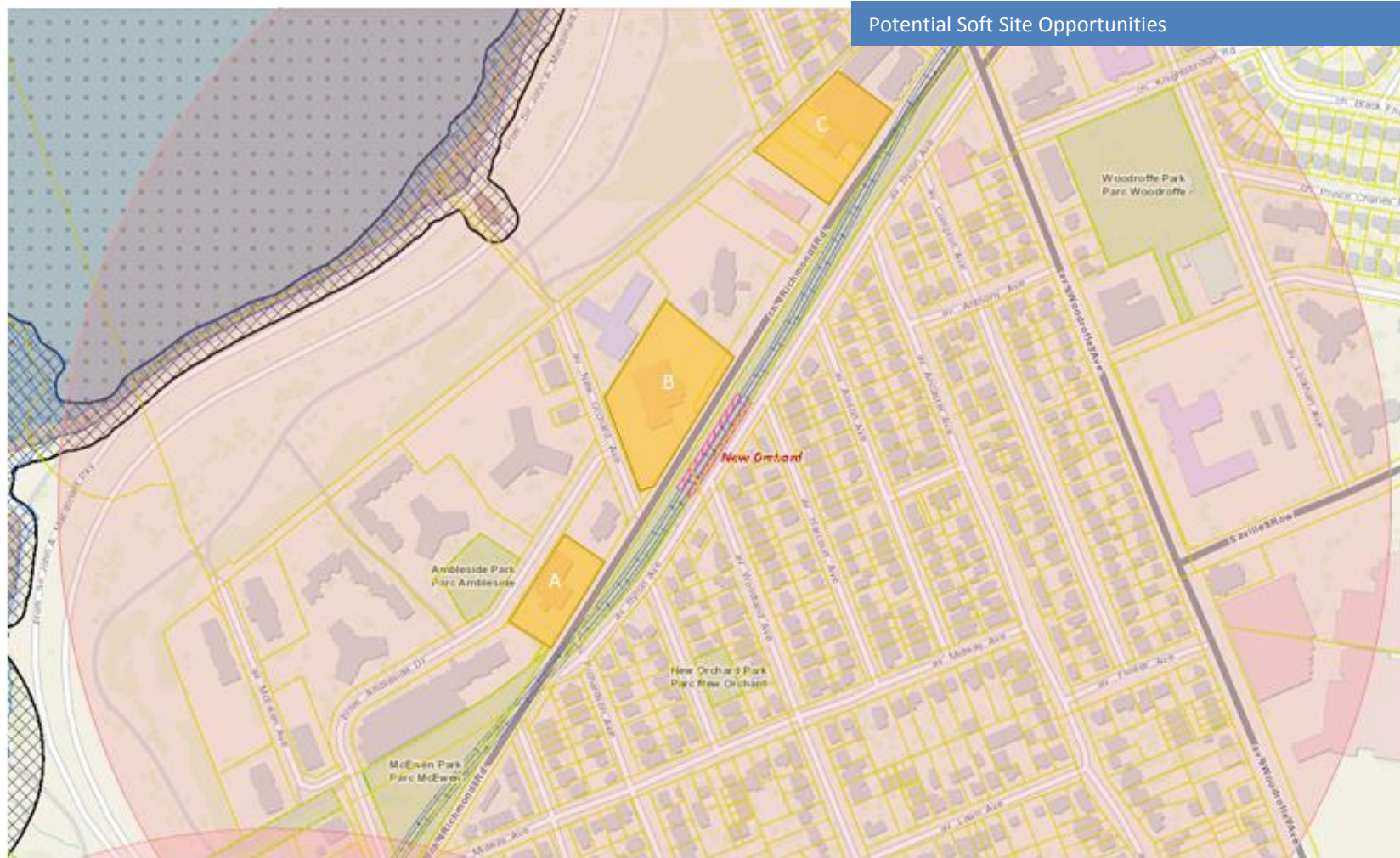


Active & Proposed Developments



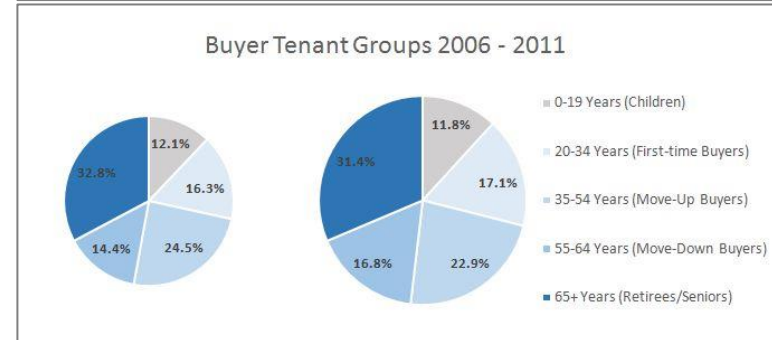
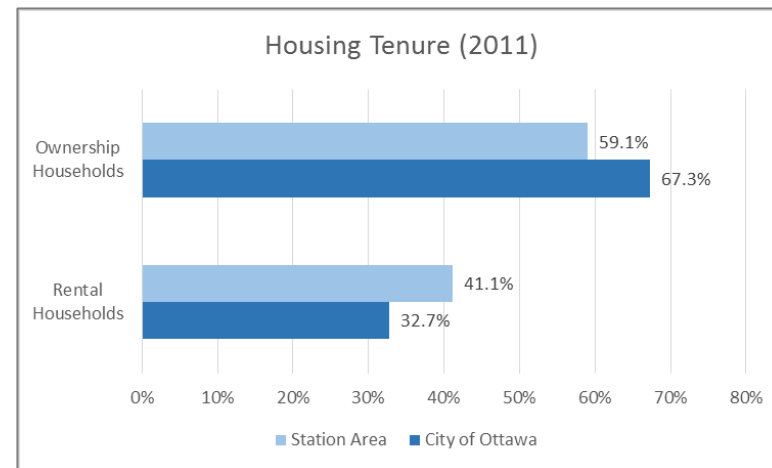
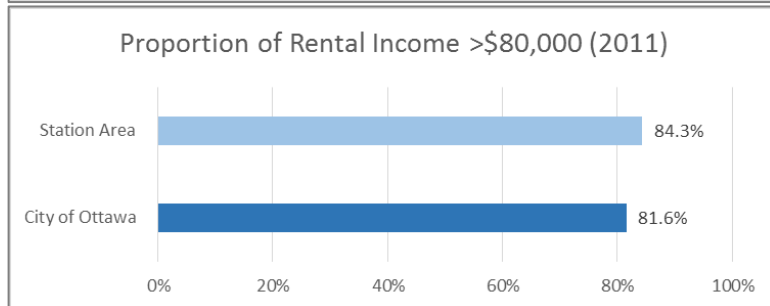
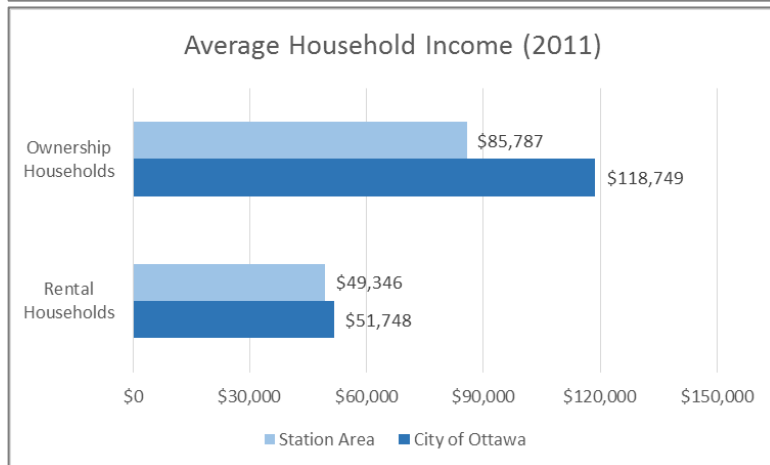
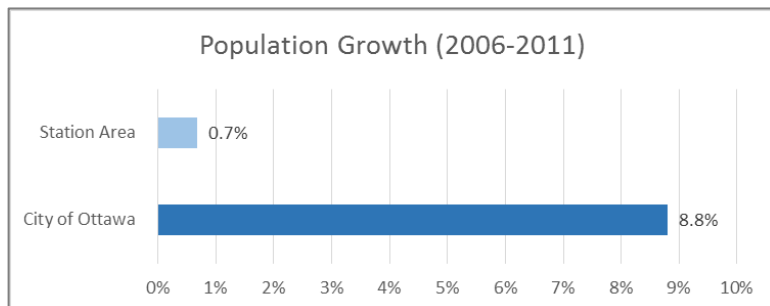
None.

New Orchard Station

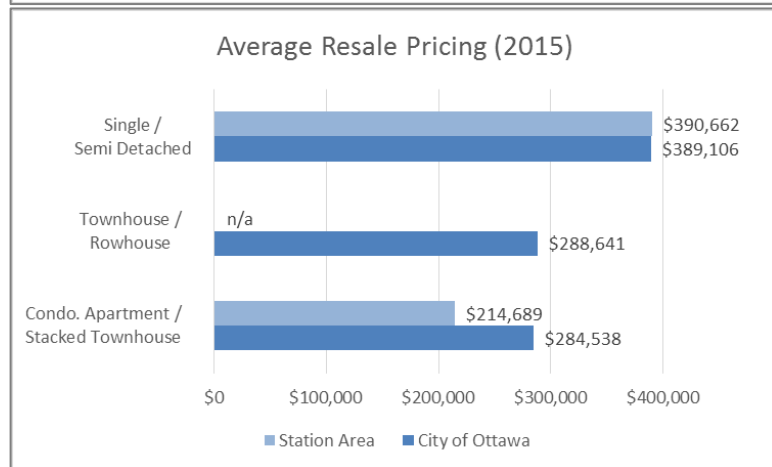
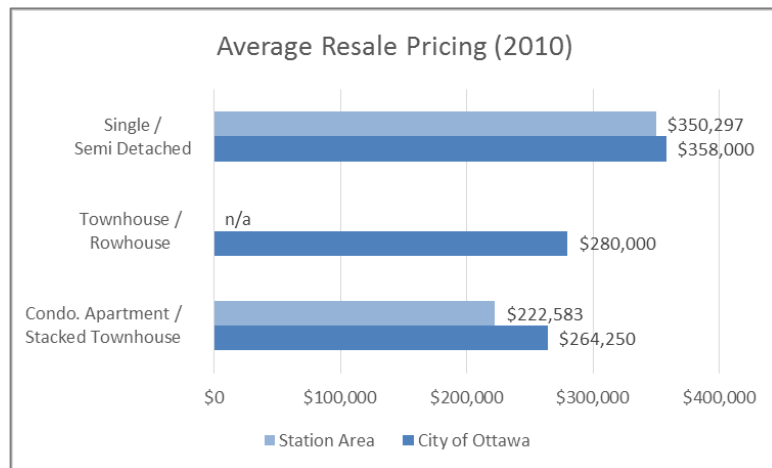


Summary Property Details			
A	Dealership	1075 Richmond Rd Holdings Ltd. (Honda Dealership)	1.0 ac
B	Dealership	Rimosa Investments Ltd. (Chrysler Dealership)	2.4 ac
C	Dealership	Kay One Holdings Ltd. (Honda Dealership)	1.8 ac

New Orchard Station



New Orchard Station

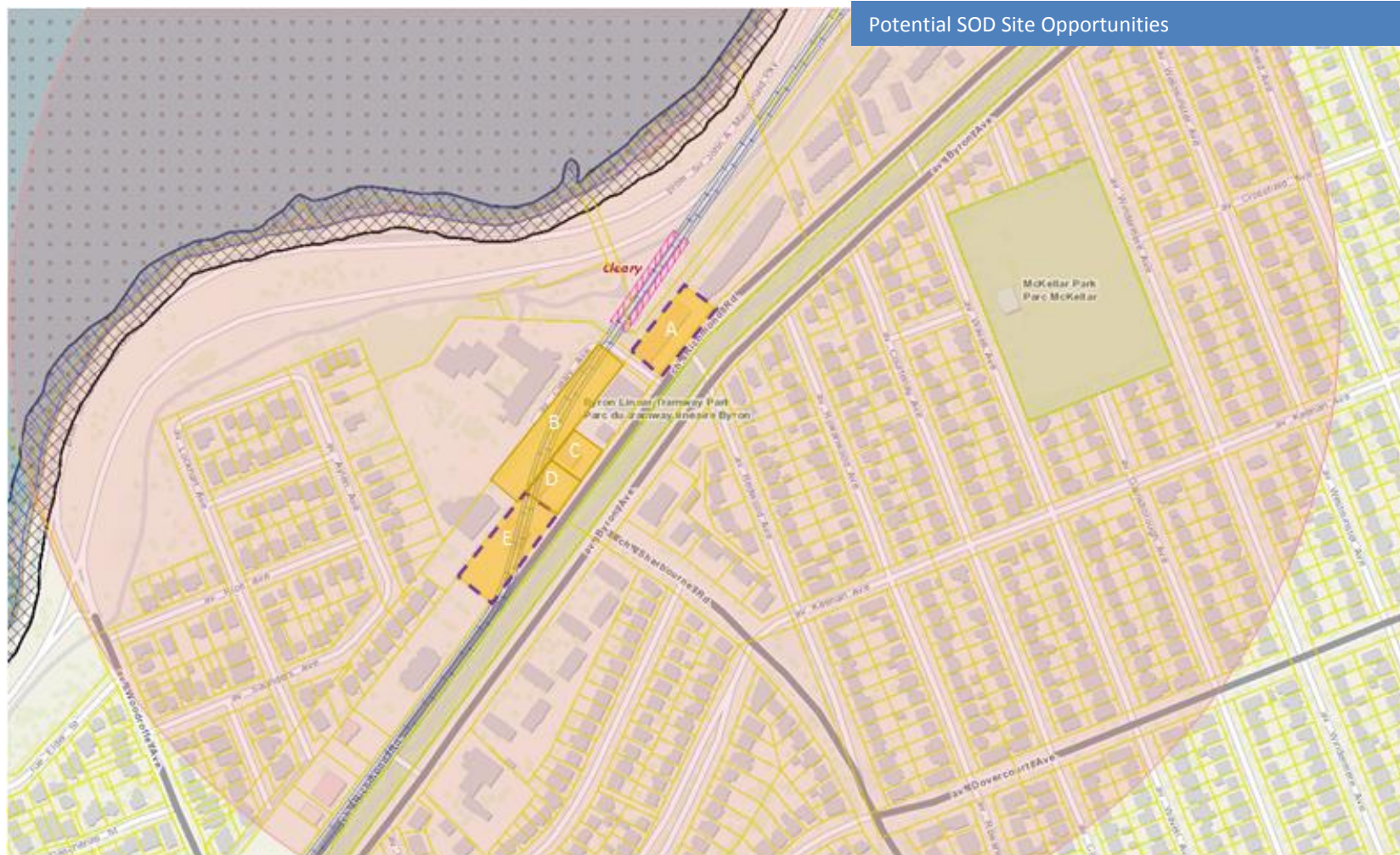


Active & Proposed Developments



The Azure Condominium is the only actively marketing condominium apartment project within 600m of New Orchard Station. An application at 342 Woodroffe Avenue is proposing an 18 unit apartment building.

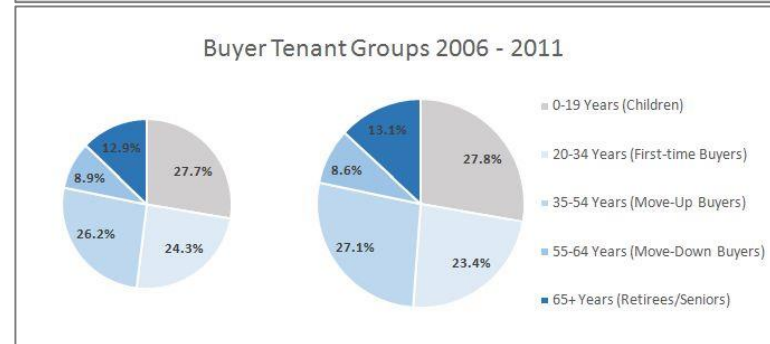
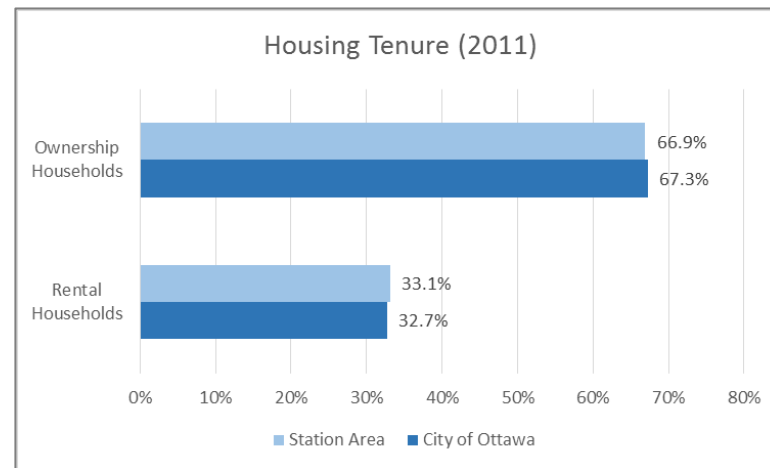
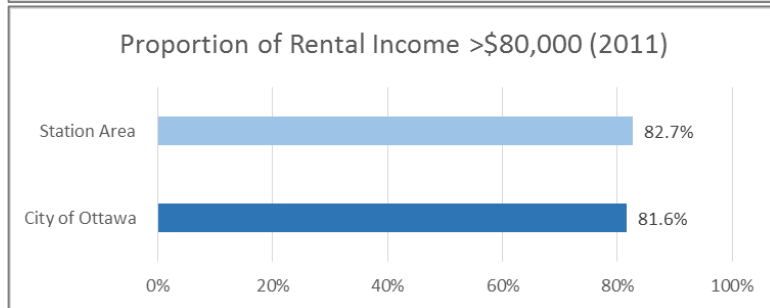
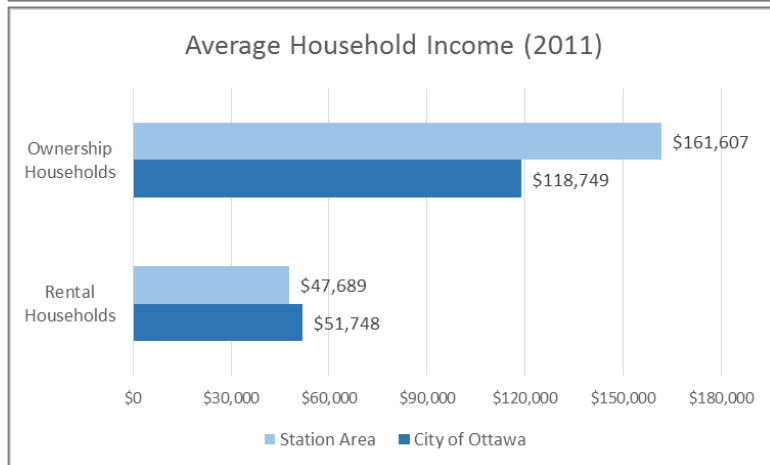
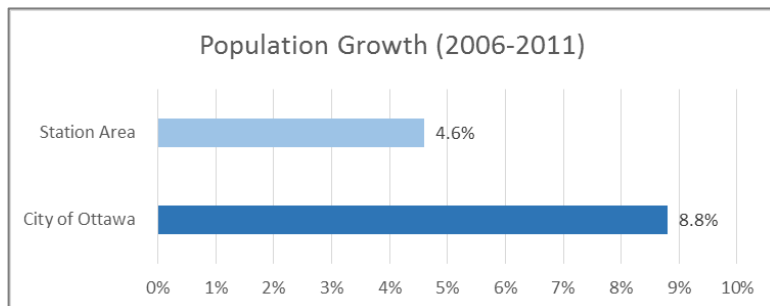
Cleary Station



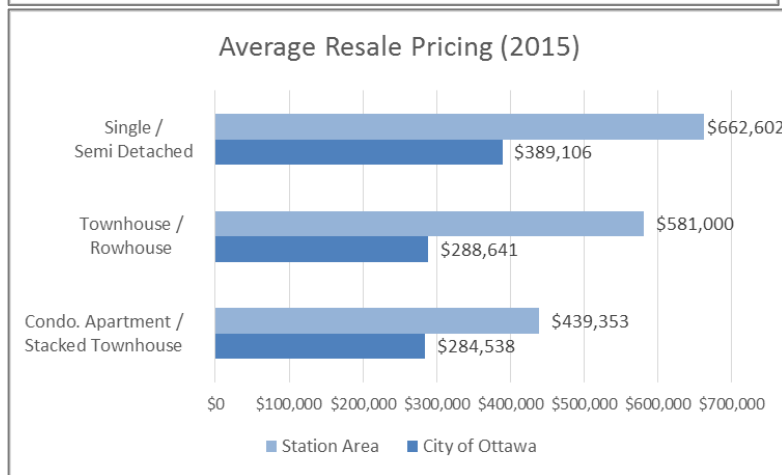
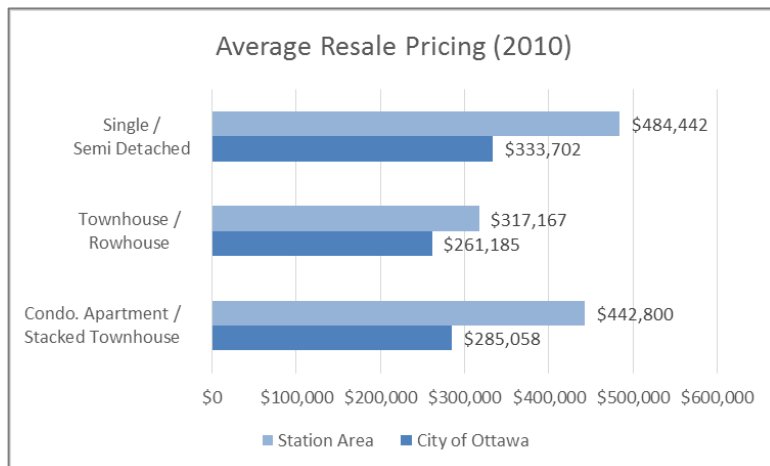
Summary Property Details			
A	Retail	Emros Development Corp.; 536555 Ontario Ltd.	0.6 ac
B	Church	The First Unitarian Congregation of Ottawa	1.1 ac
C	Auto Shop	Dentech Holdings Inc.	0.3 ac

D	Dental Clinic	464354 Ontario Limited	0.3 ac
E	Restaurant	Kristy's Restaurants Inc.	0.9 ac

Cleary Station



Cleary Station

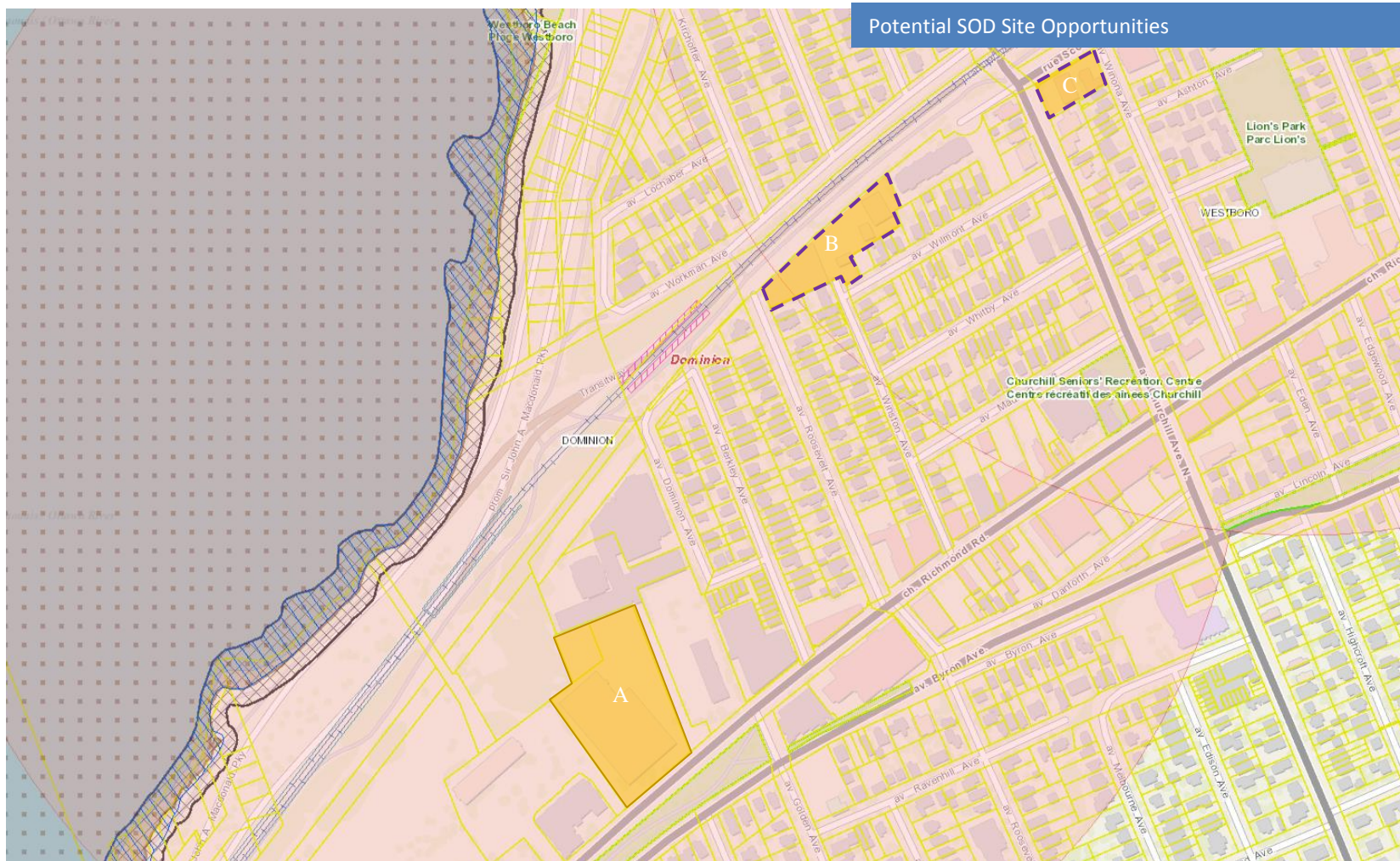


Active & Proposed Developments



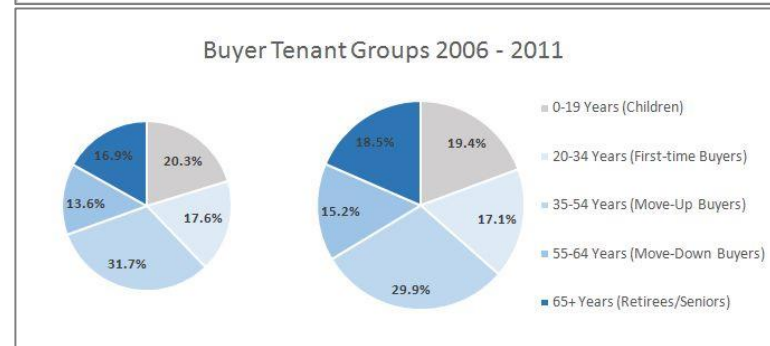
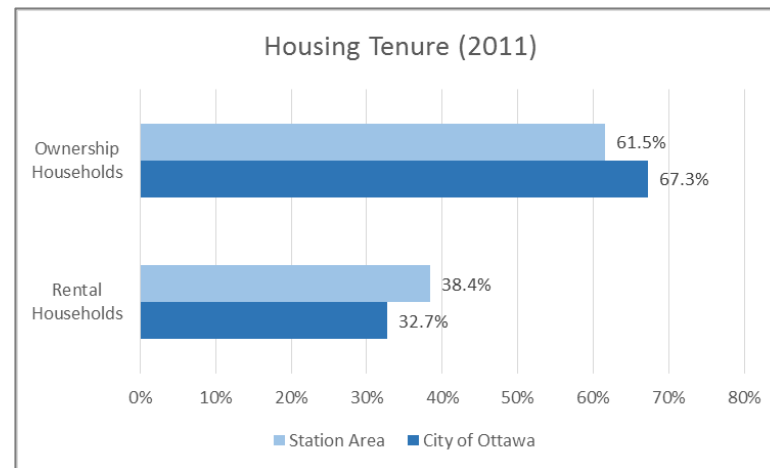
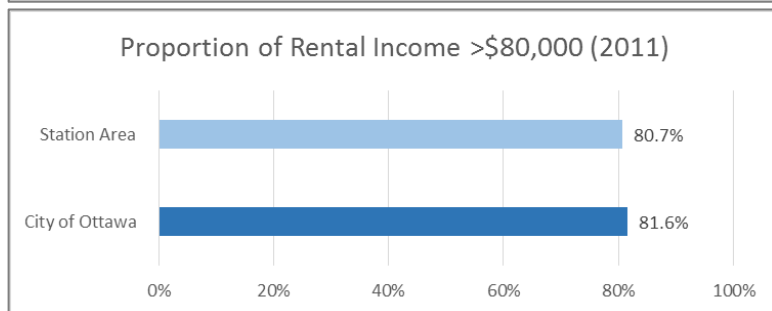
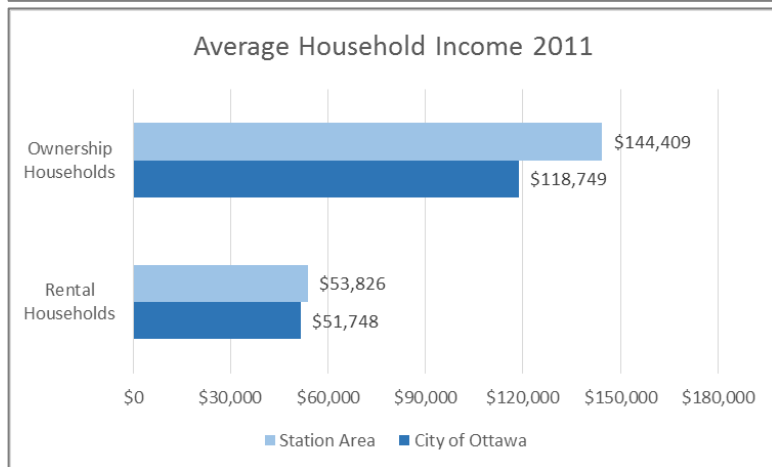
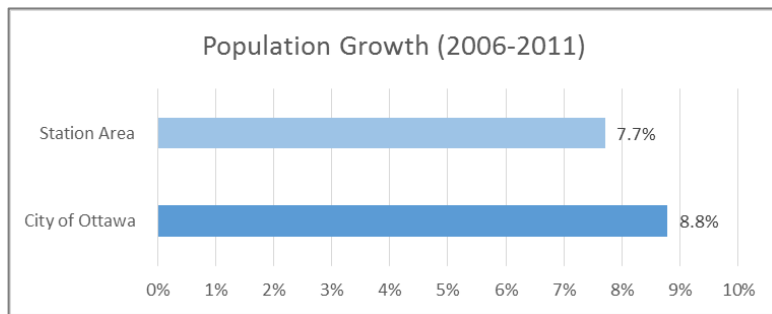
Two residential development applications are currently in the pipeline within the immediate vicinity of Cleary Station, proposing three mixed-use residential buildings between 14 to 16-storeys.

Dominion Station



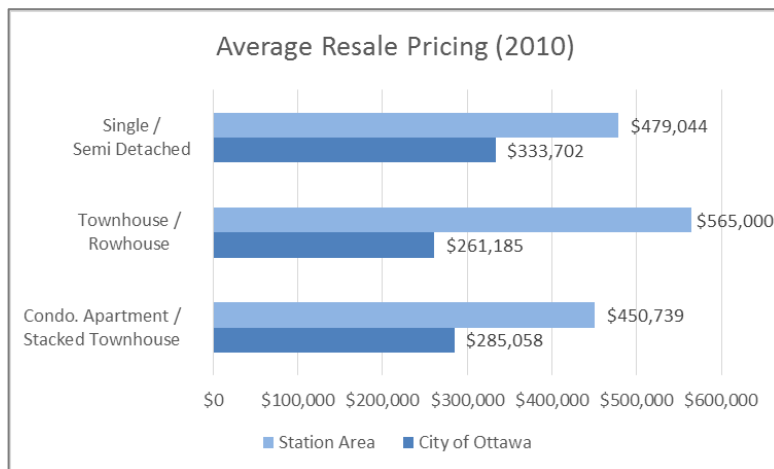
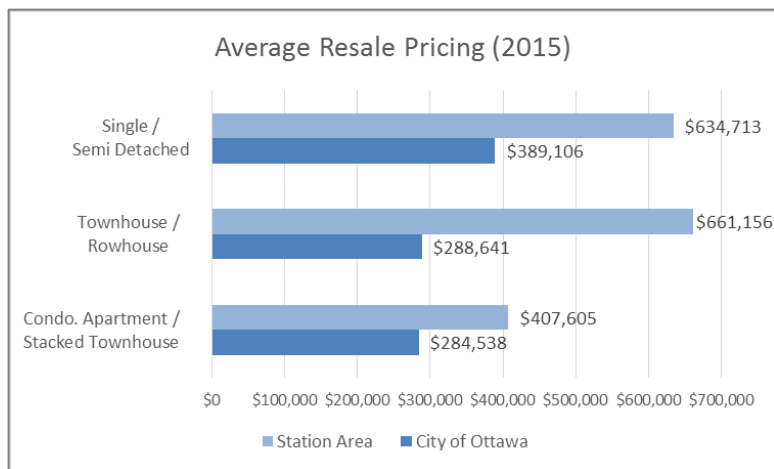
Summary Property Details			
A	Offices	Rogers Cable Communications Inc.	3.2 ac
B	Residential	Uniform Properties Limited	1.3 ac
C	Offices	EJSPA Corporation	0.4 ac

Dominion Station



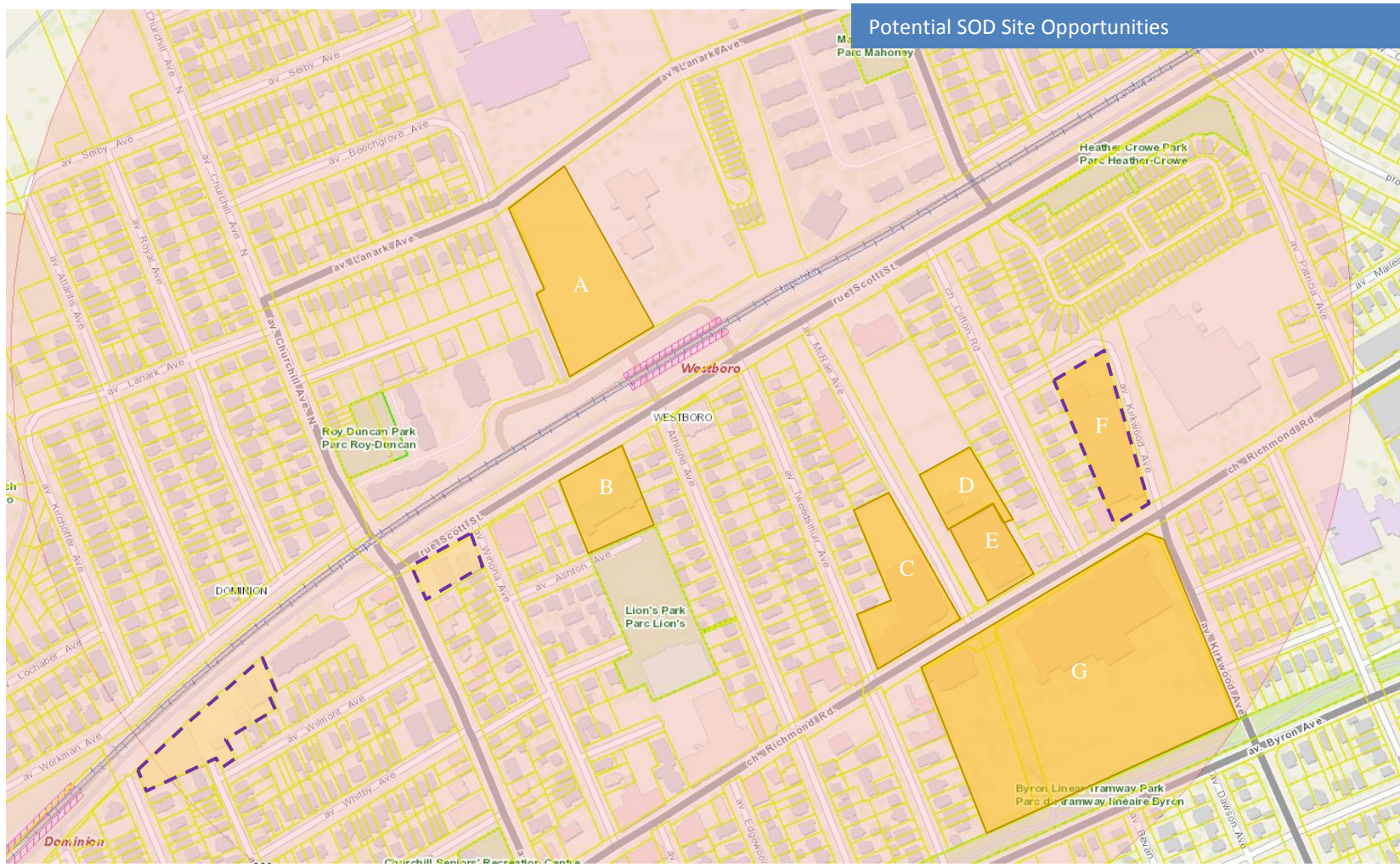
Dominion Station

Active & Proposed Developments



UpperWest, by Minto, is the sole actively marketing project within the immediate vicinity of Dominion Station. There are also currently two proposed residential developments at 335 Roosevelt Avenue and 371 Richmond Road, as well as an office application at 566 Byron Avenue.

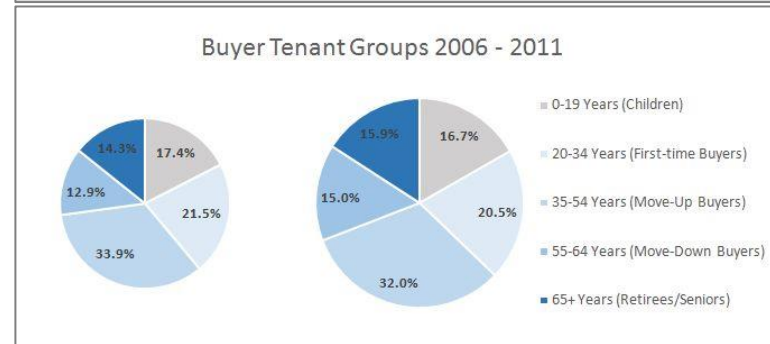
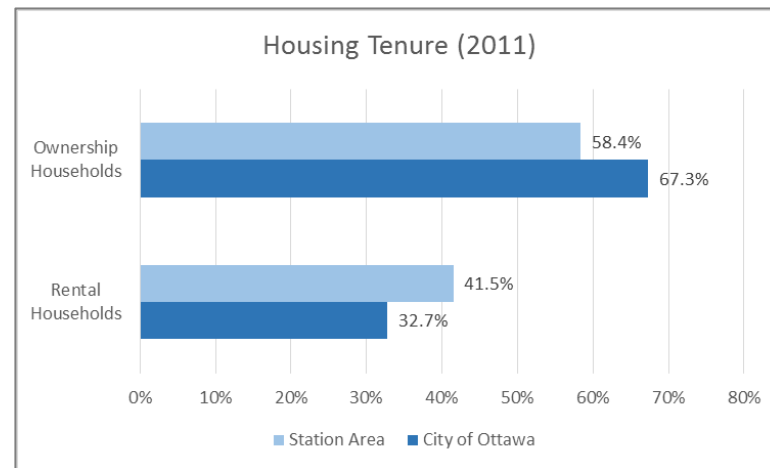
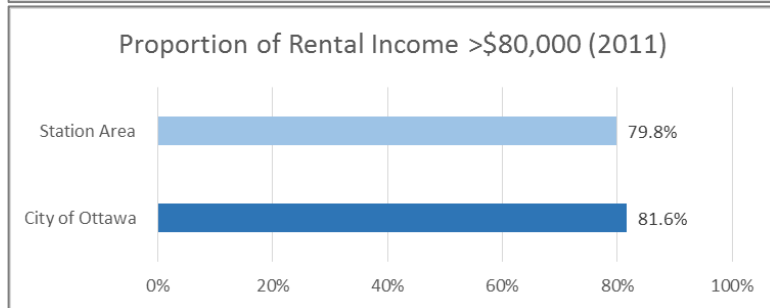
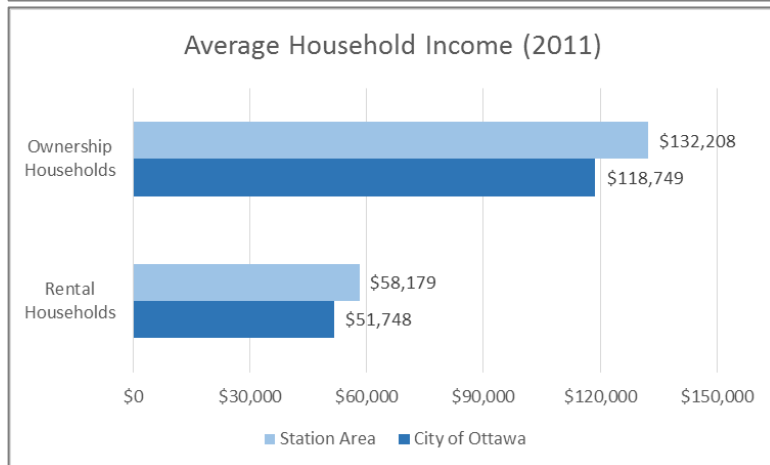
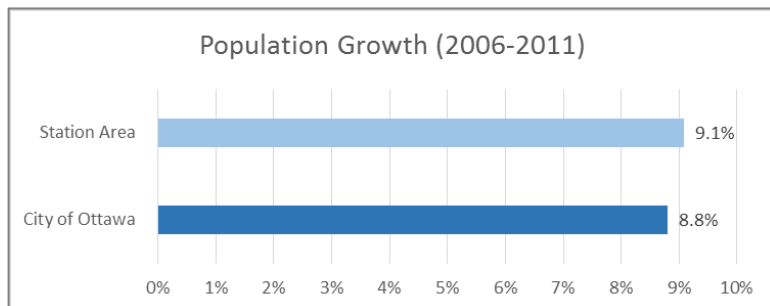
Westboro Station



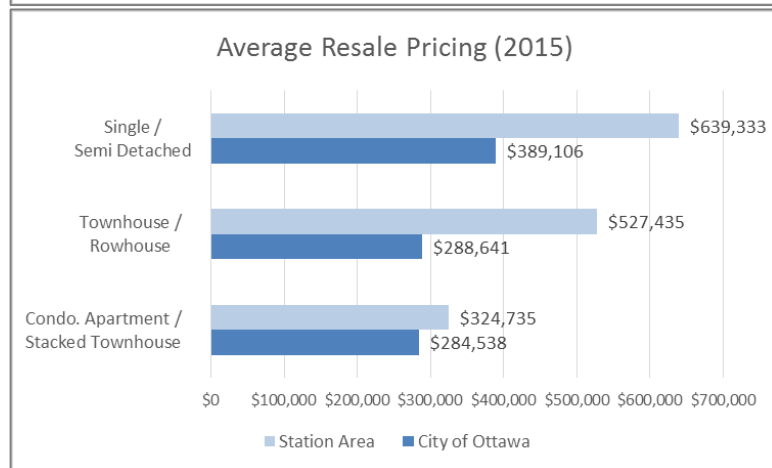
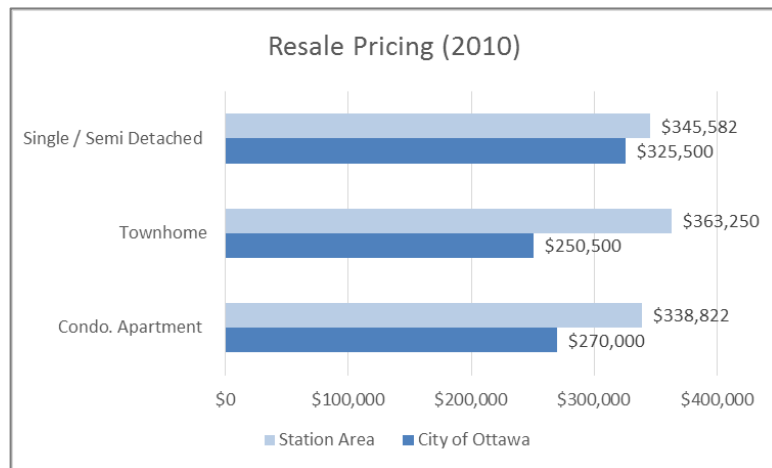
Summary Property Details			
A	Vacant	Federally Owned	2.7 ac
B	Curling Rink	The Granite Curling Club of West Ottawa Inc.	1.2 ac
C	Dealership	3526097 Canada Inc. (Subaru Dealership)	1.8 ac
D	Retail	3526097 Canada Inc.	0.7 ac

E	Retail	Nisman Holdings Ltd.; Leimerk Developments Ltd.	0.8 ac
F	Retail	Claridge Homes (Westboro) Inc.	1.5 ac
G	Retail	CP Reit Ontario Properties Ltd., City of Ottawa	11.5 ac

Westboro Station



Westboro Station

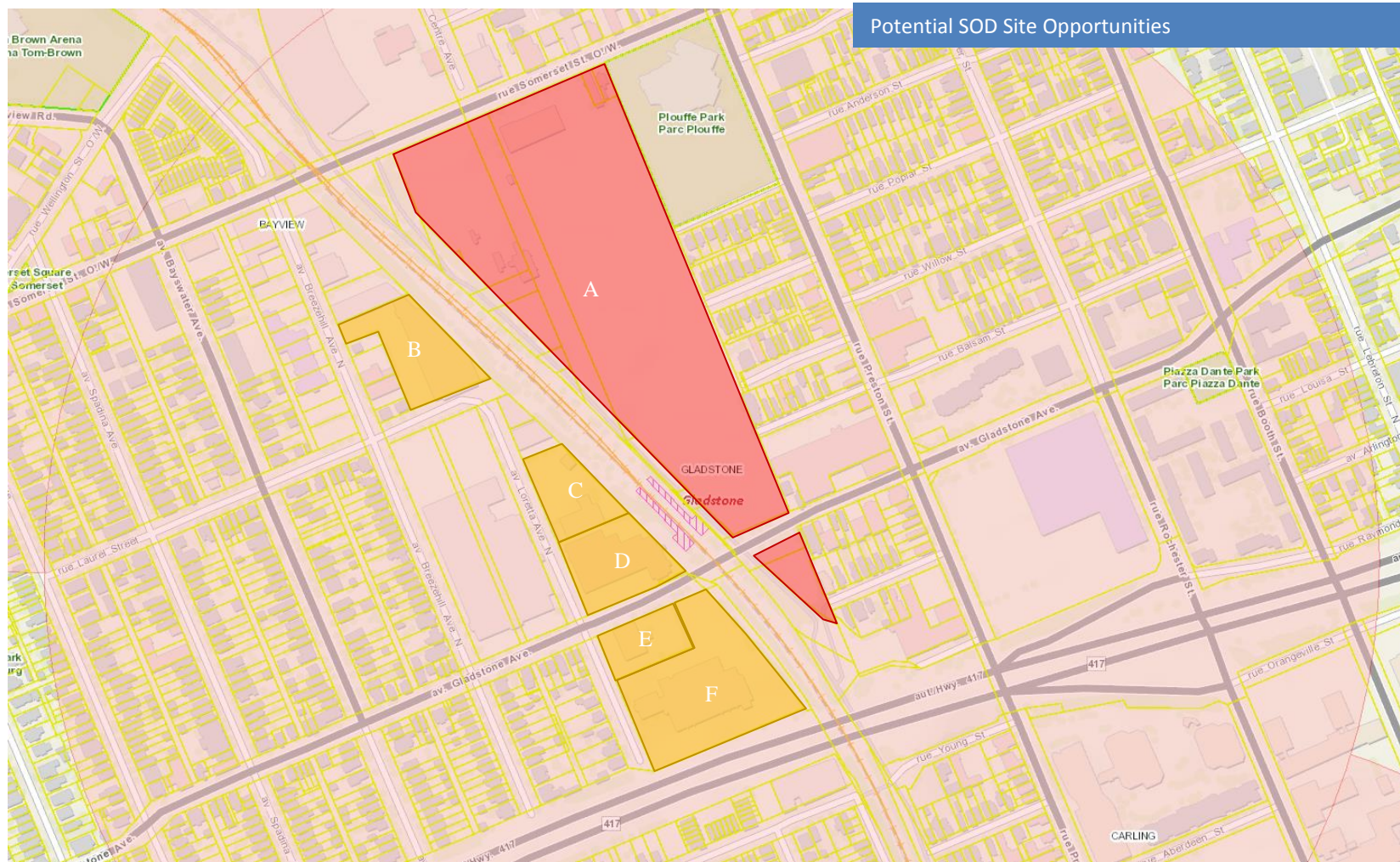


Active & Proposed Developments



The Q-West master-planned condominium apartment community, by Ashcroft, represents the most recent cluster of high-density market activity surrounding Westboro Station. Four residential towers between 4 to 9-storeys, as well as one 5-storey office have also been proposed within the immediate station area.

Gladstone Station



Potential SOD Site Opportunities

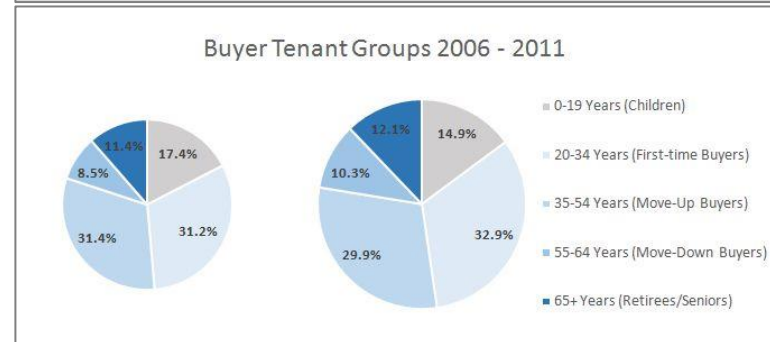
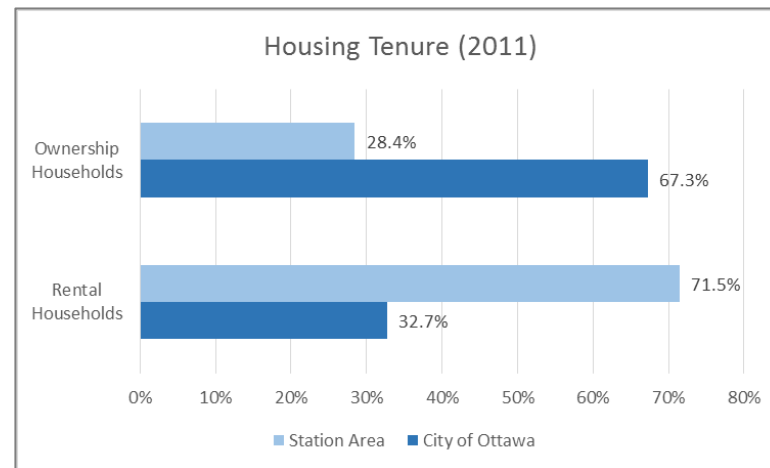
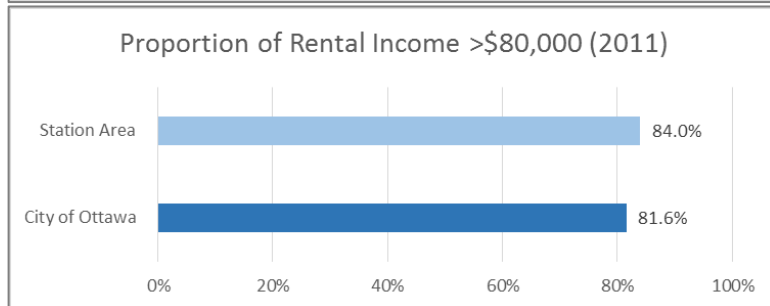
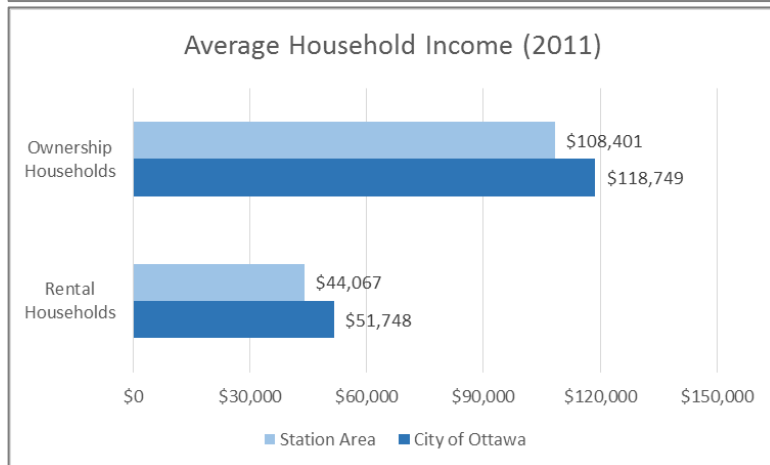
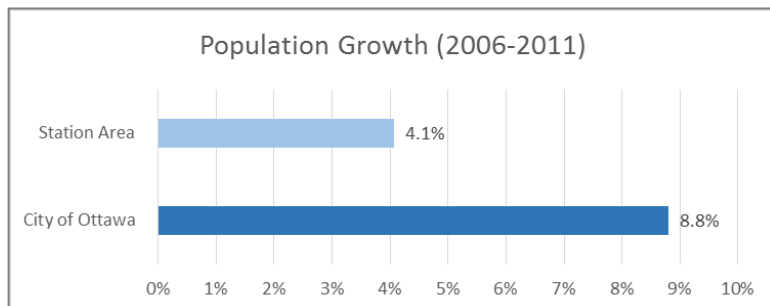
Summary Property Details

A	Vacant	Federally Owned	16.7 ac
B	Retail	Unsworth, Carson	1.5 ac
C	Retail/Industrial	Loretta Avenue Inc.	1.0 ac

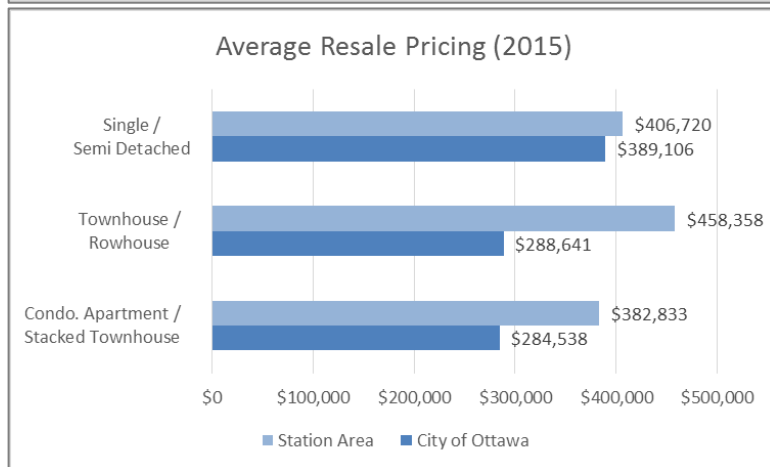
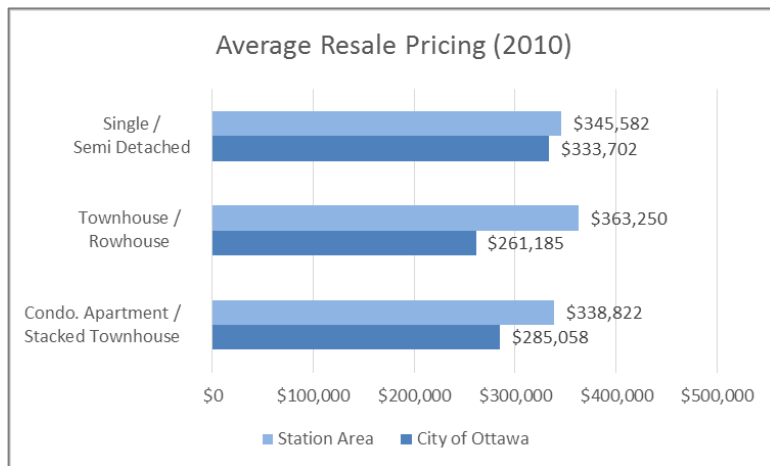
Summary Property Details

D	Retail/Industrial	Gladstone Avenue Inc.	1.4 ac
E	Retail	R. Connelly Securities Ltd.	0.8 ac
F	Offices	Regional Municipality of Ottawa-Carleton	3.3 ac

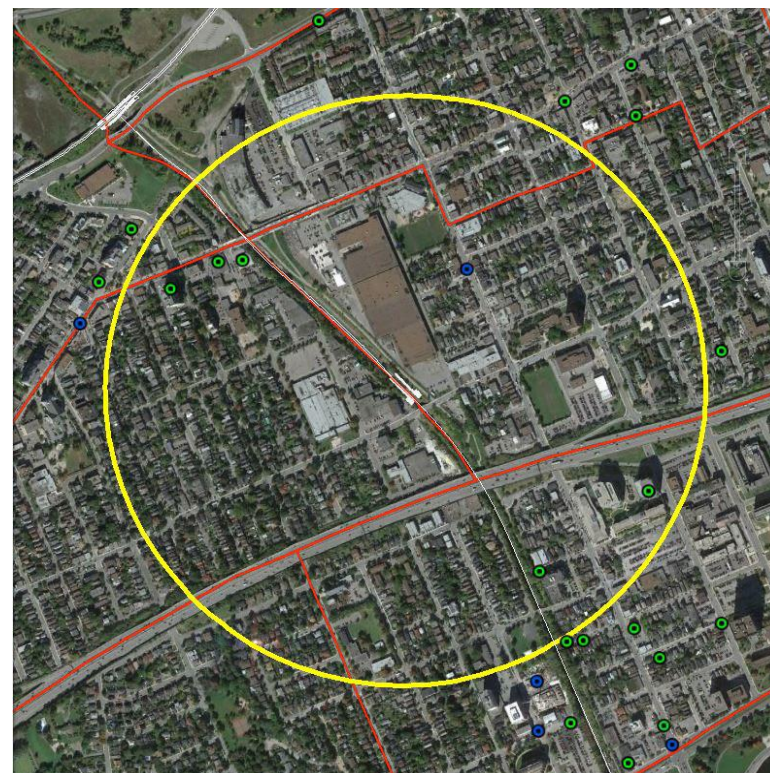
Gladstone Station



Gladstone Station

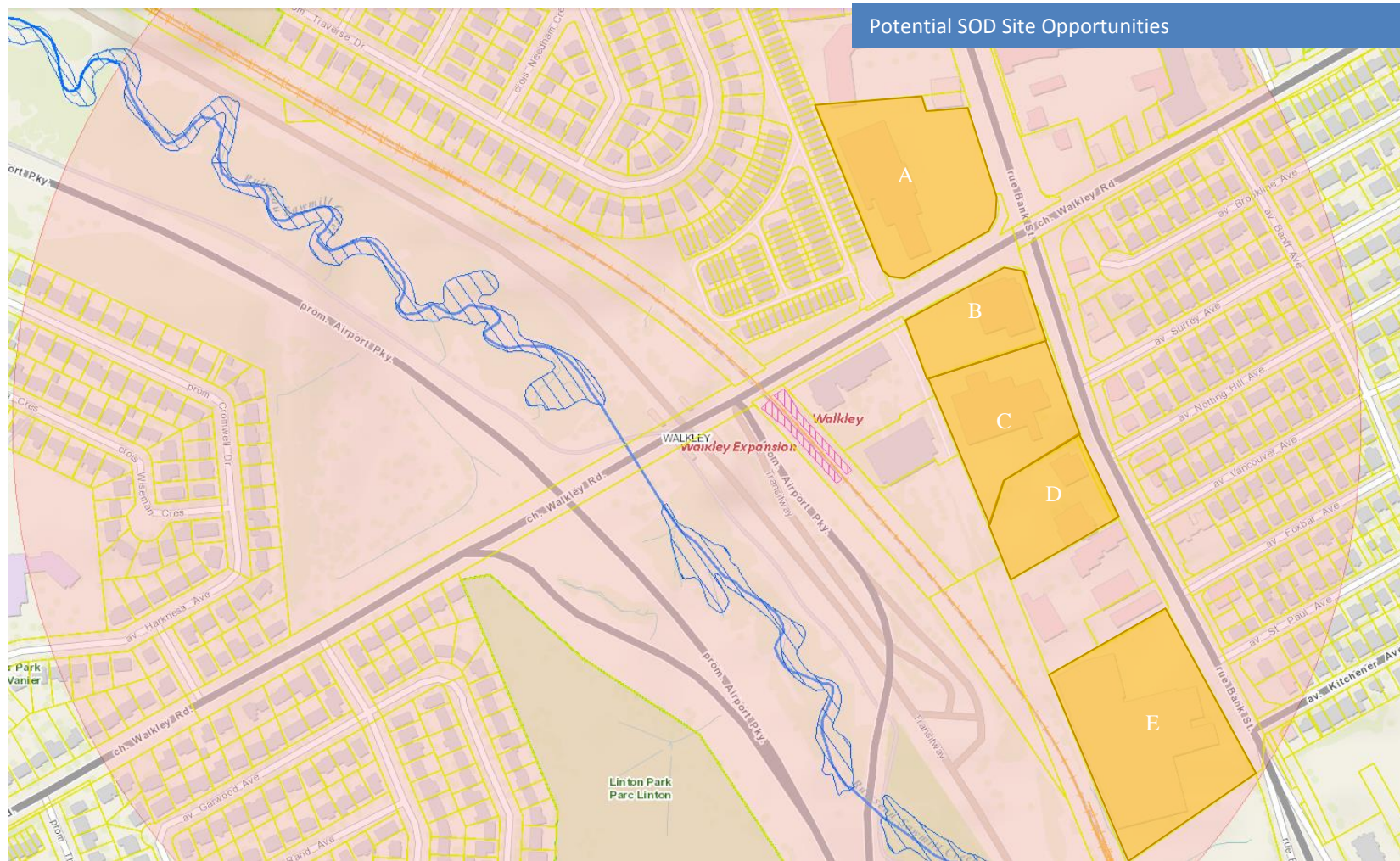


Active & Proposed Developments



The largest concentration of proposed developments has been identified surrounding Gladstone station, with eleven high-density residential applications within the immediate station vicinity.

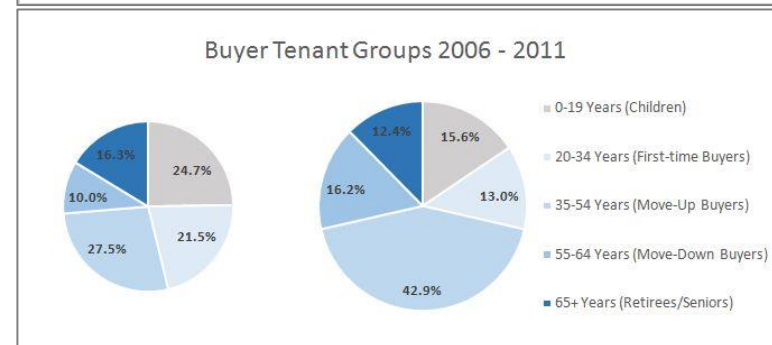
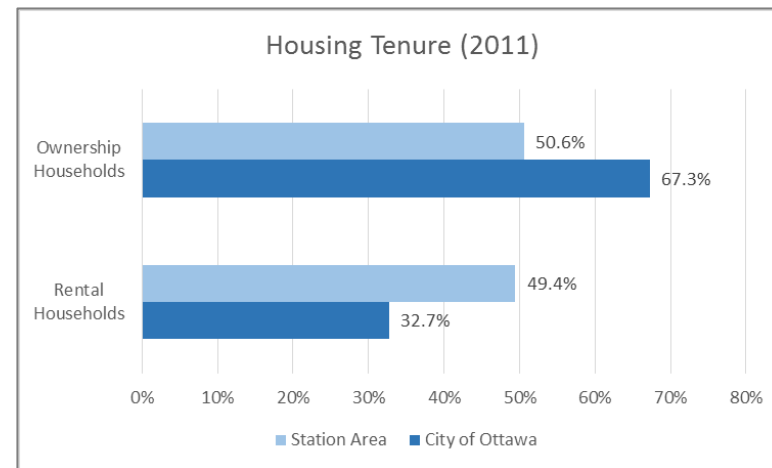
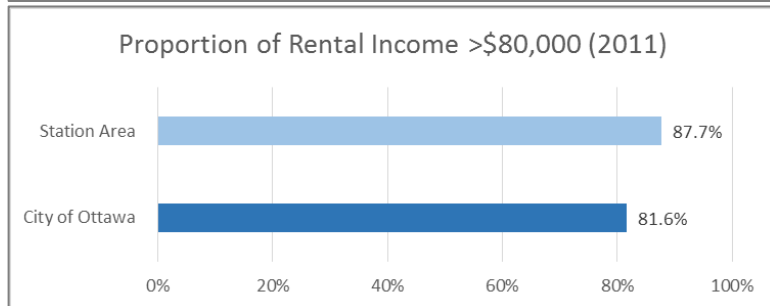
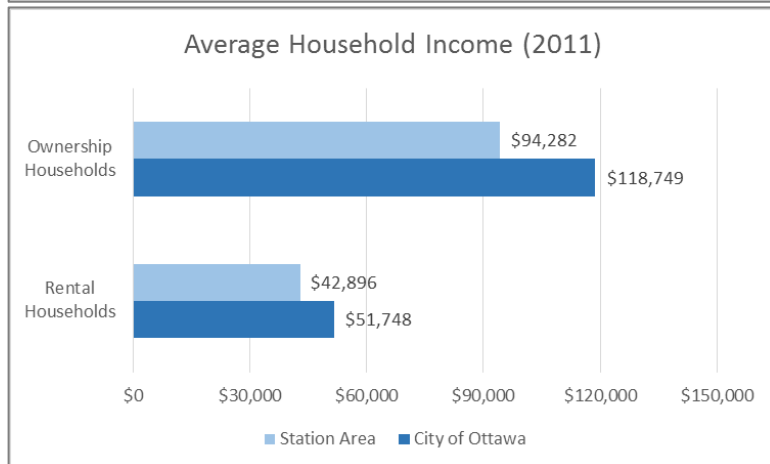
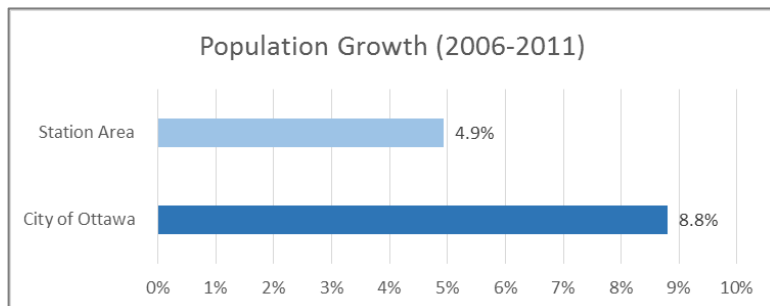
Walkley Station



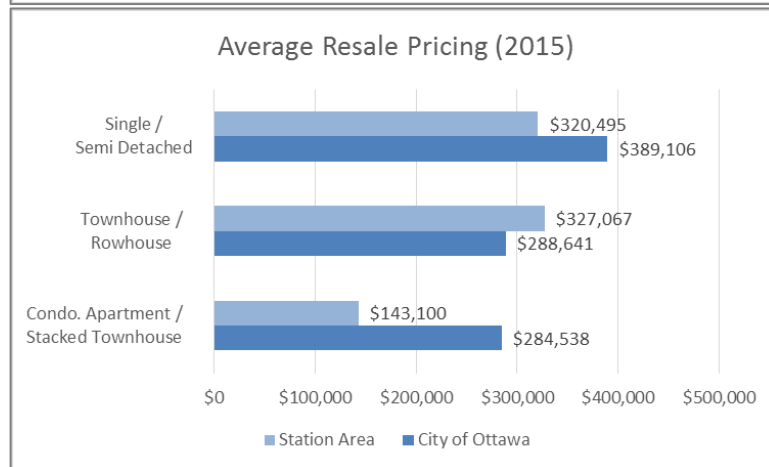
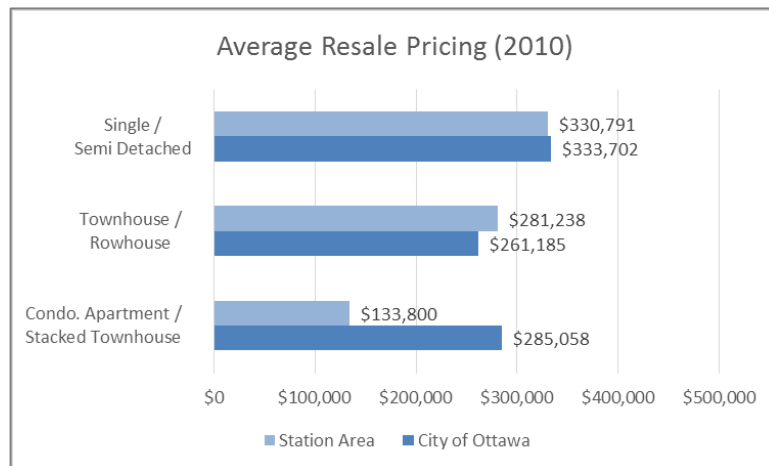
Summary Property Details			
A	Retail	Sun Life Assurance Company of Canada	4.3 ac
B	Retail	Ambassador Realty Inc.	1.8 ac
C	Retail	Ocean Properties 2 Inc.	2.9 ac

D	Restaurant	Riocan Holdings Inc.	1.9 ac
E	Retail	The Liquor Control Board of Ontario	5.5 ac

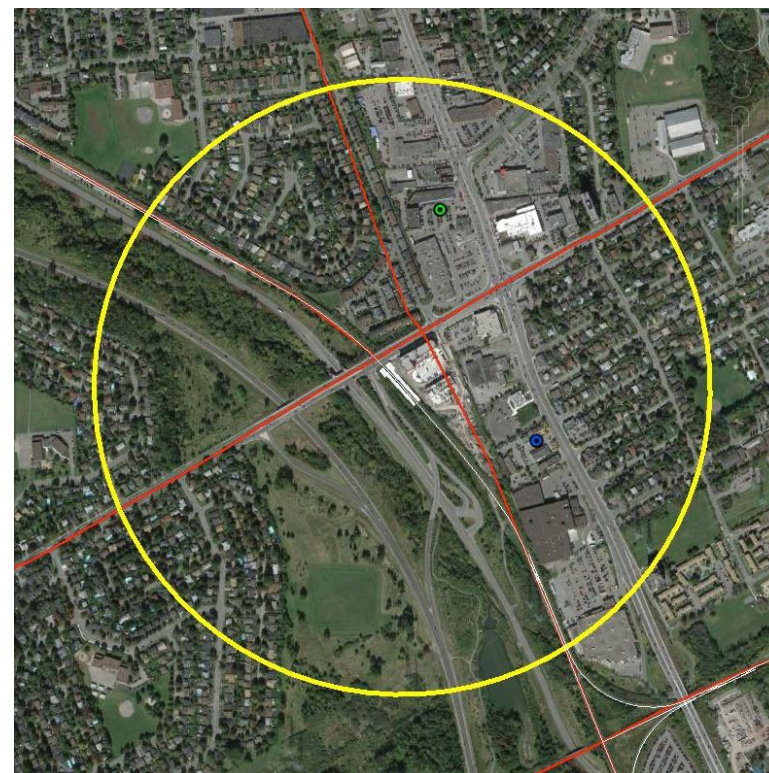
Walkley Station



Walkley Station

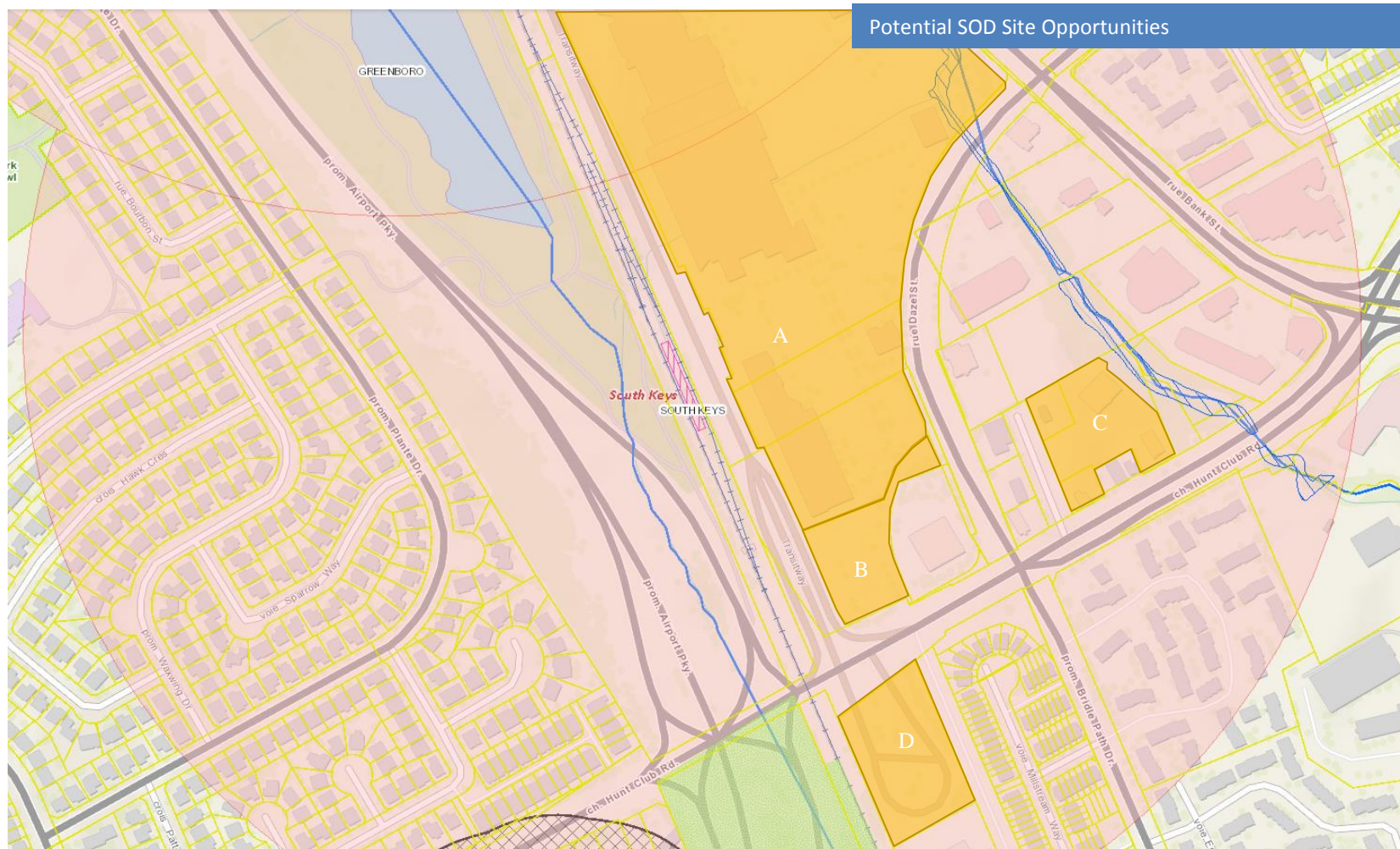


Active & Proposed Developments



Distillery Warehouse Lofts, by Linden Developments, is the sole actively marketing development surrounding Walkley station. In addition, an application at 1800 Bank Street is proposing up to 456 residential units within a 15-storey mixed use development.

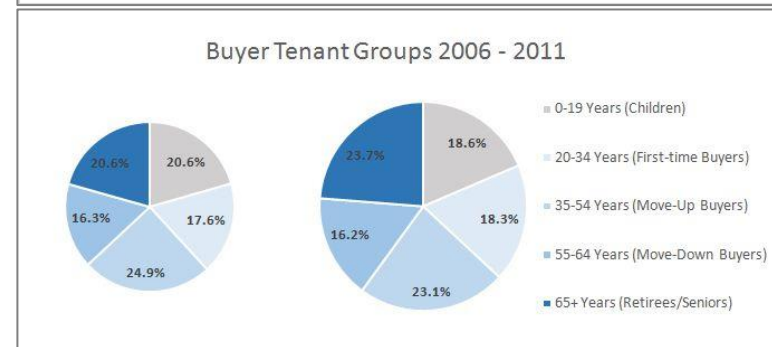
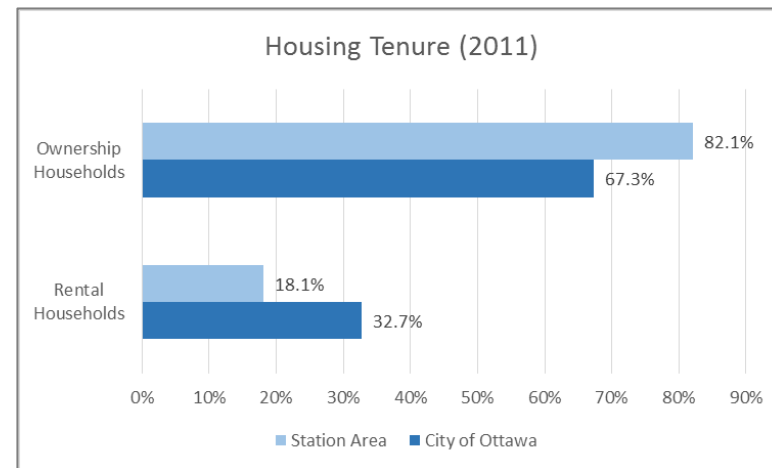
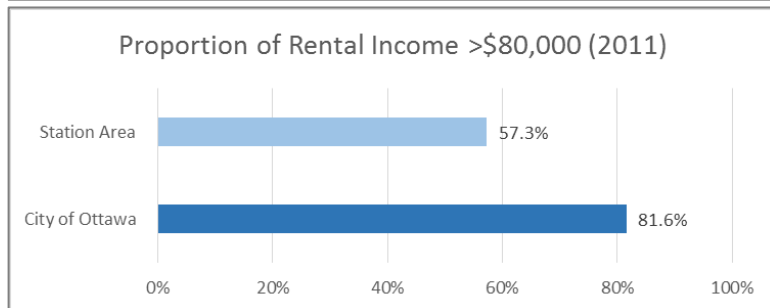
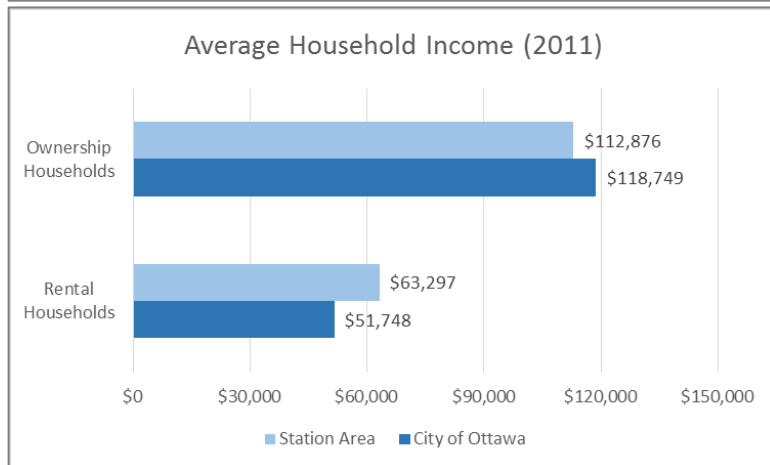
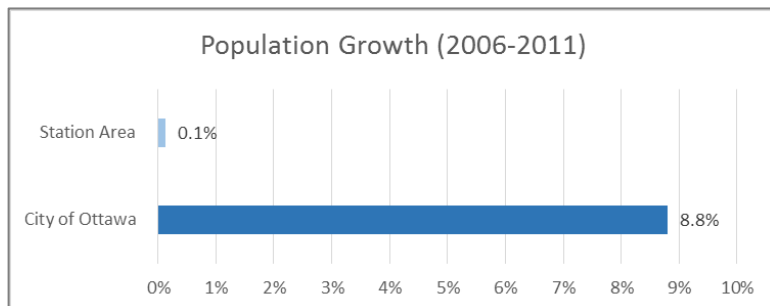
South Keys Station



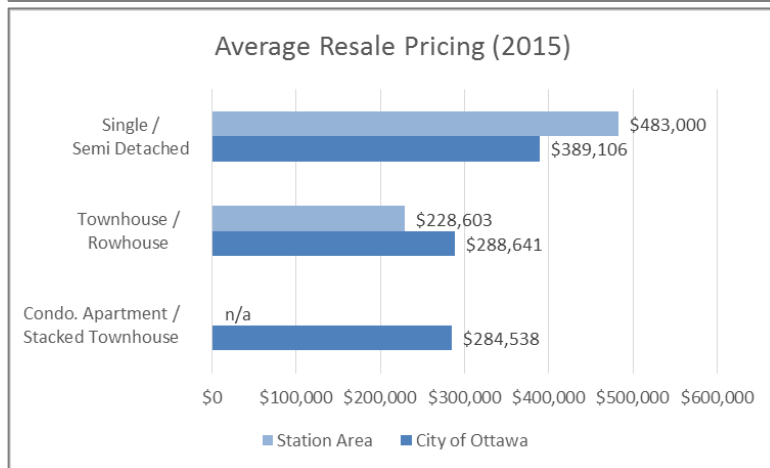
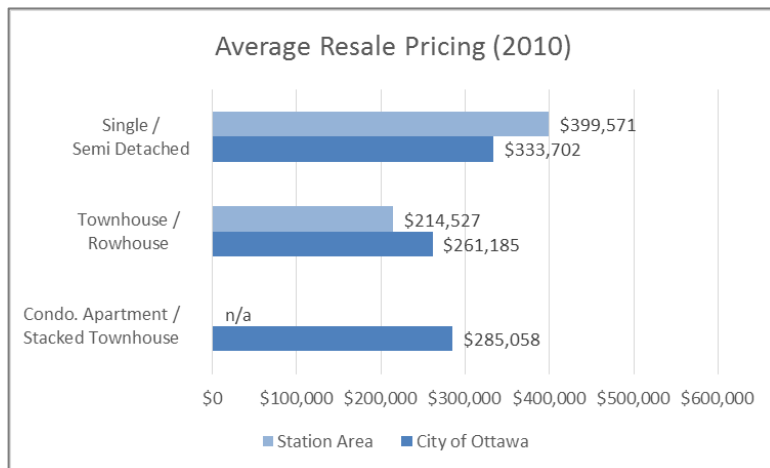
Summary Property Details			
A	Retail	Calloway Reit Inc.	26.4 ac
B	Parking Lot	Cominar on Real Estate Holdings Inc.	1.9 ac

C	Vacant	1179 Hunt Club Inc.	2.7 ac
D	Road	Regional Municipality of Ottawa-Carleton	2.8 ac

South Keys Station



South Keys Station

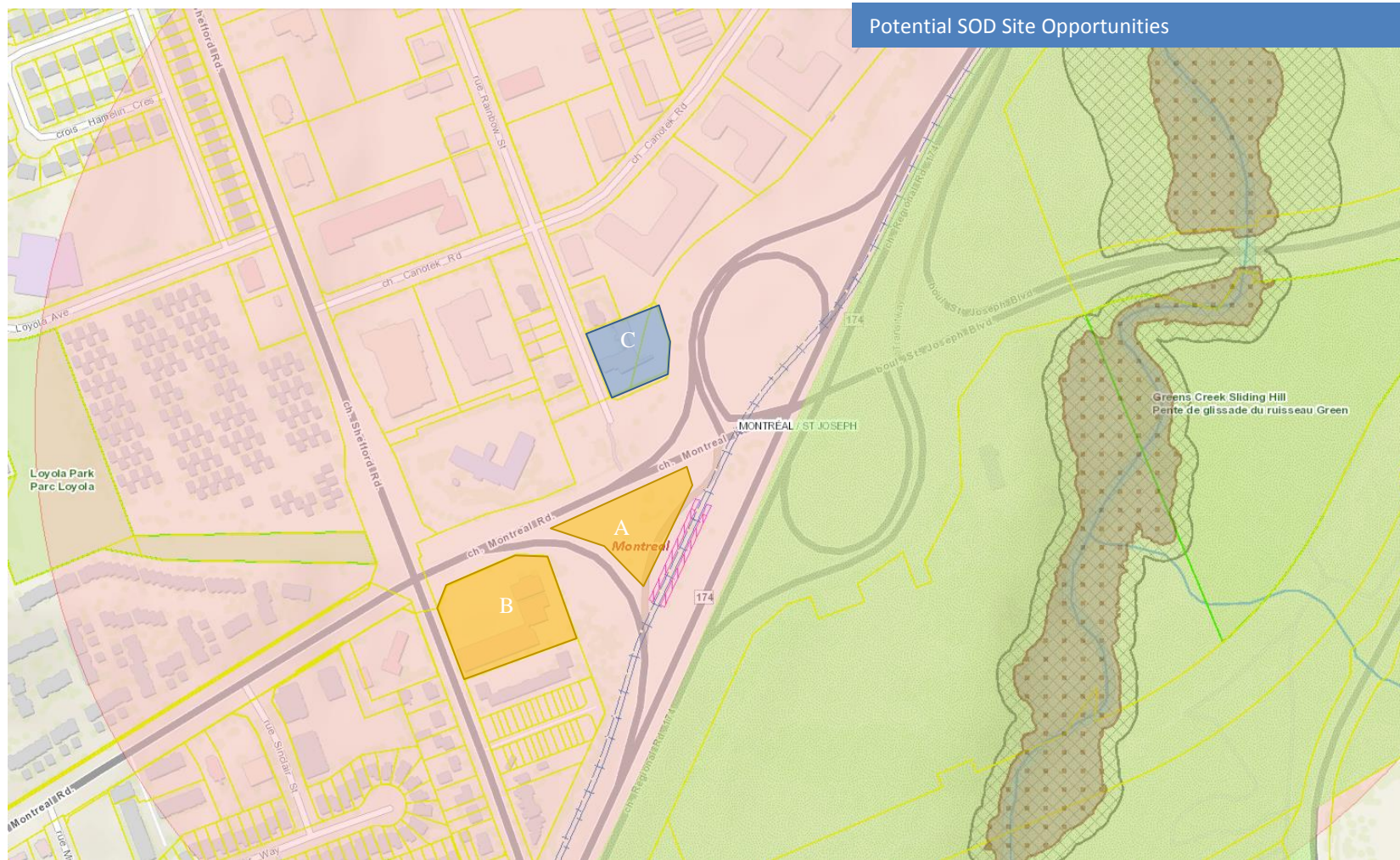


Active & Proposed Developments



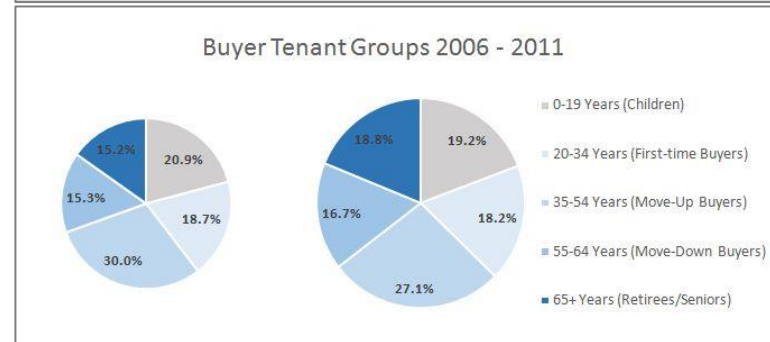
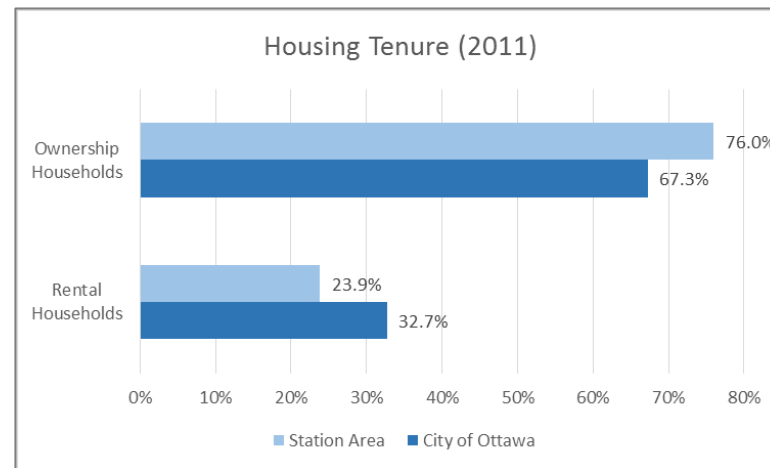
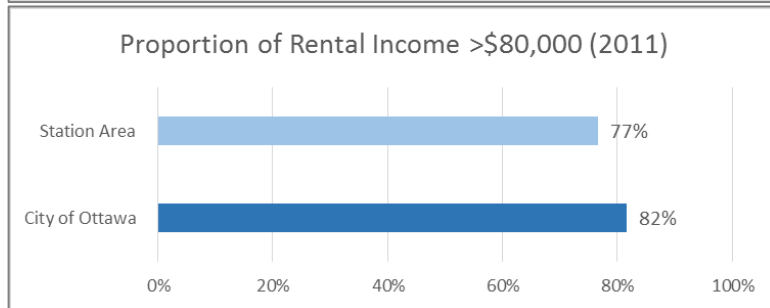
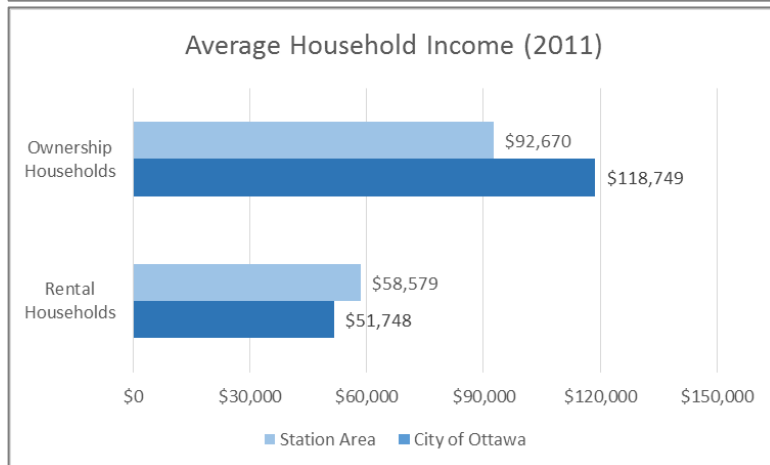
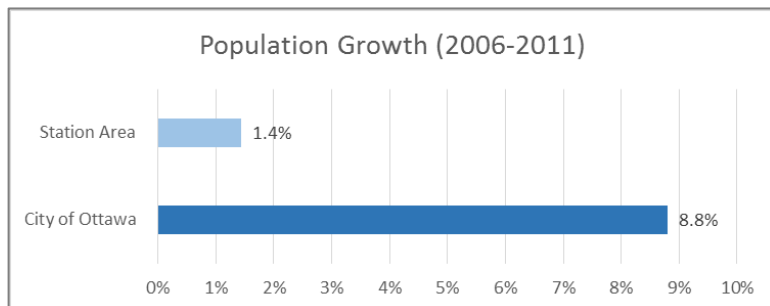
A single development application has been identified within the immediate South Keys area, involving a 6 to 7-storey retirement residence proposing between 150 to 180 units.

Montreal Station

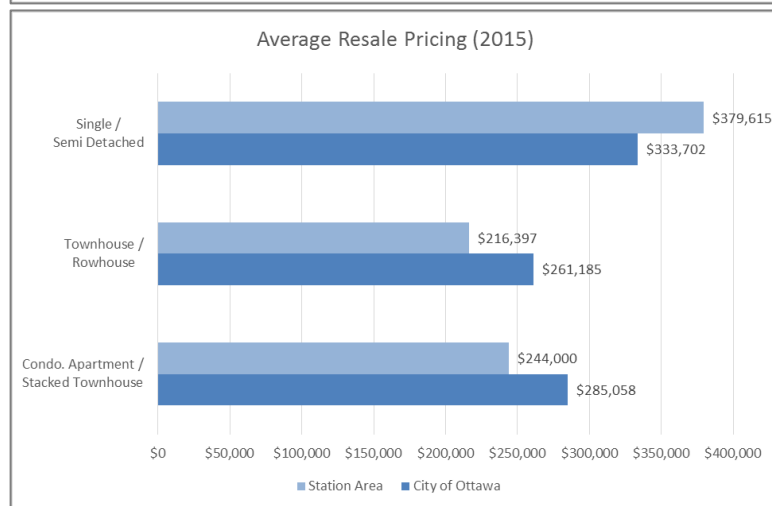


Summary Property Details			
A	Vacant	City of Ottawa	0.9 ac
B	Retail	Ottamer Inc.	2.2 ac
C	Industrial	Iglesias Investments Ltd.	0.9 ac

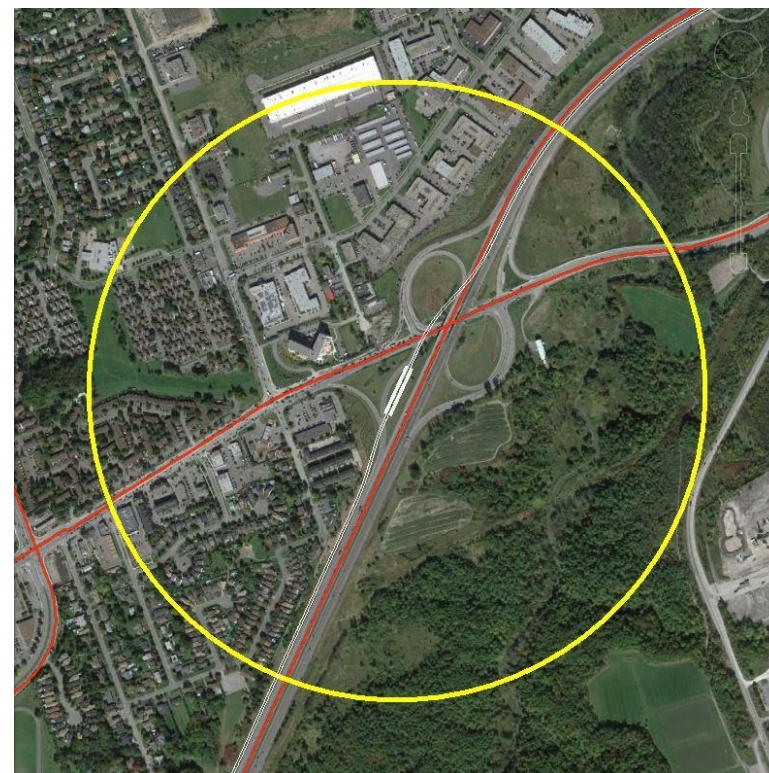
Montreal Station



Montreal Station

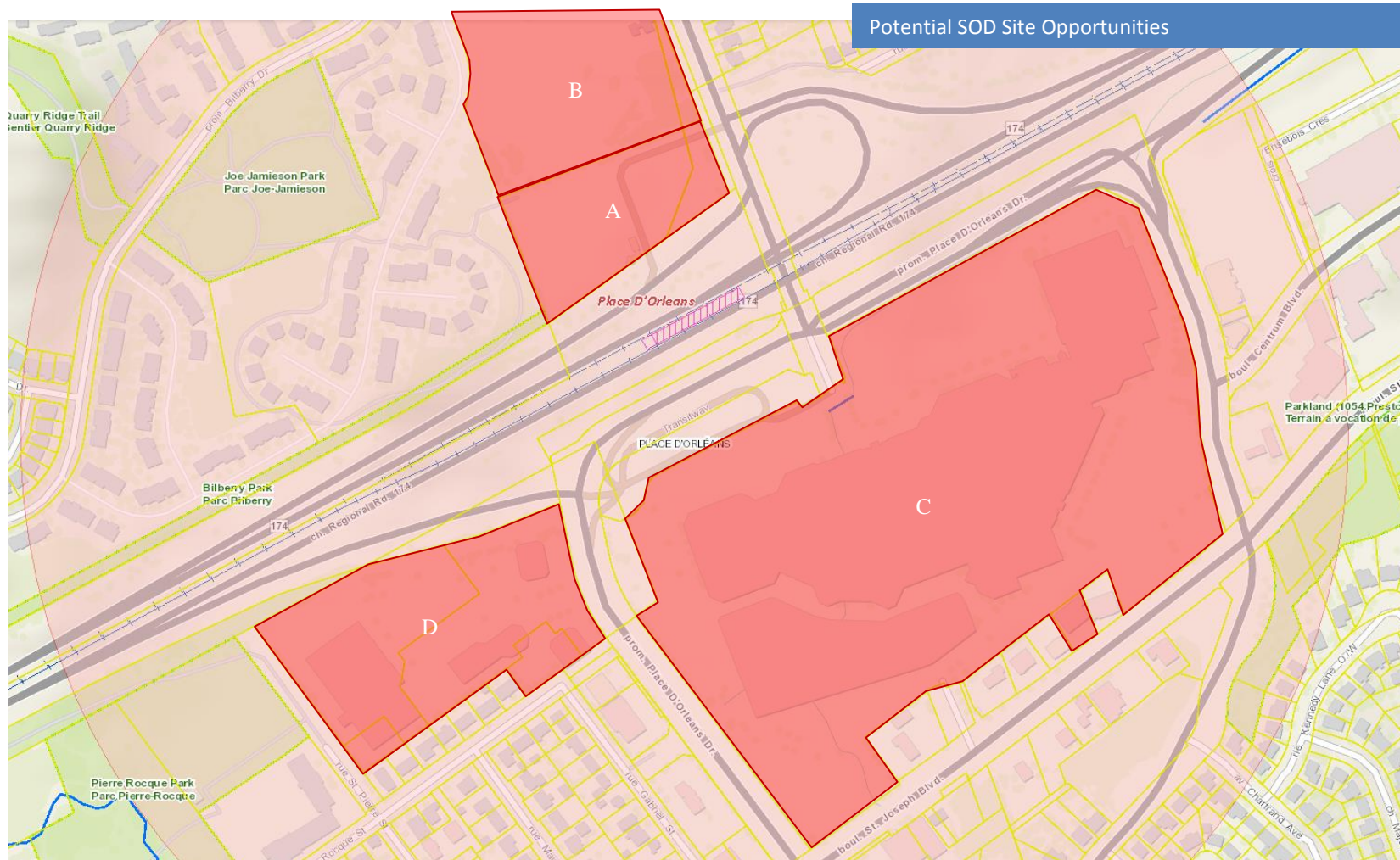


Active & Proposed Developments



None.

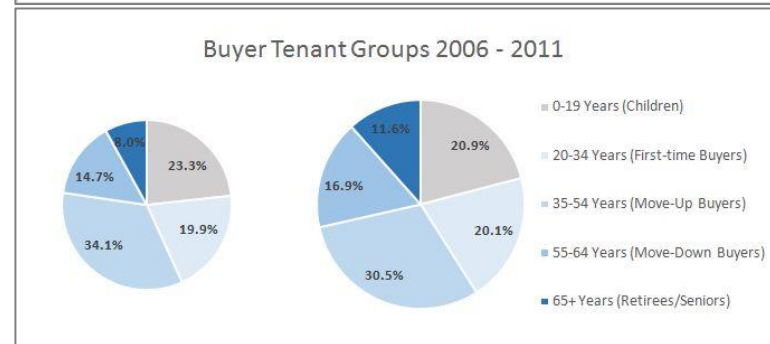
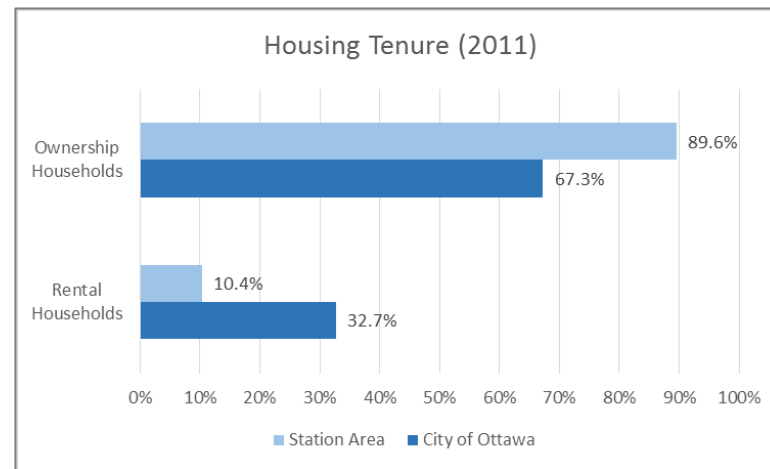
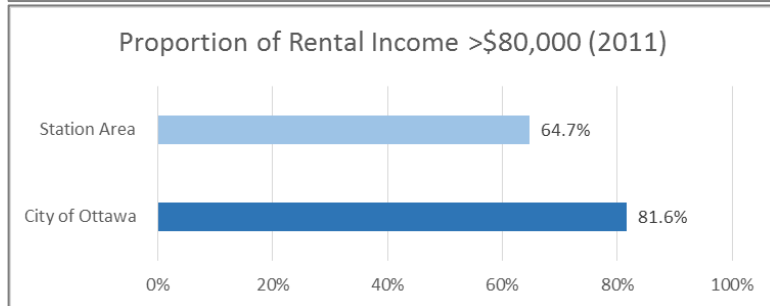
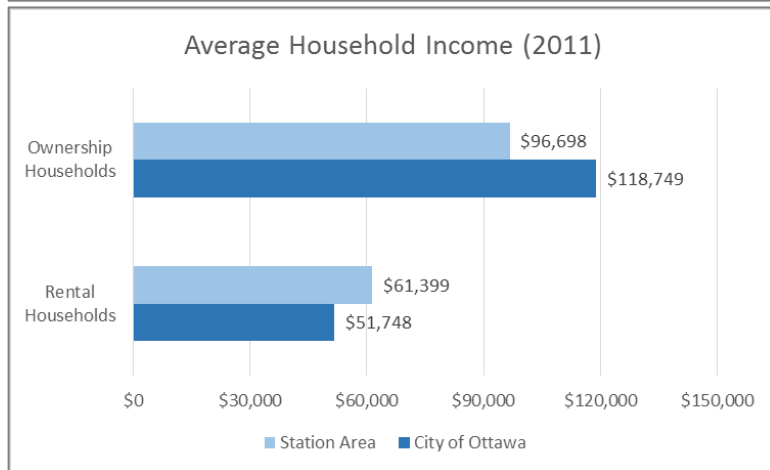
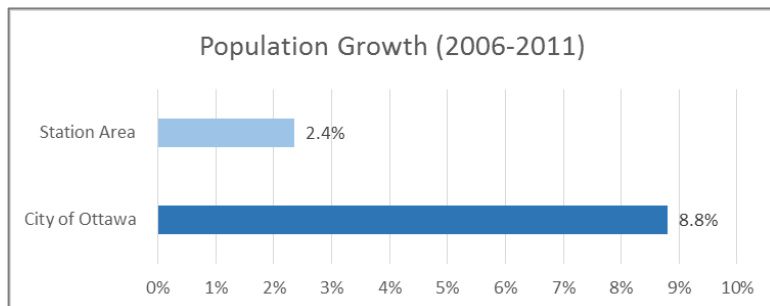
Place D'Orleans Station



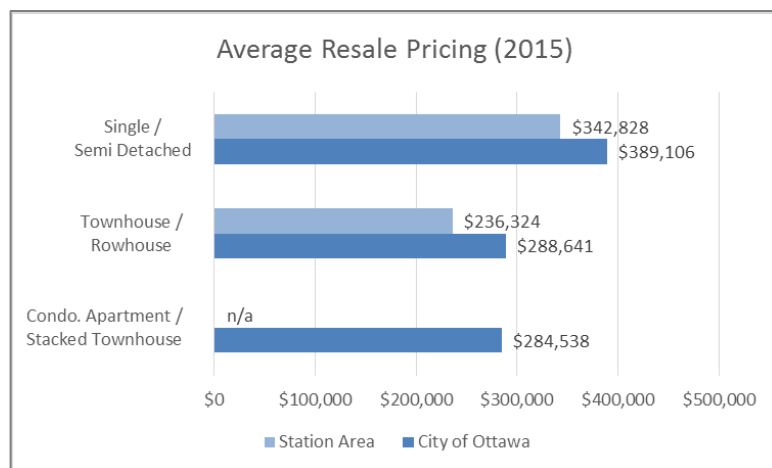
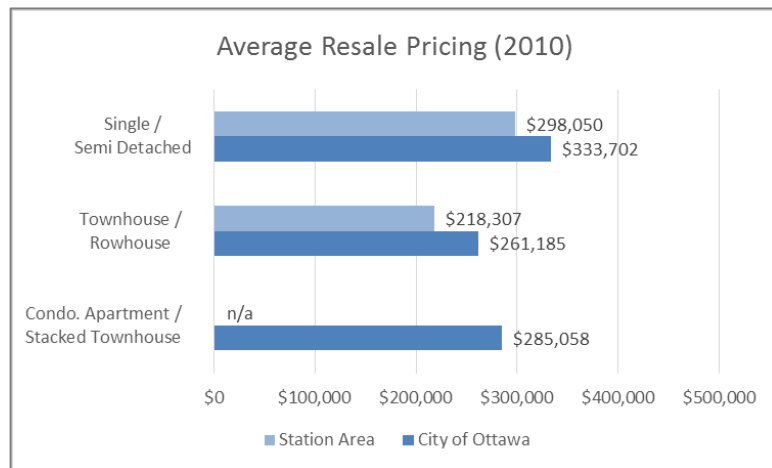
Summary Property Details			
A	Parking Lot	Regional Municipality of Ottawa-Carleton	4.6 ac
B	Vacant	Minto Properties Inc.	6.9 ac

C	Retail	Place D'Orleans Holdings Inc.	42.5 ac
D	Retail	CP Reit Ontario Properties Inc.	5.5 ac

Place D'Orleans Station



Place D'Orleans Station



Active & Proposed Developments



At this time, an application for redevelopment is currently in the pipeline, proposing a potential 90 units within a mixed use building.

Appendix B – Real Estate Market Overview

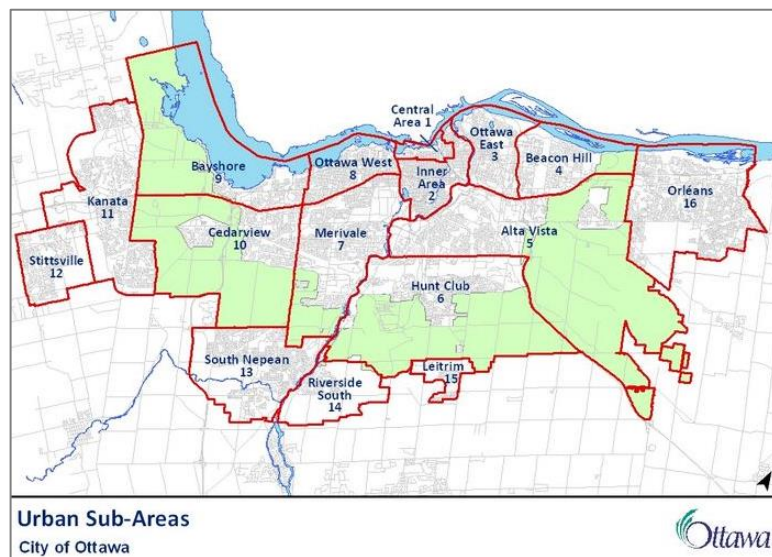
Residential Market Context

Actively Marketing Residential Developments

To isolate market trends along the Stage 2 LRT corridors, NBLC conducted market research on actively marketing medium and high-density residential projects, including condominium apartment and stacked townhouse (‘urban flat’) developments selling as of year-end, 2015. **Figure 13**, provides a map of actively marketing and proposed medium and high-density residential developments while **Table 3** highlights actively marketing projects within a 600-metre radius of a Stage 2 LRT stations.

The following map provides an overview of the various submarket areas referred to in the following market observations.

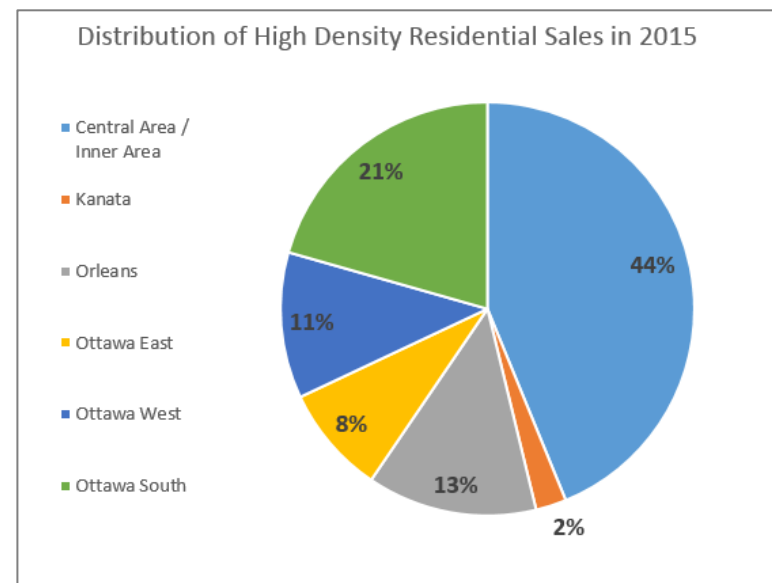
Figure 13



The absorption of high-density residential development in the City of Ottawa has historically averaged between 850 and 1,500 units per annum. In 2015, the City absorbed a total of 977 new high-density units. Of note, there are currently 72 actively marketing high-density residential projects (representing 8,058 units) in Ottawa, overall. These projects are selling at an estimated average rate of 1.19 sales per project, per month.

The majority of the sales activity throughout actively marketing projects in Ottawa have occurred within the central areas of the market area, as illustrated in the following chart.

Figure 14



The following points highlight other notable characteristics of the actively marketing high-density residential market in Ottawa.

- The highest concentration of actively marketing condominium apartment projects are currently found within the Central Area and

Inner Areas of Ottawa, and to a lesser extent within the Ottawa West and Ottawa East areas. These three areas account for approximately 4,194 actively marketing condominium apartment units across 29 active development projects.

- Ottawa West saw the second largest number of actively marketing condominium projects amongst all other submarkets, with a number of projects located in the Westboro neighbourhood. Known for its lively main street character with many shops and restaurants; developments within this area are largely concentrated along Richmond Road, mainly in the form of boutique and mid-rise buildings from 4 to 10-storeys in height.

The Ottawa East area followed just behind that of Ottawa West area in terms of development activity, however much of the development in this submarket is comprised of stand-alone mid-rise condominium apartment projects along the Rideau River. Urban flat and stacked townhome projects, often as a part of larger lower-density community developments (with unit counts between 80-140 units), were found more commonly along the periphery of this submarket area.

Table 2

Actively Marketing Condominium Apartment and Stacked Townhome / Urban Flat Project stats by area*						
Area	# of Projects	Total # Units	Min Price	Max Price	Min Size	Max Size
Condominium Apartment Projects						
Central Ottawa ^	29	4,194	\$179,990	\$5,000,000	317	2,437
Ottawa West	8	1,135	\$176,900	\$1,375,930	408	2,025
Ottawa East	5	628	\$215,000	\$940,900	561	1,909
Ottawa South ^^	5	312	\$224,900	\$477,000	570	1,260
Kanata	3	87	\$199,287	\$593,999	495	1,388
Orleans	5	404	\$173,300	\$607,800	452	1,261
Subtotal / Average	55	6,760	\$173,300	\$5,000,000	317	2,437
Stacked Townhome / Urban Flat Projects						
Ottawa Central	1	17	\$229,800	415,800	520	913
Ottawa West	-	-	-	-	-	-
Ottawa East	1	106	\$310,900	350,900	1,294	1,440
Ottawa South	6	432	\$189,900	397,900	900	1,833
Kanata	4	332	\$214,900	492,000	771	1,510
Orleans	5	411	\$184,900	368,900	729	1,438
Subtotal / Average	17	1,298	\$184,900	\$492,000	520	1,833
Totals / Average	72	8,058	\$173,300	\$5,000,000	317	2,437

*Based on availability of data, end-price ranges and remaining inventory at each project. ^Central Ottawa includes the Central Area and Inner Area submarkets. ^^Ottawa South includes the Alta Vista, Merivale, South Nepean and Riverside South submarkets.
 Source: PMA Brethour, City of Ottawa Condominium Market Update and N.Barry Lyon Consultants

- With respect to sales volumes and activity, actively marketing condominium apartment and urban flat projects combined experienced approximately 13.4 sales per site in 2015, equating to 1.12 sales per month per project.
 - Condominium apartment projects experienced roughly 14.5 sales per project, or 1.2 sales per project per month, while urban flat projects saw a lower proportion of sales, with roughly 10.5 sales per project or 0.9 sales per project per month.
 - The lower velocity of urban flat sales can be attributed the location of most urban flat projects. The majority of active urban flat development projects are located within market areas with less demand for high-density product types, namely Ottawa South, Kanata and Orleans.
- Twelve actively marketing projects were found to have experienced notable higher sales success in 2015 compared to the overall market average of 1.1 sales per month. These projects experienced between 20 and 50 sales within a year (between 1.75 and 3.9 sales per month), following are some notable attributes of these developments.
 - Location is a factor likely contributing to the sales success of the majority of these projects. Often, projects located within the City's Central Area and Inner Area submarket areas can leverage the urban characteristics and neighbourhood amenities to not only sell suites at higher sales pace but also at a slightly higher price point.
 - Chapman Mills, by Minto, was the top selling project in 2015 project with respect to its overall sales volume (47 sales). This urban flat project, located in South Nepean (Barrhaven), offered the lowest end-pricing (ranging from \$189,900 to \$213,900) while delivering large suite sizes (between 1,000 to 1,100 square feet). Of note, the project began selling its latest development phase in February 2015.
- There also appears to be a correlation between higher overall sales absorptions in condominium apartment projects with starting pricing below a \$200,000 threshold and specifically amongst projects offering entry-level pricing between a \$150,000 to \$170,000 starting price range. This marketing strategy, used at five of the 12 top performing projects in our survey, has allowed these developers to draw potential purchasers from a broad pool of buyers, attracting first time buyers and potential investors.
- Mid-rise condominium apartments and urban flat projects within a 3 to 6-storey range are prominent in areas outside of the greenbelt, namely in the south Ottawa areas (Merivale, Hunt Club, and South Nepean areas) and South Orleans (in addition to those in the eastern part of Ottawa).
 - Urban flat/ stacked townhome projects were the most common high-density built form in the City's peripheral submarkets, often as a phase of a larger master-planned community. These unit types cater to a range of purchaser groups from first-time homebuyers and young couples to retirees and move-down purchasers.
 - Unit sizes amongst urban flat projects in south Ottawa and south Orleans areas were, on average, approximately 1,100 square feet in size, with both one and two-storey units offered.
 - Of note, there was just one actively marketing urban flat project recorded in the Central Area (Edge Lebreton Flats), unit sizes were found to be smaller compared to all other areas, with units ranging from 520 to 913 square feet. This project differs from urban flats located outside of the Central Area and Inner Area,

as this particular project has been marketed as a luxury development.

- End-pricing varies across developments surveyed as part of our review subject to a development’s location, size, building amenities, suite finishes and target purchaser groups.
 - Condominium apartment projects in the city centre drive the highest end-pricing amongst actively marketing condominium apartment projects, due to the frequency of projects positioned as luxury condominium apartment and loft projects, which included high-end features, finishes, and amenities, as well as penthouse units which often exceeded the \$1 million dollar price point.
 - Orleans and south Ottawa (Merivale, Hunt Club, and Barrhaven) have seen the lowest pricing thresholds amongst condominium apartment projects. Entry-level pricing for remaining inventory amongst these projects was positioned below the \$250,000 mark within both areas. Similar findings were also true for urban flat projects in the Orleans and south Ottawa area, with entry level pricing often below the \$200,000 threshold.
 - Pricing thresholds amongst traditional townhomes within the south Ottawa, Kanata, and Orleans areas were within a close range to that of urban flats. By comparison, traditional townhome end-pricing in these areas ranged between \$220,500 and \$401,900, while urban flat pricing ranged from \$184,900 to \$492,000. With a minimal pricing gap between the two product types, it is likely that many purchasers will continue to demonstrate a preference for ground-related housing forms over higher density stacked townhomes or urban flats.

Purpose-Built Rental Apartment Developments

In addition to actively marketing condominium apartment and stacked townhome/urban flat projects, NBLC also conducted research on newly completed purpose-built rental apartment projects in order to gauge typical lease rates and demographic groups being accommodated. This review excludes student residence developments.

- Four recently completed purpose-built rental apartment projects were surveyed, each catering to differing demographic groups and located throughout four different neighbourhoods.
 - Williams Court, located in Kanata, saw the highest monthly rental rates amongst all projects surveyed, at \$1,860 per month with an average unit size of 924 sf (\$2.02 psf, per month). Interestingly, 78% of units at Williams Court are of one-bedroom or one-bedroom plus den configurations, offering larger unit sizing amongst a target rental group composed of recent retirees and active empty nesters. The Williams Court project is also the largest recently completed rental apartment project in the market, consisting of 725 units throughout five buildings. The development first began occupying in 2010, with the last and most recently completed building currently leasing-up.
 - Minto One80Five, a hotel-to-rental conversion located in Ottawa’s city centre, saw the second highest lease rates at an average of about \$1,630 per month with the average unit size at approximately 722 square feet (about \$2.26 psf, per month). The project’s target market includes 25-45 year-old urban professionals (including temporary/contract government staffers). The building offers a luxury rental alternative to other competitive condominium apartment developments, complete with condominium-grade amenities and finishes.

- Westboro Connection, the newest rental building surveyed (initial occupancy in June 2016), was found to offer an average monthly lease rate of \$1,385. The project also offered the smallest average unit size at about 625 square feet amongst 138 units (\$2.26 psf, per month). Westboro connection was found to accommodate active young professionals in Ottawa’s Westboro neighbourhood.
- With lease rates just slightly above Westboro Connection, Brownstones at Place des Gouverneurs, located in the Ottawa East area, also shared the lowest lease rates amongst the four projects surveyed, with an average monthly lease rate of \$1,395, with an average unit size of about 780 square feet (\$1.83 psf, per month). Brownstones shared a similar target market to Westboro Connection, with emphasis on active young professionals, promoting the future Cyrville LRT Station as a gateway to numerous amenities.

Proposed High-Density Residential Developments

To gauge the level of interest for future development, NBLC also analyzed proposed medium and high-density residential development applications currently in the pipeline. The following observations were noted:

- Similar to actively marketing developments, the largest proportion of proposed medium and high-density residential developments are concentrated within the Central Area and Inner Areas of Ottawa. Based on current development application data, approximately 54 applications have been proposed in the Central Area and Inner Area, accounting for approximately 9,289 proposed units. Amongst these development applications, about 4,800 units are proposed within 600 metres of a Stage 2 transit station.

- The City Centre, Tunney’s Pasture and Little Italy neighbourhoods have attracted the highest concentration of high-rise development applications, often in the form of multi-phased high-rise developments between 8-storeys to over 30-storeys. These applications were found clustered around Gladstone Station, with five applications within a 600-metre radius of the station as well as 11 applications outside of the station radius
- Ottawa West, specifically the Westboro and South Westboro neighbourhoods, areas saw the second highest concentration of development applications. With a total of 17 applications (3,136 proposed units), project size and scale was found to be mostly in the form of stand-alone applications ranging anywhere between 4- to 30-storeys. A majority of these projects were mixed-use with grade-related retail components.
- On the opposite end of the spectrum, Kanata and east Ottawa (Beacon Hill) areas saw the least amount of proposed high-density residential development activity.
 - Applications in the east Ottawa area were, for the most part, single building applications of a mid-rise built form, ranging typically between six and 24 stories.
 - By comparison, applications in the Kanata area are smaller scale typically in the form of multi-phased low-rise communities, mostly as a part of urban flat or low-rise apartment complexes.
- Aside from proposed development activity within the established areas of the City, areas that appear to be emerging with proposed development activity include south Ottawa (Merivale, Alta Vista and Hunt Club) and Orleans areas, which account for a combined 17 applications totaling 3,496 proposed units.

- Current development applications within the Orleans area appear to be concentrated near the existing transitway and the proposed Stage 2 LRT line. Eight out of 11 applications were within a 600-metre radius of a station. These applications predominantly include multi-phase, mid-rise and stacked townhome developments.
- Three applications are located within a 600-metre radius of Jeanne D'arc, Orleans Boulevard, and Place D'Orleans Stations while five other applications were proposed within a 600-metre radius of future stations, which included Orleans Town Centre, Tenth Line and Trim Road Stations.
- South Ottawa, in particular in the Alta Vista and Greenborough neighbourhoods, have also attracted a cluster of proposed development ranging from a low-rise apartment complexes to mid-rise, and mixed-use communities.

The following map and tables highlight the details of actively marketing and proposed high-density residential developments along the Stage 2 LRT corridors.

Figure 15 – Overview of Real Estate Development Activity in Ottawa

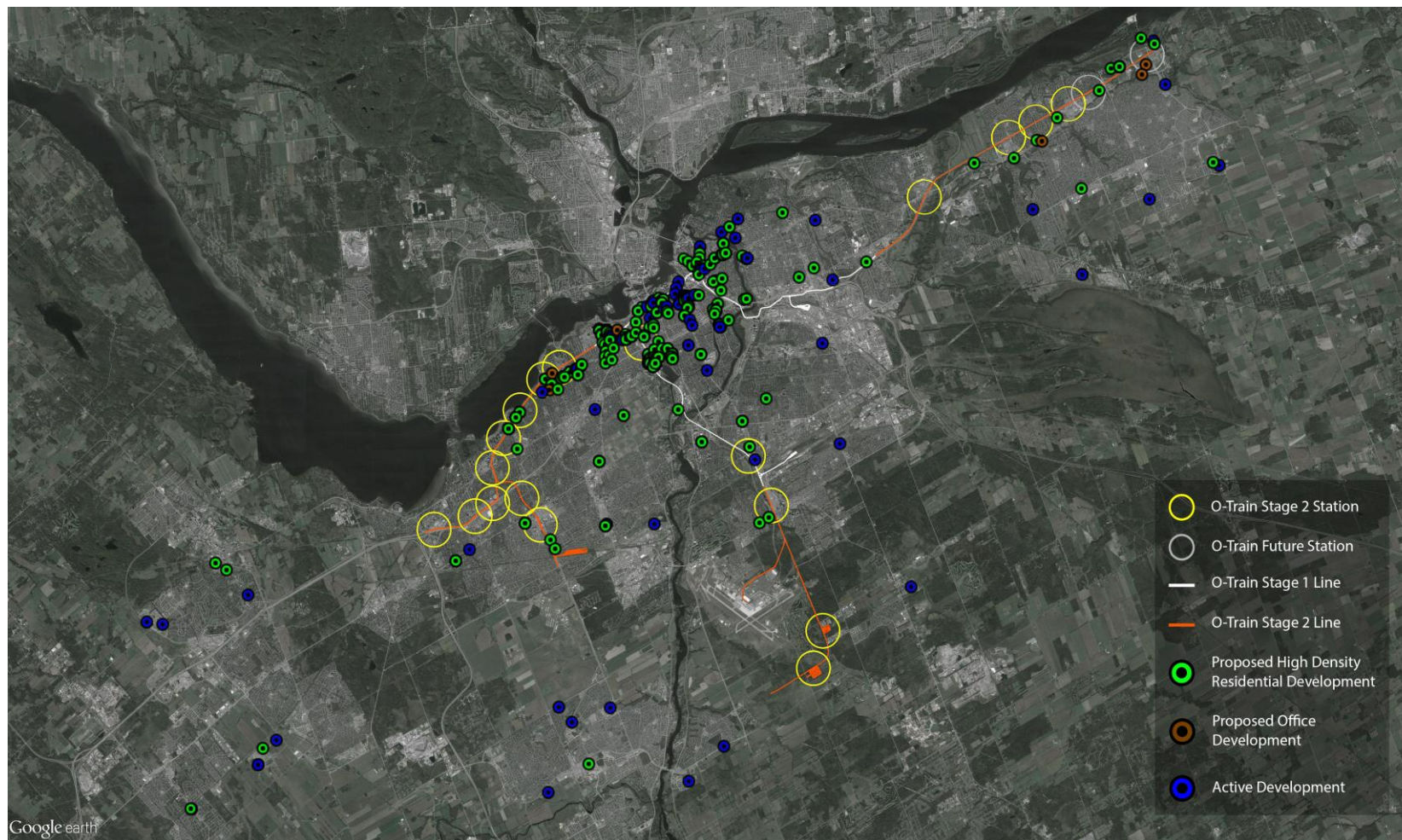


Table 3

Actively Marketing Condominium Apartment and Urban Flat Projects surrounding Stage 2 O-Train Stations									
As of April 2016									
Nearest Station	Project Name / Developer	Opening Date	Status*	Storeys	Total Units	2015 Sales	Size Range (sq. ft.)	Price Range	2015 Abs.**
Condominium Apartment Projects									
Western Extention									
New Orchard	The Azure <i>Azure Urban Developments Inc.</i>	May-13	Pre	14	98	14	685 - 2,025	\$266,205 - \$1,375,930	1.2
Dominion	UpperWest <i>Minto Developments</i>	Oct-12	UC	25	176	19	532 - 1,391	\$272,900 - \$742,900	2.1
Pinecrest	Qualicum Woods Crossing <i>Greatwise Developments</i>	Oct-12	UC	4	411	26	476 - 1,886	\$176,900 - \$390,802	0.3
Westboro	Q West - Ph III <i>Ashcroft Homes</i>	Sep-11	SI	9	90	-	583 - 1,070	\$319,800 - \$558,750	0.8
Westboro	Q West - Ph II <i>Ashcroft Homes</i>	May-11	SI	9	90	-	600 - 1,129	\$309,800 - \$573,950	0.8
Westboro	Q West - Ph I <i>Ashcroft Homes</i>	Dec-10	SI	9	90	18	599 - 744	\$298,555 - \$907,900	0.8
Westboro	111 West <i>Ashcroft Homes</i>	Dec-09	SI	8	162	9	408 - 984	\$241,900 - \$473,000	0.7
Average / Subtotal (7 Projects):				11	1,117	86	408 - 2,025	\$176,900 - \$1,375,930	7.2
Eastern Extention									
Trim	Petrie's Landing I - Tower II <i>Brigil</i>	Apr-05	UC	14	140	28	452 - 1,261	\$196,800 - \$607,800	1.2
Tenth Line	Petrie's Landing II - The Avenue <i>Brigil</i>	Apr-05	SI	4	76	18	807 - 1,252	\$173,300 - \$366,300	0.3
Tenth Line	Petrie's Landing II - St. Michael's <i>Brigil</i>	Apr-05	SI	4	40	9	1,215 - 1,215	\$296,000 - \$296,000	0.3
Average / Subtotal (3 Projects):				7	256	55	452 - 2,025	\$173,300 - \$1,375,930	4.6
*Status: "Pre" = pre-construction, "UC" = Under Construction, "SI" = standing inventory. **2015 Abs. = Sales Absorption.									
Source: PMA Brethour Group, City of Ottawa Condominium Market Update and N. Barry Lyon Consultants									

Actively Marketing Condominium Apartment and Urban Flat Projects surrounding Stage 2 O-Train Stations (Continued)									
As of April 2016									
Nearest Station	Project Name / Developer	Opening Date	Status*	Storeys	Total Units	2015 Sales	Size Range (sq. ft.)	Price Range	2015 Abs.**
Condominium Apartment Projects									
Southern Extention									
Gladstone	Capital Hall - Tower 1 <i>Ashcroft Homes</i>	Sep-15	UC	25	329	-	317 - 649	\$179,990 - \$339,990	-
Gladstone	One Seventy Preston <i>Roof Over Head Developments</i>	-	UC	5	15	-	665 - 1,022	\$299,000 - \$499,000	-
Gladstone	Icon <i>Claridge</i>	May-13	UC	45	320	18	610 - 1,930	\$286,000 - \$1,250,000	1.5
Gladstone	The Eddy <i>Windmill Developments</i>	Oct-12	SI	6	57	1	430 - 1,079	\$206,400 - \$532,530	0.1
Gladstone	Hideaway at Central <i>Urban Capital and Tamarack</i>	Nov-11	SI	9	162	31	435 - 852	\$225,900 - \$389,900	2.6
Walkeley	Distillery Warehouse <i>Linden Developments</i>	Nov-11	SI	10	116	27	1,012 - 1,164	\$361,300 - \$368,700	2.3
Gladstone	SOHO Champagne - Ph II <i>Mastercraft Starwood</i>	Jun-11	UC	20	191	23	535 - 1,525	\$298,900 - \$1,050,000	1.9
Average / Subtotals (7 Projects)				16	861	100	430 - 1,930	\$206,400 - \$1,250,000	8.3
Urban Flat Projects									
Letrium*	Sundance at Findlay Creek <i>Claridge</i>	Apr-14	SI	3	72	6	900 - 1,170	\$216,900 - \$244,900	0.5
Average / Subtotals (1 Project)				3	72	6	900 - 1,170	\$216,900 - \$244,900	0.5
Average / Total (18 Projects)				12	2,635	247	317 - 2,025	\$173,300 - \$1,375,930	20.6
*Status: "Pre" = pre-construction, "UC" = Under Construction, "SI" = standing inventory. **2015 Abs. = Sales Absorption.									
Source: PMA Brethour Group, City of Ottawa Condominium Market Update and N. Barry Lyon Consultants									

Table 4

High Density Residential Development Applications surrounding Stage 2 O-Train Stations*					
As of April 2016					
Station	Address	Date	Owner / Developer	Dwelling Units	Description
Western Extension					
Baseline	193 Norice St.	5-Feb-16	Saint Joseph Developments	22	4-storey apartment building.
New Orchard	342 Woodroffe Ave.	14-Jul-15	Terry Mellor & Anne Marie Bourgeois	18	Low-rise apartment building.
Cleary	809 Richmond Rd.	10-Jul-15	Jamie Boyce	257	Two 16-storey residential buildings.
Dominion	462 Churchill Ave. N	16-Jan-15	Tamer Abaza	8	3-storey rental apartment building.
Baseline	145-155 Meadowlands Dr. W	9-Jan-15	Clausi Developments & Property Sales	165	4-storey retirement residence.
Dominion	371 Richmond Rd.	30-Oct-14	Domicile Developments Inc.	100	9-storey residential building.
Westboro	175 Richmond Rd.	30-Jun-14	Claridge Homes (Westboro) Inc.	241	9-storey mixed use building with retail at grade.
Westboro	249-261 Richmond Rd.	19-Mar-14	697196 Ontario Inc.	N/A	4 to 6-storey office building with retail at grade.
Dominion	335 Roosevelt Ave.	18-Feb-14	Mackay House Inc. (Uniform Urban Developments)	194	14-storey and 16-storey condominium apartment buildings.
Cleary	747 Richmond Rd.	21-Jun-13	The Torgon Group (c/o Sam Cohen)	224	26-storey and 14-storey mixed use buildings with retail at grade.
Baseline	19 Centrepoinde Dr.	N/A	Richcraft	346	three 15-storey residential buildings.
Subtotal (11 Applications):				1,575	
*Development Applications are within a 600 metre radius of Stage 2 O-train stations. Source: City of Ottawa Planning and Growth Management.					

High Density Residential Development Applications surrounding Stage 2 O-Train Stations (Continued) As of April 2016					
Station	Address	Date	Owner / Developer	Dwelling Units	Description
Eastern Extension					
Trim	8900 Jeanne D'Arc Blvd. N	9-Dec-15	Brigil Homes	801	Petrie's Landing I Remaining Phases: 3 residential towers (two 16-storey and one 19-storey residential buildings) and one 15-storey retirement home.
Tenth Line	241 Centrum Blvd.	28-Aug-15	Hillside Vista Inc. (DCR Phoenix Development)	42	Phase 2 of development involves three stacked townhouse blocks.
Jeanne D'Arc	1533 St. Joseph Blvd.	15-Mar-15	2124366 Ontario Inc. (The Royale Development GP CO)	98	5-storey retirement residence.
Trim	1009 Trim Rd.	4-Feb-15	Pierre Grandmaitre	300	Two 15-storey residential buildings.
Place D'Orleans	1080 St. Pierre St.	9-Jan-15	Centre Reveille International	90	Option two of development application involves a mixed-use building with 90 units.
Tenth Line	110 Rossignol Cres.	22-Oct-13	Ashcroft Homes	199	Retirement residence and 10-storey condominium apartment.
Orleans	2221 St. Joseph Blvd.	24-Jun-13	6133631 Canada Inc.	47	4 and 5-storey mixed use buildings with residential and commercial use.
Trim	120 Prestige Cir.	N/A	3223701 Canada Inc. (Brigil)	233	Remaining phases at Petrie's Landing I: 4-storey apartment buildings, remaining 152 units part of phased development; Phase 3 (81 units) future development.
Place D'Orleans	Centre Reveille International	N/A	1080 St. Pierre St	90	Option 2 involves demolition of the building and re-development of a mixed-use building.
Subtotal (9 Applications)				1,900	
*Development Applications are within a 600 metre radius of Stage 2 O-train stations. Source: City of Ottawa Planning and Growth Management.					

High Density Residential Development Applications surrounding Stage 2 O-Train Stations (Continued)					
As of April 2016					
Station	Address	Date	Owner / Developer	Dwelling Units	Description
Southern Extension					
South Keys	934-948 Hunt Club Rd.	23-Feb-16	830399 Ontario Inc. (V.I.P. Construction & Engineering Ltd.)	35	Phase 2 of Development involves a 3-storey rental apartment building with 35 units.
South Keys	1026-1054 Hunt Club Rd.	12-Aug-14	1029941 Ontario Inc	150	6 to 7-storey retirement residence.
Walkley	1800 Bank St.	17-Jul-14	2122673 Ontario Inc.	456	15-storey mixed-use development.
Gladstone	50 Bayswater Ave.	-	1649038 Ontario Inc. (District Realty Corp.)	-	4 and 10-storey addition to the existing rental apartment building.
Gladstone	1050 Somerset St. W	8-Feb-12	Claridge Homes	271	28-storey mixed-use condominium tower with commercial space at grade.
Gladstone	1040 Somerset St. W	20-Jun-13	Claridge Homes	338	39-storey with retail component.
Gladstone	75 Aberdeen St.	-	Milano Auto Body	-	10-storey retirement residence.
Gladstone	333 Preston St.	-	Sakto Corporation	262	28-storey residential building to be attached to existing 8-storey residential building facing Aberdeen.
Subtotal (8 Applications):				1,512	
Total (28 Applications):				4,987	
*Development Applications are within a 600 metre radius of Stage 2 O-train stations.					
Source: City of Ottawa Planning and Growth Management.					

Office and Commercial Market Overview

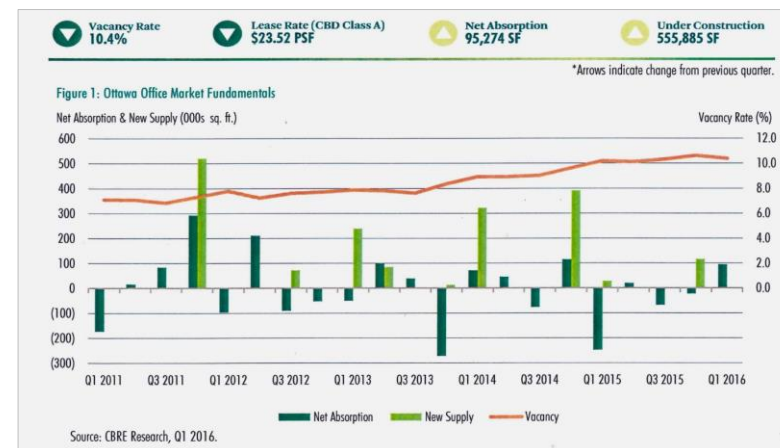
The following discussion presents a high-level overview the office and retail market trends in Ottawa and their relationship to the Stage-2 LRT expansion.

Local Office Market Trends

The Federal Government has a significant influence on Ottawa’s Office market, accounting for nearly half of the total office inventory. Picking up from previous years, there continues to be some migration from the central core to suburban areas and an overall decrease of its office footprint in the City. Because of ongoing efforts by both the public and private sectors to consolidate office requirements, as well as the increasing popularity of more efficient office design concepts (“Office 2.0”), many in the office leasing industry hold the view that the slowly increasing vacancy trend may continue over the next five years towards the 13% to 14% range. As a result, office landlords have recently been more generous with tenant improvements and free rent inducement packages. Although there is some optimism, it remains to be seen how new Liberal Government policies may impact Ottawa’s office market, given its large footprint within existing inventory.

Q1 2016 saw over 400,000 sq.ft. of leasing activity throughout Ottawa. Absorption over the previous quarter was also positive by almost 100,000 square feet. From a base of over 16 million sq.ft., an additional half million sq.ft. is currently under construction, though most of this is occurring in Kanata (and the remainder near Westboro Station). The office vacancy rate in Ottawa stands at 10.4%, continuing a very gradual upward trend from approximately 7% five years ago.

Figure 16 – Office Market Snapshot (CBRE Q1 2016 Report)



Noteworthy new office supply on the longer term horizon include the large-scale mixed-use development of Lebreton Flats, where preliminary plans indicate space for up to 12,000 office workers, and Tunney’s Pastures new Master Plan which anticipates the eventual doubling of federal workers at that site to 22,000.⁷ Both projects will be serviced by Stage 1 LRT stations. In part due to the high tech sector, the west part of the City’s office market is expected to continue performing better than the east.

As the construction of the LRT project’s first phase approaches completion (June 2018), there is evidence of an increasing appreciation of the locational benefits of proximity to LRT stations. Most tenders for office space now specify the requirement of LRT station proximity. This should improve prospects for landlords who own or plan to build office building assets within closest vicinity to LRT stations.

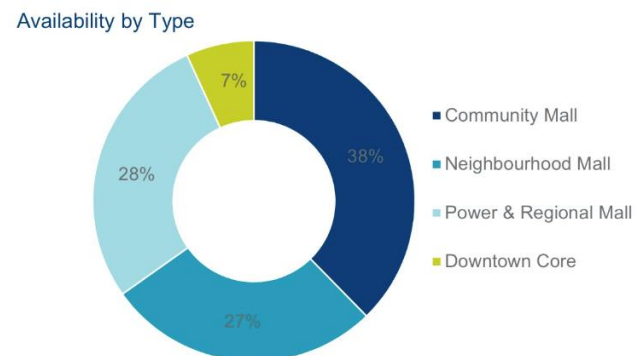
⁷ National Capital Commission.

Local Retail Market Trends

After a difficult 2015 as the region dealt with an unusual volume of important retail closures, the Ottawa retail leasing market is currently characterized as “steady, but flat”. Overall Q4 2015 vacancy rates were 4.6%, up slightly from the 2.5% to 3.5% range in the previous 5 years (**Figure 17**). Regional Malls registered the lowest vacancy rate at 3.6%, the downtown core the highest at 9%.

Barry Nabatian of Shore Tanner, a well-known retail market analyst, confirmed last October that retail space in Ottawa appears to be reaching a level of over-supply. Much of the recent retail market activity has focused on significant upgrades and expansions to regional shopping centres, including significant projects at both CF Rideau (on Stage 1) and Bayshore Shopping Centre (the western terminus of Stage 2).

Figure 17 – Retail Snapshot (Cushman Wakefield Q4 2015)



Source: Cushman Wakefield

Average overall net rental rates have been declining slightly since 2013, from an average of \$34 to \$33 per square foot currently.

Notable observations of retail developments in the vicinity of planned Stage 2 LRT stations include the following:

Westboro:

- Westboro Connection, a mixed-use development at 319 McRae in the Westboro area, 200 meters from the Westboro Station, 33,000 sq.ft. retail along with 116,300 sq.ft Class A office space and 142 residential units. Leasing well, the project has leveraged the existing transit service and market demand within the area and is believe to be a good example of a mid-size mixed-use SOD project.

Lincoln Fields:

- A struggling +/- 300,000 square foot retail centre in proximity to the future Lincoln Fields LRT Station, it has recently lost its anchor tenant Walmart, vacating more than a third of the mall’s retail space to relocate at Bayshore. There are talks of a potential mixed-use re-development of the property which, given its significant property

size (14.8 acres) and proximity to the future LRT station, could reflect a potential longer-term private sector SOD opportunity.

College Square:

- The redeveloped strip mall has had modest vacancy issues but could benefit from the vicinity of the Baseline Stage 2 LRT Station and its proximity to Algonquin College.

Place d'Orleans:

- As with Lincoln Fields, Place d'Orleans has struggled with the recent loss of a major tenant, losing Target who occupied 116,000 square feet. It is unknown whether there are any plans for future improvement or redevelopment of the property.

In the broader perspective, retail development in the most important and high demand nodes have been addressed by recent development. The trend for new retail developments has increasingly shifted towards infill or more centralized locations, with few notable exceptions. As per a Cushman Wakefield Report, it is expected that the trend towards the redevelopment of older plazas into more mixed-use centres will continue in the near future. Therefore, underperforming retail centres located in proximity to LRT stations could reveal notable SOD opportunities for the City of Ottawa.

Proposed Non-Residential Development

Based on our review of non-residential development application data in the City of Ottawa, the following points highlight key attributes of proposed high-density commercial office developments located in proximity to the Stage 2 LRT corridor.

- A total of five development applications for office development are currently in process throughout the station areas. These applications represent a total of 285,000 square feet of proposed office space, including a large City-initiated project on Bayview Road (the “Bayview Yards” project).
- The application for phase two of the Bayview Yards development (near both Bayview and Gladstone Stations) and 2070 Scott Street (near Westboro Station) are the largest office developments proposed along the corridor.
 - The development application at Bayview Yards is City-initiated for the purpose of housing Invest Ottawa, the city’s economic development agency and spaces to incubate other local start-up businesses. A 50,000 square foot renovation of an existing building is currently under way and will function as phase one of the project. Based on discussions with City staff, the proposed development of phase two might include a 10 to 14-storey office tower, approximately 180,000 square feet in size. The timing of the phase two development will be contingent on market factors following the completion of phase one, but is expected to be a mid-to-long term time horizon.
 - The application at 2070 Scott Street represents the second largest office development proposed amongst applications obtained. The proposal will include one 5-storey office tower with potential for retail at grade, offering a total of 64,691 square feet of commercial space near Westboro Station.
- Smaller, 1 to 2-storey office applications are also noted along the eastern extension, notably around Orleans and Trim Stations. These applications were found embedded within existing industrial parks and low-rise- strip retail plazas intended for medical related uses.

Table 5

Non-Residential Development Applications Surrounding Stage 2 O-Train Stations As of April 2016					
Station	Address	Date	Owner / Developer	Total Office GFA (sq. ft.)	Description
Western Extension					
Bayview/ Gladstone	7 & 89 Bayview Rd	N/A	City of Ottawa & Invest Ottawa "Bayview Yards"	180,000	10- to 14-storey City-owned office building. City ownership, exclusive use by Invest Ottawa.
Westboro	2070-2090 Scott St.	8-Apr-15	EJSPA Corporation	64,691	5-storey office building.
Dominion	566 Byron Ave., 436 Roosevelt Ave.	27-Aug-14	Roberto Campagna	2,368	2-storey medical office.
Subtotal (3 Applications):				247,059	
Eastern Extension					
Orleans	2300 St. Joseph Blvd.	24-Mar-16	2341371 Ontario Inc. (Habib Chahrour)	6,749	3-storey office building.
Trim	3735 St. Joseph Blvd.	16-Mar-16	2383808 Ontario Inc.	30,793	Two 3-storey office buildings.
Subtotal (2 Projects):				37,542	
Total (5 Projects):				284,601	
<i>Source: City of Ottawa Planning and Growth Management.</i>					

High-Density Land Transaction Activity

To highlight the frequency and values of high-density land captured throughout recent property transactions corresponding with recent development applications surrounding the Stage 2 LRT Line, NBLC prepared a sample of recent land transactions between a 2010 to 2016 timeframe. The details of these land transactions are summarized in **Table 6** and **Figure 16**; following are some key observations:

- A total of 16 high-density land transactions were recorded in areas surrounding Stage 2 LRT stations, accounting for a total of \$49,115,000 in land purchased over 17.2 acres.
- Most of the recent land transaction activity captured as a part of this review have been for sites purchased with the intent of developing high-density residential development. Most of these property owners have subsequently sought planning permission for mid-rise residential buildings of between 7 and 16-storeys in height.
- Of note, two of the land transactions captured in this review are properties intended for development as a retirement residence. One other is proposed as a hotel.
- Only one of the land transactions captured in this review includes a significant office component. The Westboro Connects development, at 1960 Scott Street includes both a seven-storey residential tower and five-storey office tower on a two-storey podium. More than 150,000 square feet of non-residential gross floor area is being developed on the site.
- Transactions along the western LRT extension were found to yield the highest concentration of mid-rise and mixed-use residential developments, yielding \$30,746,000 in land purchased over a combined eight acres of land. This distribution of land transaction

activity is consistent with broader trends driving demand towards urban areas of the City's west end.

- Only three recent transactions for high-density development land have occurred along the southern or eastern extensions, respectively. Only one of the corresponding development applications along the eastern extension is for residential development.
- Nine of the transactions captured were relatively small, singular parcels of land under one acre in size. These properties often correspond to smaller scale stand-alone mid-rise residential development plans.
- Seven transactions captured were larger parcels of land above 1-acre in size, with proposed multi-building, mixed-use developments. Three of these transactions involved infill developments on previously underutilized spaces, two of which proposed the re-use of a retail strip mall (1800 Bank St.) and a former storage facility (1960 Scott St.).
- The surveyed land transactions indicate that the typical land value of high-density residential land, on a per unit basis, is in the order of \$20,000 per unit.

Table 6

High-Density Land Transactions along the Stage-2 O-Train LRT Corridors (2010 - Present)							
Date	Address	Price	Size (Ac.)	Price/Acre	No. of Proposed Units	Price/Buildable Residential Unit	Notes
Western Extension							
19-Jan-16	193 Norice St.	\$1,395,000	0.3	\$4,026,657	22	\$63,409	4-storey residential apartment.
27-Nov-14	145-155 Meadowlands Dr. W	\$966,667	1.1	\$875,945	165	\$5,859	4-storey retirement residence.
27-Mar-14	1960 Scott St.	\$7,450,000	1.5	\$5,042,503	126	\$59,127	7-storey residential tower and 5-storey office tower on 2-storey podium. Transaction value also includes 150,000 square feet of office and retail GFA.
6-Jun-13	1445-1451 Wellington St. W	\$1,950,000	0.3	\$7,219,929	114	\$17,105	12-storey mixed-use building.
18-Jan-13	236 Richmond Rd.	\$2,575,000	0.3	\$7,759,249	70	\$36,786	9-storey mixed-use building.
14-Dec-12	335 Roosevelt Ave.	\$4,500,000	1.4	\$3,308,062	194	\$23,196	14 & 16-storey residential buildings.
31-Jan-12	929 Richmond Rd.	\$1,720,000	0.6	\$2,959,440	85	\$20,235	14-storey mixed-use building
6-Oct-11	175 Richmond Rd.	\$6,775,000	1.6	\$4,313,640	227	\$29,846	9-storey mixed-use building.
29-Apr-11	371 Richmond Rd.	\$864,000	0.1	\$10,800,000	100	\$8,640	9-storey residential building.
30-Aug-10	200 Lockhart Ave.	\$2,550,000	0.9	\$2,782,286	147	\$17,347	8-storey retirement residence.
Subtotal / Averages:		\$30,745,667	8.0	\$4,243,125	1,250	\$24,597	
Eastern Extension							
30-May-13	3012 St. Joseph Blvd.	\$1,600,000	0.6	\$2,662,410	-	-	2-storey office building.
16-Nov-11	241 Centrum Blvd.	\$1,200,000	1.6	\$740,506	94	\$12,766	52 freehold townhomes and 42 stacked townhomes.
24-Jun-11	243 Centrum Blvd.	\$900,000	0.1	\$9,870,397	-	-	5-storey hotel.
Subtotal / Averages:		\$3,700,000	2.3	\$1,292,115	94	\$12,766	
Southern Extension							
24-Dec-15	655-755 Anand Prv. (1172 Walkley Rd.)	\$3,050,000	3.5	\$882,647	250	\$12,200	Two 16-storey residential buildings.
6-Oct-15	1800 Bank St.	\$10,000,000	2.7	\$3,767,327	456	\$21,930	15-storey mixed-use building.
6-Mar-14	934-948 Hunt Club Rd.	\$1,619,000	0.7	\$2,197,877	55	\$29,436	Two 3-storey rental buildings.
Subtotal / Averages:		\$14,669,000	6.8	\$5,590,553	761	\$19,276	
Totals / Averages:		\$49,114,667	17.2	\$2,855,967	2,105	\$22,145	
Note: City of Ottawa does not track GFA of residential space in development applications and was not available for the purposes of this analysis.							
Source: City of Ottawa Planning and Growth Management, Geowarehouse and N.Barry Lyon Consultants.							

Figure 18 – Recent High-Density Land Transaction Activity along the Stage 2 LRT Corridors



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