City of Richmond Hill
Civic Administration Centre
Accommodations Options Analysis

December 2019

700319-0052 (6.0)

Colliers INTERNATIONAL

ACKNOWLEDGEMENTS

Client:

City of Richmond Hill
Italo Brutto, Commissioner (retired)
Pat Caron, Director (retired)

Project Team

Colliers Project Leaders
Advisory Services
Marcus Rhomberg, Senior Manager
Jason Rutland, Managing Director
Deepu Balaraman, Principal
Scott Bailey, Project Manager
Lisha Hibbins, Senior Advisor

+VG Architects
Paul Sapounzi, Managing Partner
Deb Westman, Associate
Ed Bourdeau, Associate Partner

Bullock Wood Design
Donna Wood, President

Stantec
Francois Tomeo, Senior Transportation Planner
Brandon Orr, Transportation Planner

Altus Group
Marlon Bray, Senior Director
Alex Freeman, Senior Cost Consultant

Colliers Project Leaders
Advisory Services
2720 Iris Street
Ottawa, Ontario CANADA K2C 1E6

TABLE OF CONTENTS

1.0 Executive Summary

1.1 Purpose

Further to direction from Council in June 2018, the City of Richmond Hill (City) staff are currently undertaking an exercise to revisit the Civic Administration Centre (CAC) space requirements and investigate alternate options to accommodate future City Hall growth. The City is seeking to reconfirm space needs (using previously approved space standards per person) and parking requirements, and to investigate the full range of options available to accommodate future staff growth, including the risk profile and high-level budget impact of each option. City staff has reviewed its head count 20 year outlook projection, reducing the projection from 728 to 676 head counts, resulting in a reduction of total space required, already using the new space standard, from 242,000 SF to 222,656 SF in the next 20 years.

Colliers Project Leaders (Colliers) was engaged by the end of August 2018 to conduct this Accommodation Options Analysis in order to present the findings to the City. The City is open to entertaining different ownership structures, such as lease or own, as well as other approaches, such as use of satellite offices. The results along with recommendations arising out of these investigations are to be detailed in this Civic Administration Centre study.

1.2 Recommendations

Colliers recommends the City proceed with further investigations on the renovation of 225 East Beaver Creek Drive (City Hall) as “Core” location supplemented with additional satellite space at City owned 1200 Elgin Mills Road (Operations Centre) referred to as Option 5, as it best meets the City’s requirements as outlined in this Report. This Option 5 represents the least cost to achieve as well as the most flexible phased implementation approach, allowing the City to increase in space, through renovations, commensurate with real time growth needs. Proposed next steps include but are not limited to a building condition assessment, accessibility and code audit, detailed programming, developing space standards and further due diligence study (e.g. environmental study) on both existing buildings (City Hall and Operations Centre) to better understand what systems and structures will need upgrading to accommodate the anticipated occupancies. In addition, some preliminary block layout and phasing plans for implementation and costing would be advantageous to complete. This would assist in confirming the two locations can accommodate the anticipated staff growth and the associated functional needs.

Colliers also recommends the City completes a renovation of the existing City Hall building to the new space standard that will reduce current administration office areas. This will include densification of the existing floor space allowing for efficiencies to be realized and resulting in a reduction of space needs by 19,475 usable square feet, or approximately one entire floor of the existing City Hall building.

1.3 Objectives and Staffing Considerations

The main strategic objective of this Civic Administration Centre Accommodation Options Analysis report is to ensure that proper and complete due diligence has been exercised in determining the recommended possibilities to accommodating the CAC, while demonstrating financial accountability. During the definition of criteria for suitability of each option to the City’s needs, Colliers followed guiding principles that were originally developed as part of the scope of the previous Civic Precinct Project. They remain relevant for the purposes of this Report, however in light of the direction provided by Council in 2018 to investigate alternate options to accommodate future City Hall growth and the cancellation of the Civic Precinct Project, certain principles were given more weight than others, specifically principles related to

balancing financial impacts and flexibility in implementation. Colliers worked in coordination with expertise from Bullock Wood Design to reconfirm the programming and office space needs based on the previously approved space standards per person, including future growth projections; Stantec to assess the parking requirements to accompany the CAC office space needs; +VG Architects to provide architectural and planning guidance on the different options uncovered; and Altus Group to provide high level preliminary budgets for use in comparing the different options uncovered.

To allow for comparability across the different options considered in conducting this analysis, usable square feet defined as the area actually occupied by the user was used as a baseline measure. For those options that consider some form of new construction, either building an expansion or an entirely new office building, the usable square feet is increased by a 'gross up' factor that is typically used to account for non-user occupied spaces, such as stairwells, elevator shafts, mechanical rooms, exterior wall thicknesses, etc. A typical gross up factor used in the industry is approximately 1.2 or 20% for office buildings, however civic buildings tend to require larger spaces to accommodate gathering and open circulation space for the general public resulting in a more appropriate numerical gross up factor of 1.4 or 40% which was applied for the new building scenarios only and not for existing buildings

Through discussions with City staff as part of this study, the 20 year projected head count is 676 staff with an accompanying total space requirement of 222,656 square feet (159,040 usable square feet) based on the new space standard. The current location can only accommodate 144,470 usable square feet resulting in a projected need for 14,570 usable square feet to house the growth in the next 20 years.

1.4 Options Reviewed

In the course of investigating potential options for accommodation of future staff growth, the following range of potential solutions are being considered:

Single Site Options

1) 1300 Elgin Mills Road East – Richmond Green (City owned)
2) 9481 Leslie Street – Brodie House (City owned)
3) Representative Market Available – New Construction
4) 225 East Beaver Creek Drive Expansion
    a. on City owned lands
    b. on market available lands

Satellite Options (retaining and renovating 225 East Beaver Creek Drive as 'Core' location supplemented with additional space at the following satellite locations)

5) 1200 Elgin Mills Road – Operations Centre (City owned)
6) Representative Market Available Satellite Leased Space

A scenario of a Representative Market Available – Existing Building was also investigated. However, it was determined through discussions with Colliers Brokerage and Market Intelligence teams that the Richmond Hill office market does not have an existing building of suitable size for the City's space needs in one location. Therefore, this scenario was not considered further.

To assist in identifying the suitability of each option to the City's needs, both quantitative and qualitative factors were applied. Quantitative factors include the ability for each option to sufficiently accommodate the projected space needs for the next 20 years as well as the high level estimated net costs. Qualitative factors include the ability to provide a sense of civic presence and placemaking, the impact due to the

Reciprocal Agreement in place at 225 East Beaver Creek Drive, zoning and heritage by-laws, flexibility in implementation, and adherence to the following guiding principles developed and accepted by Council from the Civic Precinct Project:

I. Shared and Flexible Spaces

II. Modernizing the Work Environment

III. Functionality and Synergies Amongst Departments

IV. Proximity to Amenities

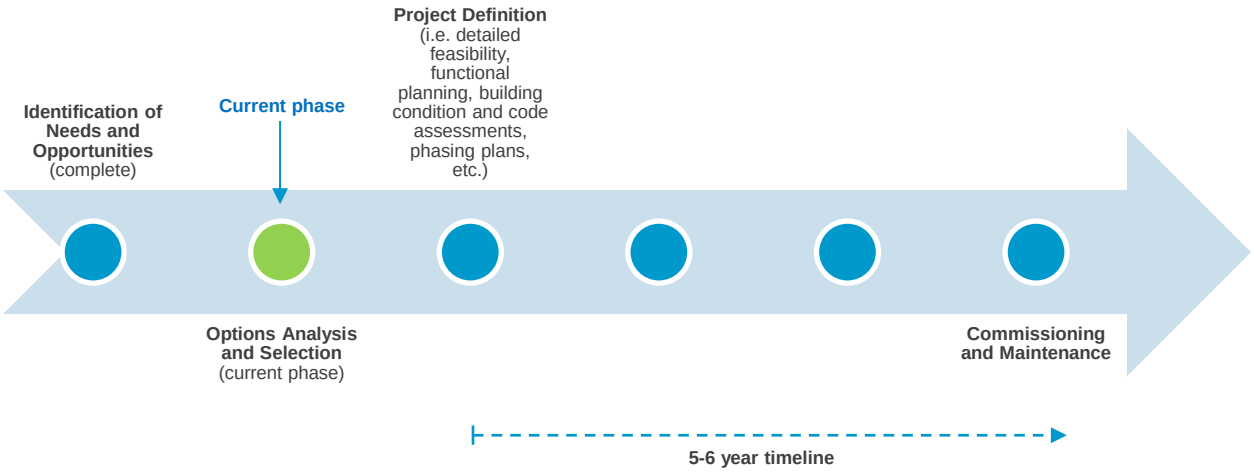
V. Balance Financial Impacts

VI. Reduce or Mitigate our Environmental Impact

1.5 Schedule and Financial Implications

For each of the six accommodation options considered, a high-level schedule to provide an estimate of duration of the project was developed. While there is some variability between options, it is estimated that it will take approximately 5 – 6 years from initiation to completion of the project chosen. Note that for those options involving market transactions, as it is difficult to estimate the duration of the transaction itself, these schedules are developed to take into account activities after the acquisition of the market property. For those options involving renovation of the existing building, the estimated schedule aims to minimize the number of moves required, however the exact phasing and number of moves are to be determined upon further study and detailing of the functional programming. Option 5 can have a flexible phased implementation plan that could take from 5 to 15 years based on actual space needs and City growth.

Figure 1-1: High-Level Timeline of Activities



As well, an order of magnitude estimate of construction costs were developed. These estimates of construction costs were based on a design brief developed that factored in site specific considerations as well as whether the option pertained to a newly constructed building or a renovation of an existing building. A summary of estimated costs by option is presented below.

Table 1-1: Options Summary

	Option 1: Richmond Green	Option 2: Brodie House	Option 3A: Market New Construction **	Option 4A: EBC Expansion – City Lands	Option 4B: EBC Expansion – Market Lands	Option 5: EBC Renovation + Satellite (City Owned)	Option 6: EBC Renovation + Satellite (Market Available)
Total Building Area	222,656 SF (159,040 usable)	222,656 SF (159,040 usable)	222,656 SF (159,040 usable)	195,000 SF (159,040 usable)	195,000 SF (159,040 usable)	178,704 SF (158,170 usable)	189,771 SF (159,040 usable)
Total Parking Requirements	885	707	707	Existing + 200	Existing + 102	Existing	Existing
Number of Levels of Parking	1 under ground	2 under ground	1 under ground	1 under ground	2 above ground	N/A	N/A
Estimated Project Duration	5.75 years	6.0 years	5.75 years	5.75 years	5.75 years	5.0 years	5.0 years
Estimated Total Net Cost*	$176.9 M	$170.4 M	$158.4 M	$89.1 M	$80.4 M	$41.8 M	$48.6 M
Estimated Total Net Cost per Usable SF	**$795**	**$765**	**$711**	**$457**	**$412**	**$234**	**$256**

* includes renovation costs of 225 East Beaver Creek Drive where applicable
** Option 3B not shown as deemed less suitable / more costly than Option 3A due to extra level of underground parking.

1.6 Conclusion

In reviewing the accommodation options presented, three natural groupings of the options form:

1) New Construction Options
   - Option 1 – Richmond Green
   - Option 2 – Brodie House
   - Option 3 – Market New Construction

2) Renovation and Expansion Options
   - Option 4A: EBC Expansion on City owned lands
   - Option 4B: EBC Expansion on Market Available Lands

3) Renovation and Satellite Options
   - Option 5 – EBC Renovation + Satellite (City-Owned)

- Option 6 – EBC Renovation + Satellite (Market Available)

While the Renovation and Expansion option does allow for all staff to be essentially co-located (Option 4), **the Renovation and Satellite options represent the least cost to achieve as well as the most flexible in approach, allowing the City to increase in space commensurate with real time growth needs (Option 5 and Option 6)**. The New Construction options (Option 1, Option 2, and Option 3) all rank inferior to the Renovation and Satellite grouping as well as the Renovation and Expansion grouping.

Table 1-2: Options Scorecard

	Option 1: Richmond Green	Option 2: Brodie House	Option 3A: Market New Construction	Option 4A: EBC Expansion – City Lands	Option 4B: EBC Expansion – Market Lands	Option 5: EBC Renovation + Satellite (City Owned)	Option 6: EBC Renovation + Satellite (Market Available)
Financial Scoring (weight = 2)	6	6	6	4	4	2	2
Flexibility/Phased Approach (weight = 2)	6	6	6	4	4	2	2
Functionality and Synergies Amongst Departments (weight = 1)	1	1	1	1	1	2	2
Proximity to Amenities (weight = 1)	2	3	2	1	1	1	1
Reduce / Mitigate Environmental Impact (weight = 1)	2	2	2	1	1	2	2
Civic Presence and Placemaking (weight = 1)	1	1	1	2	2	3	3
Reciprocal Agreement Impact (weight = 1)	3	3	3	2	2	1	1
Existing Zoning and Heritage By-law Compliance (weight = 1)	3	3	1	1	1	1	1
Readily Available and Actionable (weight = 1)	1	1	3	1	1	1	3

	Option 1: Richmond Green	Option 2: Brodie House	Option 3A: Market New Construction	Option 4A: EBC Expansion – City Lands	Option 4B: EBC Expansion – Market Lands	Option 5: EBC Renovation + Satellite (City Owned)	Option 6: EBC Renovation + Satellite (Market Available)
Total Score	**25**	**26**	**25**	**17**	**17**	**15**	**17**
Overall Ranking	**3**	**4**	**3**	**2**	**2**	**1**	**2**
Cost	**$176.9 M**	**$170.4 M**	**$158.4 M**	**$89.1 M**	**$80.4 M**	**$41.8 M**	**$48.6 M**

2.0 Background

2.1 Project and Rationale

A Civic Precinct Project exploring the construction of a combined City Hall and Central Library has been contemplated since the late 1980s. Currently, the City Hall is situated at 225 East Beaver Creek Road on the eastern edge of the City of Richmond Hill (City). The Central Library is located at 1 Atkinson Street, closer to the centre of City on land that is owned by the City.

In recent years, a desire to advance a Civic Precinct Project at the location of the Central Library was revived, in part to revitalize the City downtown core, enhance the Central Library, and provide public amenities. In support of this desire, in 2008 a feasibility study investigating the relocation of the municipal offices to this location was completed by CS&P Architects Inc. Following the feasibility study, as part of a larger Civic Precinct Project, investigation into sufficient parking for public use of outdoor amenities anticipated to be developed and accommodation strategies for the City Hall, which is experiencing space constraints due to growth, was included in a proposed scope of work. Once the Civic Precinct Project was approved as a capital project on February 22, 2017, in early 2018, Colliers was engaged as the City's project managers to deliver this Civic Precinct Project.

As the Civic Precinct Project progressed during 2018, City Council began debating the merits of combining the City Hall with the Central Library and locating the facility at the Yonge Street and Major Mackenzie Drive intersection. City Staff was requested by the Council to revisit the Civic Administration Centre (CAC) space requirements, separate from the Civic Precinct Project, and investigate alternate options to accommodate future City Hall growth.

Through this study, the City is seeking to reconfirm office space needs based on previously approved space standards per person that could optimize the current building space by reducing administration office areas and parking requirements, and to investigate the full range of options available to accommodate future staff growth, including the risk profile and high-level budget impact of each option, so that the City may then narrow down the set of options to a more manageable number for further detailed investigation, which may include detailed design and discussions with external stakeholders. The City is open to entertaining different ownership structures, such as lease or own, as well as other approaches, such as use of satellite offices.

2.2 Strategic Objectives and Guiding Principles

Colliers Project Leaders (Colliers) was engaged to uncover and assess potential options to accommodate the CAC, in coordination with expertise from Bullock Wood Design to reconfirm the programming and office space needs based on the previously approved space standards per person, including future growth projections; Stantec to assess the parking requirements to accompany the CAC office space needs; +VG Architects to provide architectural and planning guidance on the different options uncovered; and Altus Group to provide high level preliminary budgets for use in comparing the different options uncovered.

The main strategic objective of this Civic Administration Centre Options Analysis report (Report) is to ensure that proper and complete due diligence has been exercised in determining the recommended possibilities to accommodating the CAC, while demonstrating financial accountability. This will be achieved through:

- Creating a space plan that balances functionality and financial sustainability.

- Collecting a comprehensive list of potential locations for review as options to accommodate the CAC.
- Providing assurance that City staff have conducted a thorough due diligence exercise in determining its needs within the CAC, both now and into the future, with respect to the CAC.

To assist in defining the criteria for suitability of each option to the City's needs, the following guiding principles will be used. These guiding principles were originally developed as part of the scope of the previous Civic Precinct Project. They remain relevant for the purposes of this Report, however in light of the direction provided by Council in 2018 to investigate alternate options to accommodate future City Hall growth and the cancellation of the Civic Precinct Project, certain principles were given more weight than others, specifically principles related to balancing financial impacts and flexibility in implementation (discussed in Section 7.4).

1) Shared and Flexible Spaces

In order to use resources most effectively and efficiently, and to ensure the City can be agile in its response to future space needs and municipal service trends, the Report will build in flexibility to the greatest extent possible by considering all space requirements through the lens of multiple uses and common service goals so that resources can be shared to the greatest extent possible.

2) Modernizing the Work Environment

In conjunction with the above principle, the Report shall have regard for emerging workplace trends toward flexibility in work arrangements. For example, the City may consider staggering work hours, a mix of hoteling and assigned space standards, and further integration of technology and digital platforms. The building program should reflect the value of collaboration and how the space may facilitate this.

3) Functionality and Synergies Amongst Departments

To the extent possible, the City desires that all administrative departments be housed together to maximize functionality, efficiency and collaboration between groups. Where that is not possible, consideration will be taken to identify departments that have the least need for physical proximity, which could then be wholly located elsewhere. Individual teams or departments are not to be separated, to the extent possible. This is an ongoing City's initiative that is actively being reviewed and looking to increase synergies and improve staff.

4) Proximity to Amenities

In order to assist in attracting and retaining staff, the City wishes to source a solution with access to amenities, specifically sufficient parking and proximity to features such as transit, major highways, and retail (i.e. shopping and restaurants).

5) Balance Financial Impacts

The City seeks a solution that will be affordable through a balance of capital and operating funding streams therefore minimizing the need for financing by the City, if any.

6) Reduce or Mitigate our Environmental Impact

In recognition of the City's position on environmental stewardship, the Report should prioritize options that reduce or mitigate our environmental impact and carbon footprint to the extent possible, such as increased use of transit and reduced travel for staff to get to work or attend meetings.

3.0 Methodology

Selecting the most ideal accommodation option amongst the various options available can be a challenging task given the fact that it involves various inputs and assumptions related to cost and ownership, plus qualitative factors that are difficult to measure or represent in an empirical format, such as efficiencies of a consolidated workforce as compared to a distributed model or the presence of amenities to optimize employee retention. The decision needs to be based on a rational methodology that can help to review and analyze all the components mentioned above. In order to conduct the options analysis in a cogent manner, a four step process was adopted:

Figure 1: Four Step Process

The four step process is comprised of:

1. Discovery
    a. Establish Status Quo
    b. Validate Growth Projections
    c. Validate Space Standards
    d. Determine Total Space Needs
    e. Identify Components for Potential Off-Site Accommodations
2. Market Scan
    a. Review City Owned Properties
    b. Review Market Available Properties
    c. Conduct Test Fits on Potential Sites
    d. Review Potential Restrictions (i.e. zoning, legal, etc.)
3. Budget and Schedule
    a. Order of Magnitude Cost Estimate
    b. Extraordinary Cost / Revenue Estimate
    c. High Level Project Schedule

4. Recommend

    a. Define Scoring Criteria; Prepare Scorecard
    b. Attribute Scores to Qualitative and Quantitative Analysis results
    c. Findings and Recommendation

The first step of the analysis begins with an understanding of the current state, which includes a review of the current space standards and head count. As part of the Civic Precinct Project, the City has already identified a set of new space standards that could optimize the current building space by reducing administration office areas which have been approved and are moving forward. Through discussions with the heads of each department, a projection of anticipated growth and future head count was determined and further revised, and synergies between groups which need to be maintained and groups which could potentially be located off-site were identified. By applying the new space standards to the revised future head count, an estimate of the total space needs for the next 20 years was established.

The second step in the process began with a review of all City owned properties by City staff and the project team as well as a review of all current market available properties sourced through the Colliers brokerage team. Properties of sufficient available acreage conducive to development of an office building (i.e. suitable flat land topography, no restrictive designations or constraints such as heritage, conservation area or wetland, etc.) and existing properties with sufficient vacancy to allow for accommodation of the minimum partial to full space needs established in the first step were included for consideration and further analysis.

For the market available properties, as market conditions change over time and as this is a preliminary study stage to narrow down potential options for further detailed investigation, the options shown are intended to be a representation of what could be available in the market should the City choose to move in that direction going forward. Therefore, any identifying features, such as addresses or street names, have been purposefully excluded or obscured as much as possible to provide as generic a presentation as possible for the market available locations. Any financial metrics shown, whether it be price of land per acre for acquisition or gross rental rate per square foot for lease, are viewed as representative of typical market pricing for purposes of providing a sense of comparative pricing against other options considered.

For each of the options considered, a site layout design, or test fit, was developed to provide a potential concept layout and assess the feasibility of constructing a suitable facility on the lands. These test fits aided in confirming whether the required parking needs would be met on site and in what manner, which then directly influenced the estimated costing for each option at a high level. The parking analysis to determine the required parking needs of each site took into consideration the existing zoning by-laws and anticipated use and structure to be constructed at each potential site, as well as any special circumstances affecting a particular site, such as event parking during the year at the Sheraton Hotel located in the same complex as 225 East Beaver Creek Drive. Discussions with the City's Planning department confirmed the zoning by-laws in effect at each site considered and also informed the development of the test fit designs presented.

The third step in the process assessed the potential net financial costs of each potential option. Factors such as construction or renovation costs, property acquisition costs, demolition costs, relocation costs, and potential gain on sale were estimated at a high level and applied as appropriate, depending on the particulars of a specific option. For each potential option, a high-level schedule to provide a sense of the duration of the project was also developed and included.

In the final step, qualitative criteria based on the Guiding Principles previously developed and other considerations, such as flexibility in implementation, the ability of each option to provide a civic presence and the impact of the Reciprocal Agreement to which the current location and the City is subject, was applied to each option, combined with the net financial costs determined in the previous step, and represented in a tabular 'scorecard' format for ease of comparison. From the results of the scorecard, and in consideration of the strategic objectives of the City in relation to this study, recommendations for options to be considered for further investigation were provided.

4.0 Needs Analysis

The City currently owns and fully occupies the office building at 225 East Beaver Creek Drive. In addition to housing the City's administrative offices, this location is the municipal City Hall where the Mayor and Councillors' offices and Council Chamber can be found. Built in the early to mid 1990's, this 9 storey building totals 165,000 SF (144,470 SF usable) and features a steel frame with glass curtainwall and concrete central core structure resulting in very efficient floor plate layouts as a commercial market space. This typical commercial market design unfortunately does not meet current accessibility requirements.

At the time of the Civic Precinct Project, work was undertaken to determine the total space needs for an administrative office building, forecasting out approximately 20 years. The initial staff head counts of 728 applied to the new space standard desired resulted in a total space requirement of 242,000 SF. Subsequent revisions by City staff as part of this study have now reduced that estimated forecast head count to 676 with an accompanying total space requirement of 222,656 SF in 20 years.

Table 4-1: 20 year Forecasted Head Count and Space Needs by Department (administrative offices only)

Department / Space Type (including 30% program circulation)	Approved Head Count (2018)	Head Count Proposed (2026 forecast)	Head Count Proposed (20 year outlook projections)	Square Feet*
Office of the City Manager	55	65		8,464
Corporate & Financial Services	159	164		16,221
Planning & Regulatory Services	124	163		20,687
Environmental & Infrastructure Services**	90	110		11,666
Community Services	65	74		7,197
Staff Projections (all departments)			100	28,600
Governance (including Council Chambers, Mayor and Councillors' offices)				8,998
Shared Spaces (including the Roost, lobby/atrium, small business enterprise centre, meeting rooms, multi-purpose rooms/wedding chapel, wellness centre, shipping and receiving, etc.)				57,207
Subtotal (usable square feet)				159,040
Building Gross Up Factor (building areas for enclosing the building, entering and exiting, infrastructure pathways (i.e. mechanical, electrical, etc.) and gathering and circulation spaces)				63,616
Total	**493 (head count)**	**576 (head count)**	**676 (head count)**	**222,656 (gross square feet)**

* Using new space standard.

** Currently under review by City.

Should the City wish to continue to have all staff operate out of one location, either a newly constructed building totaling 222,656 SF as illustrated in the table above, an existing building available for lease or purchase totaling 159,040 usable square feet or an expansion to the existing building of between 14,570 and 34,045 usable square feet will be needed:

- The low end of the range in expansion area needed is determined by taking the forecasted need for 159,040 usable square feet under the new space standard and subtracting the existing 225 East Beaver Creek Drive amount of 144,470 usable square feet resulting in a requirement for an additional 14,570 usable square feet. This also requires a complete renovation of the existing building to the new space standard.

- If the existing building is not renovated and the new space standard is not applied either to the existing building or the expansion, this will result in a forecasted need for 178,515 usable square feet. Again, subtracting the existing 225 East Beaver Creek Drive amount of 144,470 usable square feet results in a requirement for an additional 34,045 usable square feet.

- Note that by completing a renovation of the existing building to the new space standard, efficiencies are realized resulting in a reduction of space needs by 19,475 usable square feet, or approximately one entire floor of the existing building.

Based on the Head Count Proposed (2026 forecast); should the City look to operate out of more than one location, the amount of additional space needed to accommodate the future growth ranges between 14,570 and 34,045 usable square feet, similar to the ranges provided for an expansion to the existing building. Again, the amount of additional space needed will be dependent upon whether a complete renovation of the existing building to the new space standards is completed or not, with the larger area potentially needed if no renovation is completed. Additionally, the amount of additional space needed may also be dependant on each department reviewing opportunities for staff to work remotely from home or hotelling. A study is recommended following this report that will provide better guidance as to the timing for a complete renovation.

Note that for options involving existing buildings, usable square footage is used rather than gross square footage to allow for ease of comparison as the numerical factor to calculate the gross up square footage to allow for the building infrastructure differs depending on the exact building configuration. For example, a typical office would have a numerical gross up factor of approximately 1.2 or 20%, however civic buildings tend to require larger spaces to accommodate gathering and open circulation space for the general public resulting in a more appropriate numerical gross up factor of 1.4 or 40%, as used in Table 4-1 above.

Table 4-2: Incremental Space Needs for headcount of 676

	Current Space Standard	New Space Standard
Total Space Needs for Forecasted Head Count of 676	178,515 usable square feet	159,040 usable square feet
Space Available at 225 East Beaver Creek Drive	144,470 usable square feet	144,470 usable square feet
Incremental Space Needed	34,045 usable square feet	14,570 usable square feet

Table 4-3: Incremental Space Needs for headcount of 576

	Current Space Standard	New Space Standard
Total Space Needs for Forecasted Head Count of 576	146,880 usable square feet	135,510 usable square feet
Space Available at 225 East Beaver Creek Drive	144,470 usable square feet	144,470 usable square feet
Incremental Space Needed	2,410 usable square feet	Not required

For the purposes of this study, each department was also asked to identify which groups can be relocated to a satellite location (i.e. off site). Groupings were identified as having the potential to be relocated to a satellite location based on the level of regular collaboration with other departments as well as the ability to be a self-sufficient stand-alone operation. As can be seen in the table below, a total of 131 staff representing 17,622 usable square feet under the new space standards were deemed as possible for relocation to a satellite location.

Table 4-4: Potential Satellite Candidates by Department

Department	Head Count	Square Feet
Access Richmond Hill (partial)	12	1,500
IT, Applications & PM	33	1,716
Accounts Payable	17	1,212
Event Services	6	525
By-Law & Licensing	39	2,696
Portion of Projections to the next 20 years	24	5,280
36% Program Circulation Space (aisles/corridors, elevators lobbies, exit stairs and core toilets)		4,693
Total	**131**	**17,622**

Should all these staff be relocated to a satellite location, there would result in a slight surplus of space of approximately 8,200 usable square feet at the existing building, which may act as a buffer should growth and space needs be understated or leveraged for other purposes and the city needs evolve. This presumes a complete renovation of the existing building to the new space standards. Note that this also presumes existing leased space to Sun Life has been vacated and returned to the City, which could be used as a swing space during the renovations.

5.0 Accommodation Options

Colliers, in conjunction with the City, conducted a review of all City owned properties as well as a review of all current market available properties to identify potential suitable locations based on the results of the needs analysis. While a number of suggestions were reviewed, a total of six potential options were discussed with the City and considered under two scenarios:

Single Site Options

1) 1300 Elgin Mills Road East – Richmond Green *(New Construction - City owned)*
2) 9481 Leslie Street – Brodie House *(New Construction - City owned)*
3) Representative Market Available – *(New Construction)*
4) 225 East Beaver Creek Drive *(Renovation + Expansion)*
    a. on City owned lands
    b. on market available lands

Satellite Options

(retaining and renovating 225 East Beaver Creek Drive as 'Core' location supplemented with additional space at the following satellite locations)

5) EBC Renovation + Satellite (City-Owned) 1200 Elgin Mills Road – Operations Centre
6) EBC Renovation + Satellite Representative Market Available Leased Space

For each of the six accommodation options considered, a high-level schedule to provide an estimate of duration of the project was developed. Note that for those options involving market transactions, as it is difficult to estimate the duration of the transaction itself, these schedules are developed to take into account activities after the acquisition of the market property. For those options involving renovation of the existing building, the estimated schedule aims to minimize the number of moves required, however the exact phasing and number of moves are to be determined upon further study and detailing of the functional programming.

Potential locations and combinations of sites in addition to the above six options were reviewed, however were not deemed suitable for further investigation. Suitability was determined under two scenarios – accommodation of total space needs (i.e. single site options which conformed to the approved guiding principles) and accommodation of minimum satellite space needs (i.e. satellite options). Properties of sufficient available acreage conducive to development of an office building (i.e. suitable flat land topography, no restrictive designations or constraints such as conservation area or wetland, etc.) and existing properties with sufficient vacancy to allow for accommodation under the two scenarios outlined were the criteria used to determine inclusion for consideration and further analysis. Potential combination of sites, such as investigating multiple satellite locations (i.e. adjacent retail mall and nearby light industrial properties plus the Operations Centre), adds another layer of complexity and risk with the salient features of such combinations already captured in the options identified above.

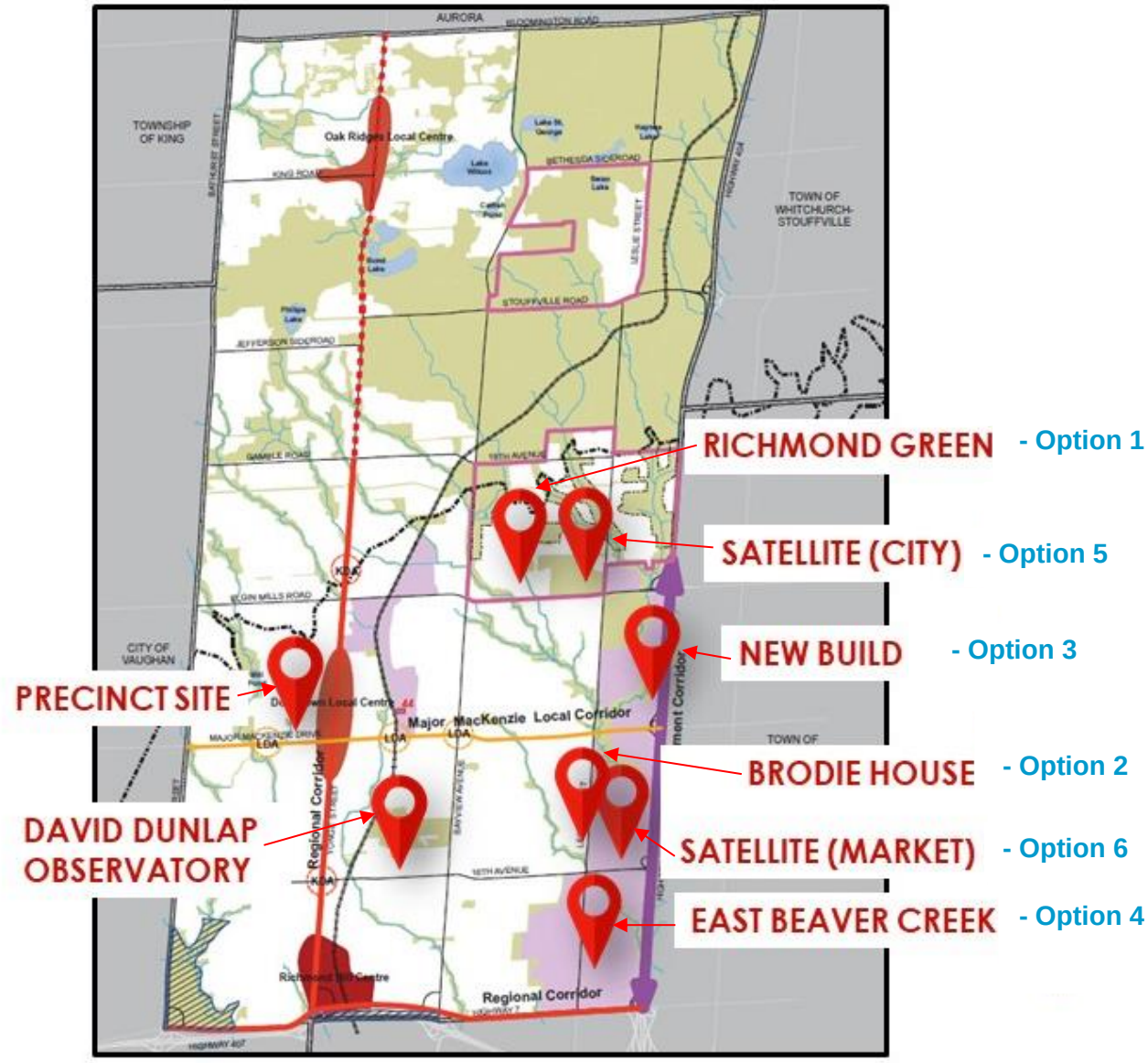
For instance, the City owned lands at the David Dunlap Observatory (DDO) were considered, however were deemed to be unsuitable for development of an office building of sufficient size for the City's needs. The DDO campus is protected as a Cultural Heritage Landscape under the Ontario Heritage Act.

Figure 5-1: David Dunlap Observatory Lands

As well, a scenario of a Representative Market Available – Existing Building was also investigated. However, from discussions with the Colliers Brokerage and Market Intelligence teams, it was determined that the Richmond Hill office market does not have an existing building of suitable size for the City's space needs in one location. Therefore, this scenario was not considered further.

The identified potential suitable site locations are presented in this section. Note that for the market available properties, as market conditions change over time, the options shown are intended to be a representation of what could be available in the market should the City choose to move in that direction going forward. The map below illustrates the locations of all potential options in relation to the existing site at 225 East Beaver Creek Drive and the Civic Precinct / Central Library.

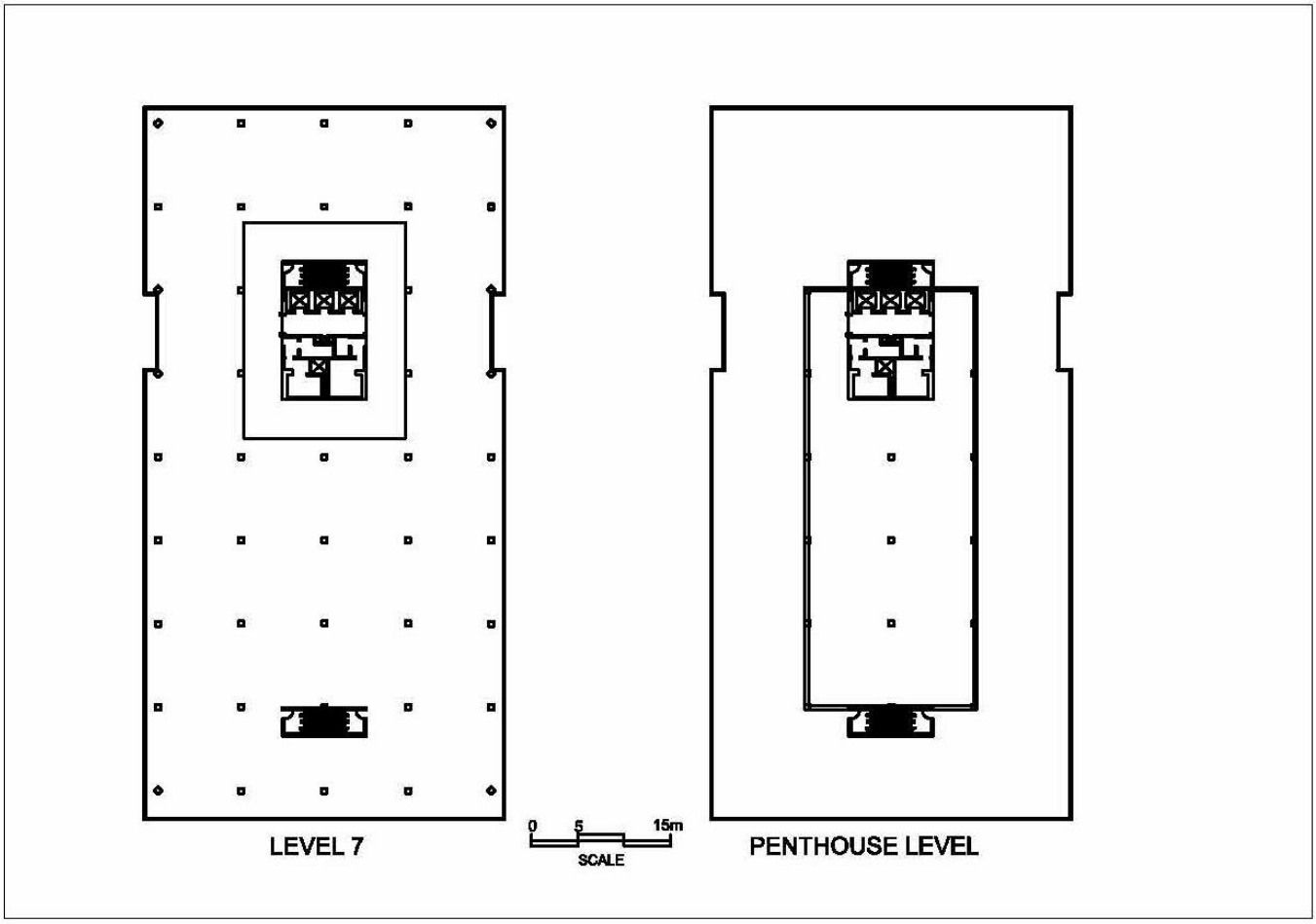
Figure 5-2: Map of Potential Sites



5.1 Single Site Options

For the purposes of this report, and to allow ease of comparison across options considered, a prototypical office building was considered within each Single Site Option 1, 2 and 3 as these three options contemplate the development of a new building on essentially a vacant piece of land. The prototypical office building applied on each of the sites for Options 1, 2 and 3 consists of 7 storeys, plus penthouse level to house the mechanical and electrical equipment, with an approximate 32,000 SF floor plate per floor, as illustrated in Figure 5-3.

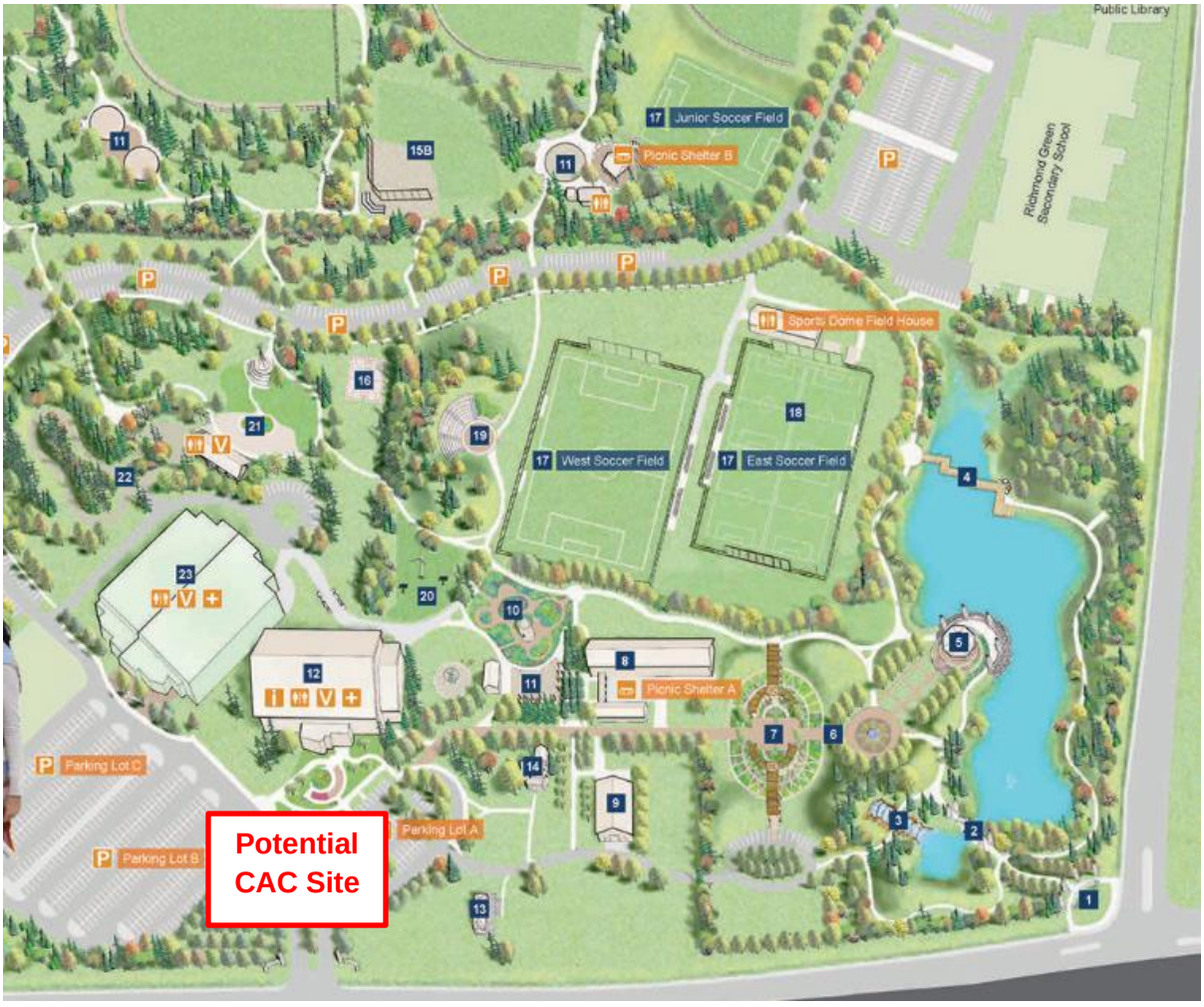
Figure 5-3: Sample Floor Plate and Penthouse Level



5.1.1 Option 1 – Richmond Green (City owned)

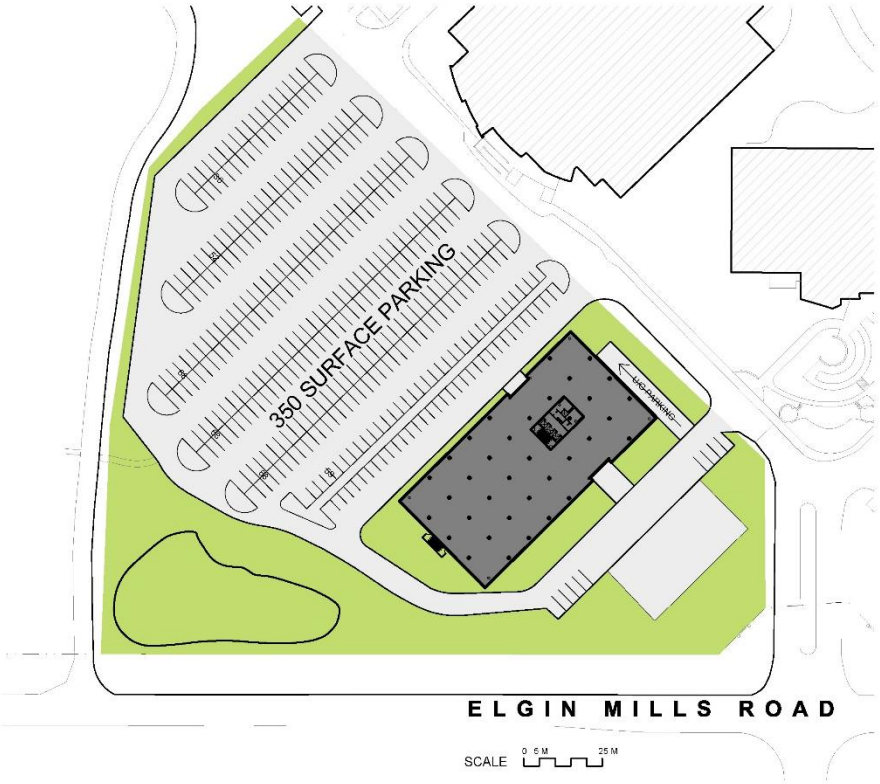
The existing City owned Richmond Green Sports Centre and Park comprises 102 acres and consists of the Tom Graham Arena complex with two ice rinks, three outdoor soccer fields, seven baseball diamonds, an outdoor basketball court, an indoor sports dome, state-of-the-art skateboard park, seasonal bocce courts, skating trail, an outdoor amphitheathre seating 300 people, and agricultural barn and paddock, among other amenities. To the northeast of the Richmond Green Sports Centre and Park are the Richmond Green Public Library and Richmond Green Secondary School, as can be seen in the figure below.

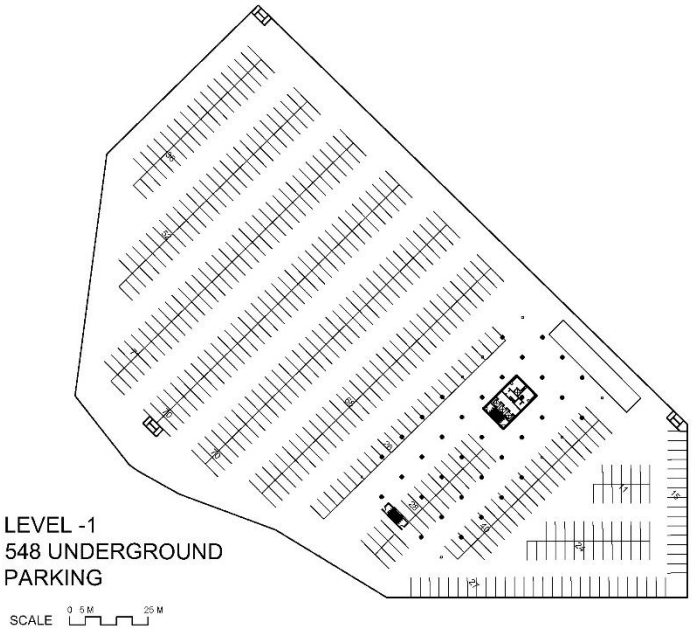
Figure 5-4: Richmond Green Sports Centre and Park



The Richmond Green option is subject to the North Leslie secondary plan and is currently designated as 'Park' and zoned 'Agricultural'. The development of the site was permitted through exceptions on a site-specific basis to allow for community recreational purposes. The current zoning, Official Plan and Secondary Plan do not allow for office use on this site, however there is sufficient available acreage conducive to development of an office building in the southwest corner of the site adjacent to the Tom Graham Arena within the surface parking lot. In addition to the prototypical 7 storey, 222,656 SF building with a floor plate of approximately 32,000 SF per floor, a single level of underground parking would also need to be included to replace the displaced existing surface parking and also to conform to the typical City's zoning by-laws for minimum parking spaces for office use.

Figure 5-5: Option 1 – Richmond Green Potential Concept Layout





ZONING
- Agricultural

SITE
- New Civic Space
- Approx. 7.3 acre
- TOTAL PARKING REQUIRED :885 Spaces
- 350 Surface Parking Spaces
- 548 Underground Parking Spaces

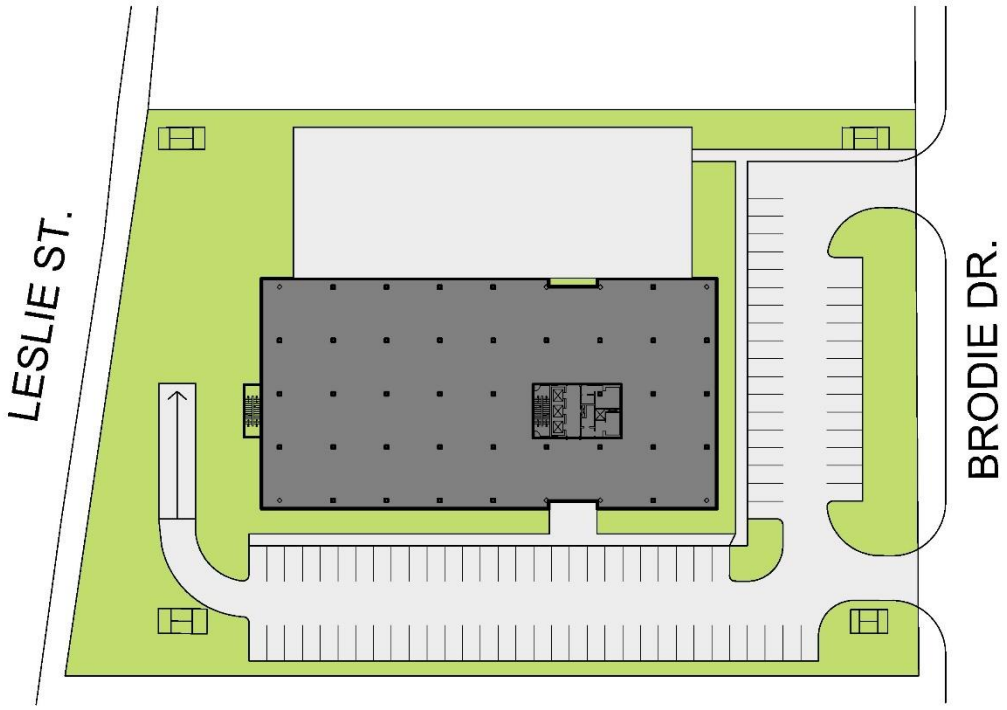
BUILDING
- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable)
- 222,656 SF Total GFA (159,040 SF Total Usable)

Task	Duration	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Site Investigations and Studies	7 months						
Prime Consultant Procurement (RFP)	6 months						
Design Development	24 months						
Permit and Applications	18 months						
Contractor Procurement (Tender)	5 months						
Construction & Occupancy Phase	30 months						
Total	**5.75 years**						

5.1.2 Option 2 – Brodie House (City owned)

Another City owned property is the heritage Brodie House at 9481 Leslie Street. This is a mid-block parcel of land comprising approximately 3.2 acres with access to both Leslie Street and Brodie Drive. Prior to development of an office building, the existing heritage homestead would need to be relocated, which will require an amendment to the existing heritage by-law applicable to this particular site. Similar to the concept envisioned at the Richmond Green site of a prototypical 7 storey, 222,656 SF building with a floor plate of approximately 32,000 SF per floor, there would also need to be two levels of underground parking constructed.

Figure 5-6: Option 2 – Brodie House Potential Concept Layout

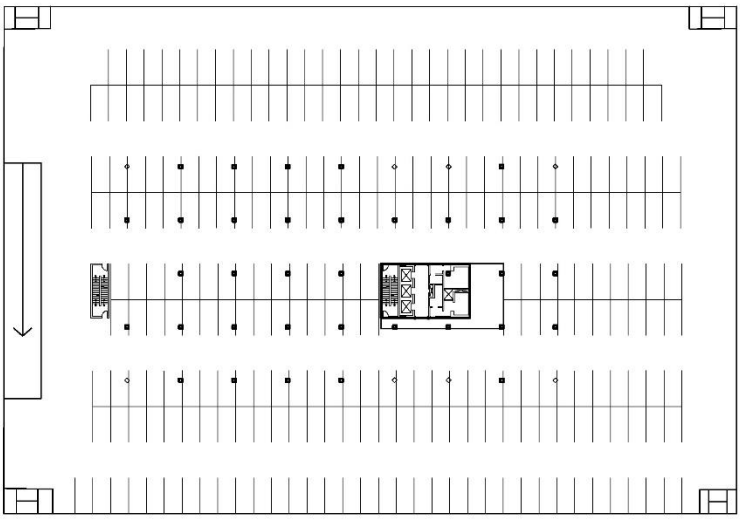


ZONING
MC-1, High Performance
Industrial-Commercial One
By-Law 150-80 as amended
Front Yard: 12.0 metres
Side Yard: 6.0 metres
Rear Yard: 12.0 metres
Flankage: 6.0 metres
Coverage: N/A
FAR: 100%
Height: 30.5 metres

SITE
- Site Area approx. 3.2 acres
- New Civic Space

TOTAL PARKING REQUIRED:707 Spaces
95 Surface parking spaces
612 Underground (2 levels)

BUILDING
- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)



300 UNDERGROUND PARKING SPACES

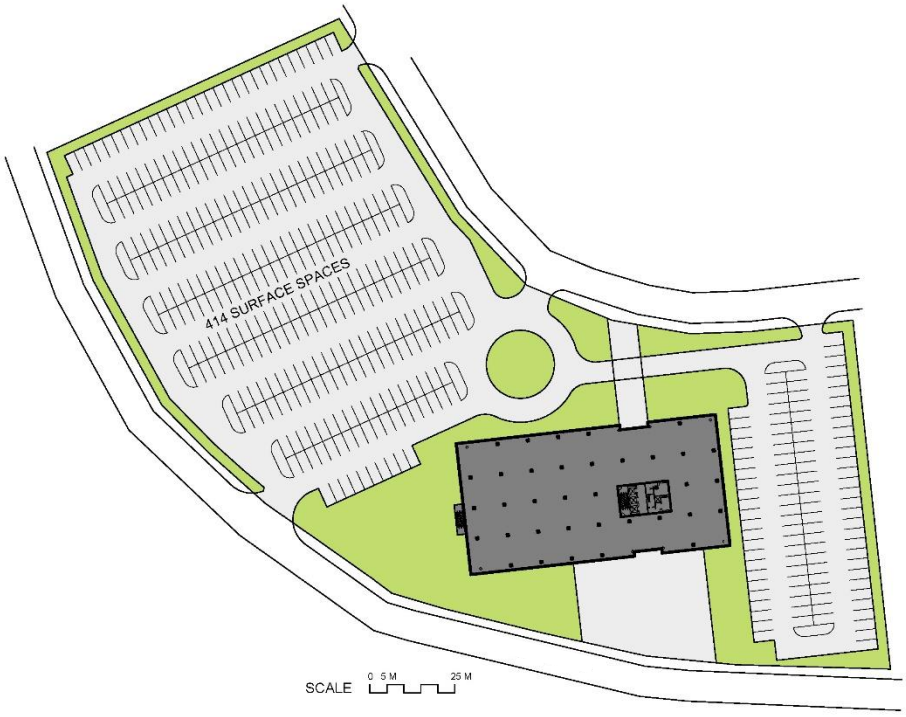
SCALE 0 5 M 25 M

Task	Duration	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Site Investigations and Studies	7 months						
Prime Consultant Procurement (RFP)	6 months						
Design Development	24 months						
Permit and Applications	18 months						
Contractor Procurement (Tender)	5 months						
Relocation of Existing Heritage	4 months						
Construction & Occupancy Phase	30 months						
Total	**6.0 years**						

5.1.3 Option 3 – Representative Market Available Site – New Construction

Within the City, there exist several areas of privately owned developable lands located in designated business parks or employment areas. An example of such a site is presented below under two potential configurations – one where most parking is located on the surface with one level of underground parking thereby allowing for future expansion on the site should the City need a larger building past the next 20 years (approximately 6.4 acres – Option 3a), and a second where a two levels of underground parking are constructed with the site acquired being sufficient for the City's forecasted needs for the next 20 years only (approximately 3.2 acres – Option 3b). One of the determining factors when considering which of these two configurations would continue to be considered lies in balancing the costs of land acquisition against the cost of constructing an additional level of underground parking.

Figure 5-7: Option 3A – Market Available New Construction Potential Concept Layout



ZONING
MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE
- Site Area approx. 6.2 acres
- New Civic Space
- TOTAL PARKING REQUIRED: 707 Spaces
- 414 Surface Parking Spaces
- 300 Underground (1 level)

BUILDING
- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)

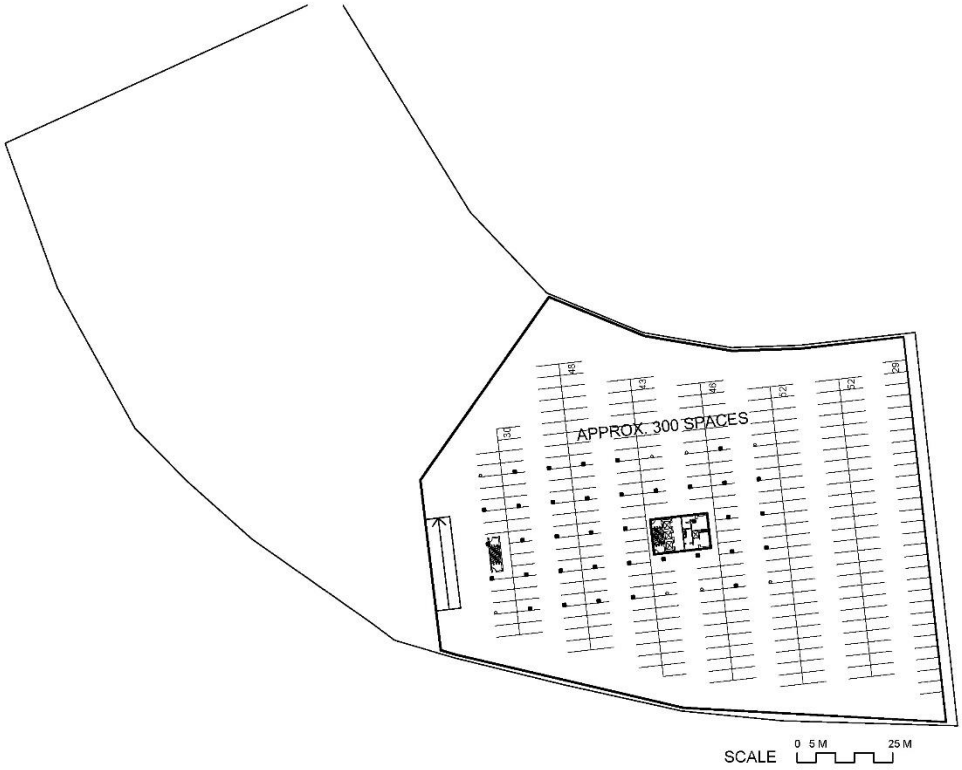
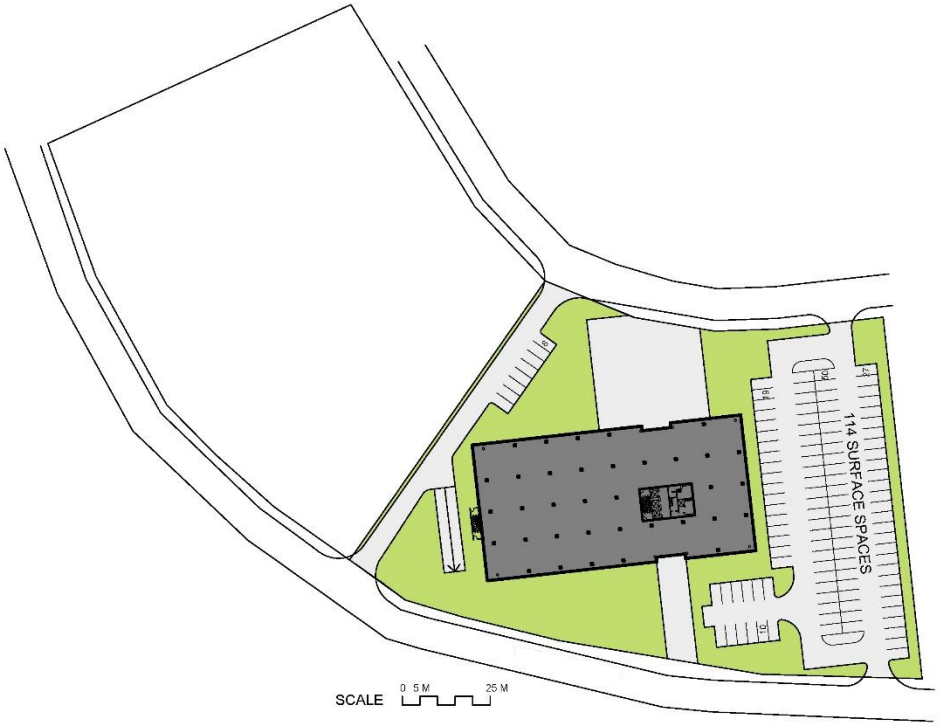
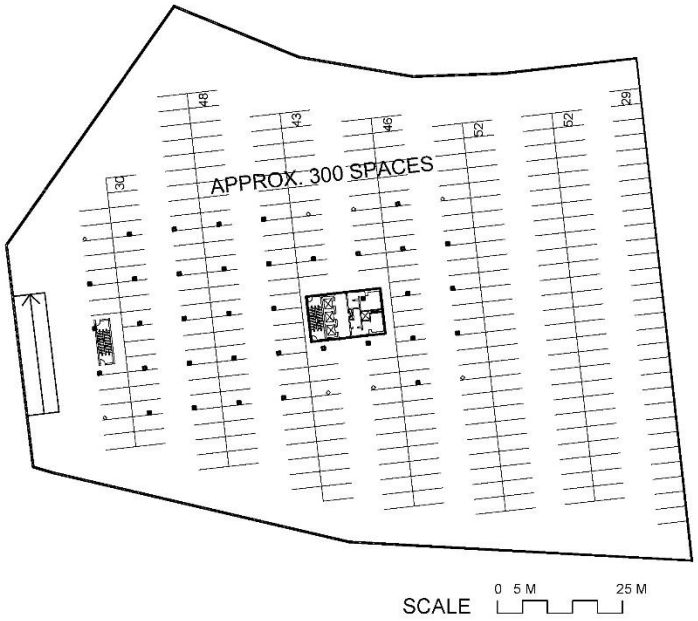


Figure 5-8: Option 3B – Market Available New Construction Potential Concept Layout





SITE

- Site Area approx. 3.2 acres
- New Civic Space
- TOTAL PARKING REQUIRED:707 Spaces
- 107 Surface parking spaces
- 600 Underground (2 levels)

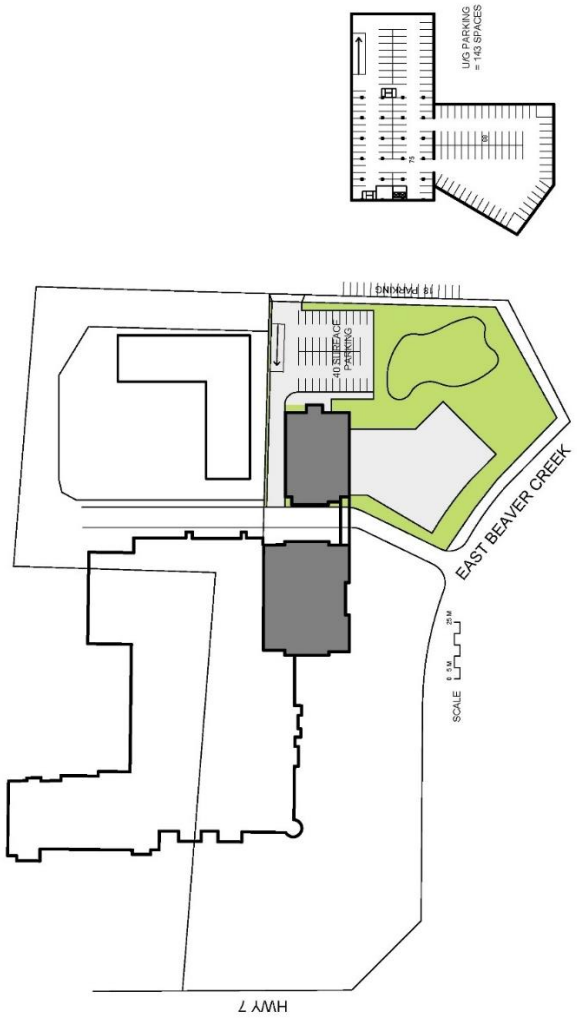
Task	Duration	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Site Investigations and Studies	7 months						
Prime Consultant Procurement (RFP)	6 months						
Design Development	24 months						
Permit and Applications	18 months						
Contractor Procurement (Tender)	5 months						
Construction & Occupancy Phase	30 months						
Total	**5.75 years**						

5.1.4 Option 4 – East Beaver Creek Expansion (City owned / Market available)

This last single site option presented looks at the existing building at 225 East Beaver Creek Drive and contemplates the development of an expansion to the building, either on City owned lands or through acquiring privately owned lands, including potentially portions of the retail mall that is directly attached to the existing building. As identified previously, the size of the expansion required will be dependent upon whether a complete renovation of the existing building to the new space standards occurs or not.

Under the expansion on City-owned lands scenario (Option 4A), the surface parking lot directly to the north of the existing building is City owned and would be suitable for a modest 3 or 4 storey extension connected to the existing building via a pedestrian bridge above grade. This would allow for all public facing spaces, such as the Council Chambers, Mayor and Councillors' offices, meeting rooms, etc., to be relocated to the extension space leaving the existing building solely for City administrative needs. This configuration would allow for better security and controls for access after hours. One level of underground parking is presumed to be sufficient to replace the displaced existing surface parking and conform to the City's zoning by-laws for minimum parking spaces, however the exact number of parking levels are to be confirmed during detailed design or study.

Figure 5-10: Option 4A – East Beaver Creek Expansion Potential Concept Layout (City Owned)



ZONING
MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

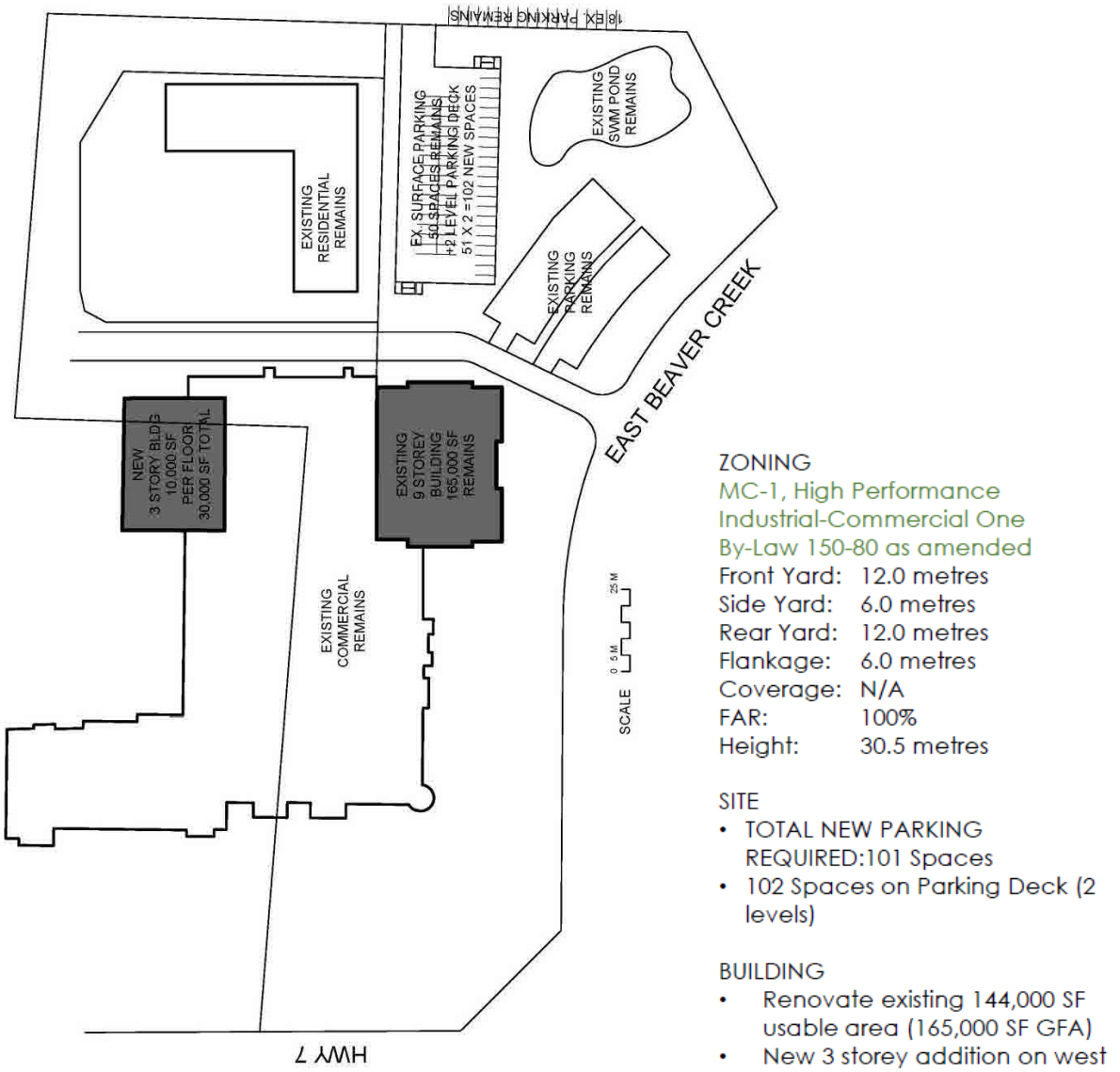
Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE
- New Civic Space
- TOTAL PARKING REQUIRED:200 Spaces (new build)
- 59 surface parking spaces
- 143 Underground Parking Spaces (1 level)

BUILDINGS
- Renovate existing 144,000 SF usable area (165,000 SF GFA)
- New 3 storey addition on existing parking lot 21,540 SF usable area (30,000 SF GFA)

Under the expansion on market available lands scenario (Option 4B), the 3 or 4 storey annex would be constructed on the west side of the existing retail complex on the existing footings built in anticipation of a twin office building during the original construction of the entire complex. As this area of the site is not owned by the City, discussions with the land owner would be necessary to ascertain the viability of this scenario. As well, in this proposed configuration, the existing retail complex would then sit in between the two City office buildings. An overhead bridge to connect the two office buildings at the 2nd or 3rd floor level is proposed and illustrated below.

Figure 5-11: Option 4B – East Beaver Creek Expansion (Market Available)



Task	Duration	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Site Investigations and Studies	8 months						
Prime Consultant Procurement (RFP)	6 months						
Design Development	24 months						
Permit and Applications	24 months						
Contractor Procurement (Tender)	6 months						
Construction & Occupancy - Expansion	18 months						
Renovation - EBC	16 months						
Total	**5.75 years**						

5.2 Satellite Options

In contemplating potential satellite options, for the purposes of this Report, the number of satellite locations has been limited to one. Of course, more than one satellite location may be considered, however in keeping with the principle of functionality and synergies among departments, the more satellite locations that are activated, the more difficult it will be to maintain functionality and synergies between and within departments. There would also be additional costs associated with duplication of spaces and services, such as lunch rooms, meeting rooms, other amenities and services spaces, and Information Technology. Note that for all satellite options considered, these include a complete renovation of the existing building to the new space standards.

5.2.1 Option 5 – Operations Centre (City owned)

Adjacent to the Richmond Green site is the City owned Operations Centre at 1200 Elgin Mills Road East. In addition to the Community Environmental Centre, the Operations Centre is also home to the Public Works department and the Fire and Emergency Services Administration and Training Centre. There is available space at this location making this a potentially suitable satellite to the existing building at 225 East Beaver Creek Drive.

The Region of York is currently leasing approximately 7,600 usable square feet on the ground floor, which they have vacated and have indicated they have no desire to renew the space. It will revert back to the City upon the natural expiry of the lease. In addition, there are a couple of under-utilized spaces on the second level which may be reconfigured to increase the amount of satellite space available for use in City accommodation resulting in a potential total of 13,700 usable square feet at the Operations Centre as a satellite location. This option presents the opportunity to grow as the City grows, only taking on space in chunks as needed when needed. Option 5 can have a flexible phased implementation plan that could take from 5 to 15 years based on actual space needs.

In comparing to the minimum incremental square footage needed of 14,570 usable square feet, there is insufficient space for this location to be used as a satellite option (shortfall of 870 usable square feet), however from discussion with City staff, the amount of shortfall of space needed is deemed minimal and the building does have potential for an addition to be constructed. Therefore, it has been included as part of this study.

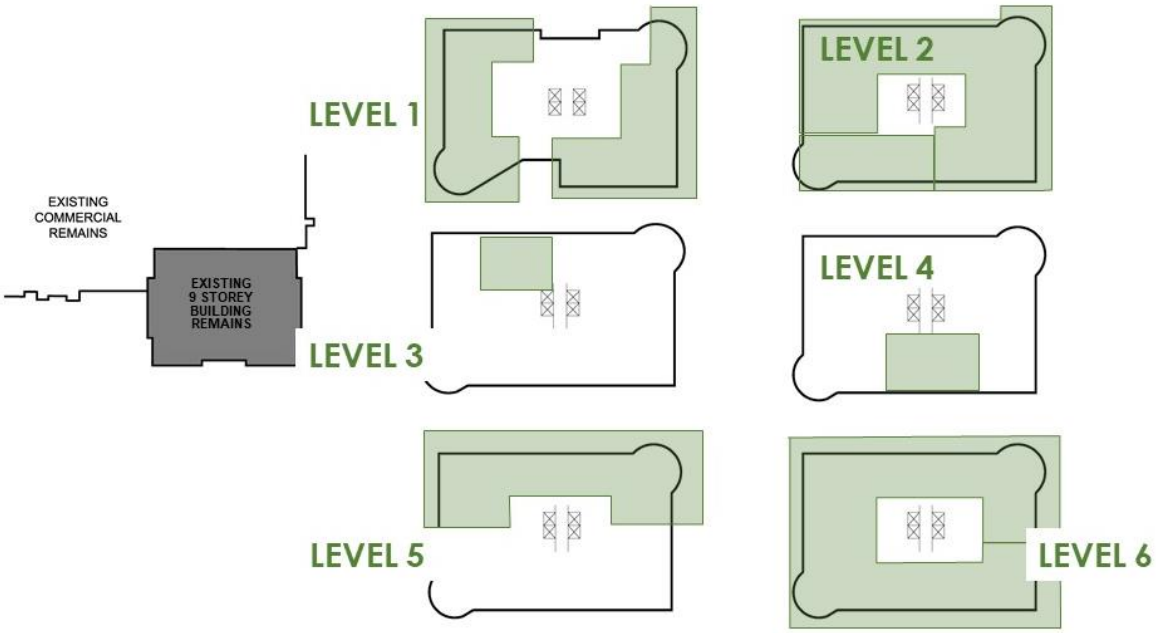
Figure 5-12: Option 5 – Operations Centre Satellite

Task	Duration	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Site Investigations and Studies	6 months						
Prime Consultant Procurement (RFP)	6 months						
Design Development	18 months						
Permit and Applications	15 months						
Contractor Procurement (Tender)	6 months						
Renovation - Satellite	15 months						
Renovation - EBC	16 months						
Total	**5.0 years**						

5.2.2 Option 6 – Representative Market Available Satellite Site

There are a number of existing office buildings within the City, mostly situated along Highway 404, that have varying amounts of vacant space which would be suitable as a satellite location. Depending on the amount of space needed for the satellite location and configuration of the office building with space available for lease, one or more floors may be needed. It is recommended that, where possible, full floors be leased from the market. Similar to Option 5 above, this option also presents the opportunity to grow as the City grows, only taking on space in chunks as needed, however availability of space will be dictated by the market. By structuring the lease agreement with expansion options and rights of first offer or refusal on adjacent space or floors, this provides a cost-effective way for the City to manage future growth.

Figure 5-13: Option 6 – Market Available Satellite



Task	Duration	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Site Investigations and Studies	6 months						
Prime Consultant Procurement (RFP)	6 months						
Design Development	18 months						
Permit and Applications	15 months						
Contractor Procurement (Tender)	6 months						
Renovation - Satellite	15 months						
Renovation - EBC	16 months						
Total	**5.0 years**						

6.0 Financial Considerations

For each of the six accommodation options considered, an order of magnitude estimate of construction costs were developed. These estimates of construction costs were based on a design brief developed that factored in site specific considerations as well as whether the option pertained to a newly constructed building or a renovation of an existing building. Details on the design briefs are included in Appendix B – Site Options and Floor Plans.

Construction cost ranges are presented under five main categories – site development, core and shell, interior fit-up, parking and renovation. This allows for the natural variability between the accommodation options to be more easily seen and compared as the options have differing components. Where components could be consistently applied, this approach was taken to minimize variability as much as possible. Examples of standard components include the area and costing for development of a civic square space and costing for furniture, fixtures and A/V for all options. A 10% design and pricing contingency has been included in the construction cost estimates as well as a 5% post-contract contingency. As it is currently difficult to anticipate when a project may get underway, an escalation contingency was not included in this Report, however it will need to be considered in the future as budgets are developed. For clarity, all costs shown in this Report are in 2019 dollars. For complete details on the elements included in the construction cost estimates, please see Appendix D.

In addition to the estimated construction costs, option specific elements are also included as applicable. These include anticipated land acquisition costs for any non-City owned properties as well as any revenues gained upon sale of the existing building, demolition costs, relocation and remediation costs for an existing heritage property (Option 2 – Brodie House), and lease costs for rental of market available space. Land pricing per acre and market rental rates were sourced based on current market activity. For the lease cost estimated value, it is presumed the space will be leased in perpetuity therefore a capitalization rate of 6.5%, which is typical of yields achieved in the suburban office market in Toronto, was used to determine the total cost. Estimated value of the existing building was provided by the City based on an appraisal conducted within the last 5 years. A summary of the financial considerations by option is provided in Table 6-1.

Note that for all options, it is presumed the operating and maintenance costs as well as taxes applicable are similar and therefore excluded from financial consideration. Likewise, for all options, it is presumed that any deferred capital repairs are addressed so that each option may be considered as if newly constructed. On a forward looking basis, it is presumed the profile and schedule of capital repairs and maintenance that are needed will be similar across all options with the only variability being the size of each facility and presence of underground parking.

As well, no allowance has been made for any environmental or soil conditions. It is anticipated that, as a next stage in these investigations, additional studies to assess environmental and soil conditions will be conducted for selected options.

Finally, no allowance or consideration has been made for financing of any option nor for legal fees associated with the Reciprocal Agreement and negotiations with the other parties to that agreement. It is presumed that for any option, the City would fund the estimated costs through equity sources.

Table 6-1: Financial Summary by Option

	Option 1: Richmond Green	Option 2: Brodie House	Option 3A: Market New Construction	Option 3B: Market New Construction
Project Costs				
Site Development*	$8.8 M	$3.8 M	$6.6 M	$4.2 M
Construction Cost – Core and Shell*	$94.2 M	$94.3 M	$94.2 M	$94.2 M
Construction Cost – Parking*	$62.1 M	$59.0 M	$32.3 M	$64.8 M
Construction Cost – Interior Fit-up*	$27.2 M	$27.3 M	$27.2 M	$27.2 M
Renovation Cost of 225 East Beaver Creek Drive*	N/A	N/A	N/A	N/A
Furniture, Fixtures & A/V	$9.7 M	$9.7 M	$9.7 M	$9.7 M
Total Project Cost	$201.9 M	$194.0 M	$170.0 M	$200.0 M
Option Specific Costs				
Demolition / Heritage Relocation Cost	N/A	$1.4 M	N/A	N/A
Land Acquisition Cost	N/A	N/A	$13.4 M ($2 M per acre)	$6.7 M ($2 M per acre)
Revenues from Disposition of 225 East Beaver Creek Drive	($25 M)	($25 M)	($25 M)	($25 M)
Lease Cost	N/A	N/A	N/A	N/A
Total Net Costs****	**$176.9 M**	**$170.4 M**	**$158.4 M**	**$181.7 M**

	Option 4A: EBC Expansion – City Lands	Option 4B: EBC Expansion – Market Lands	Option 5: EBC Renovation + Satellite (City Owned)	Option 6: EBC Renovation + Satellite (Market Available)
Project Costs				
Site Development*	$3.7 M	$2.3 M	N/A	N/A
Construction Cost – Core and Shell*	$22.5 M	$24.4 M	N/A	N/A
Construction Cost – Parking*	$17.7 M	$9.1 M	N/A	N/A
Construction Cost – Interior Fit-up*	$5.4 M	$5.4 M	$2.7 M	$3.8 M
Renovation Cost of 225 East Beaver Creek Drive*	$30.1 M **	$29.4 M **	$29.4 M **	$29.4 M **
Furniture, Fixtures & A/V	$9.7 M	$9.7 M	$9.7 M	$9.7 M
Total Project Cost	$89.1 M	$80.4 M	$41.8 M	$43.0 M
Option Specific Costs				
Demolition / Heritage Relocation Cost	N/A	N/A	N/A	N/A
Land Acquisition Cost	N/A	N/A	N/A	N/A
Revenues from Disposition of 225 East Beaver Creek Drive	N/A	N/A	N/A	N/A
Lease Cost	N/A	N/A	N/A	$5.6 M***
Total Net Costs**	**$89.1 M**	**$80.4 M**	**$41.8 M**	**$48.6 M**

* Includes soft costs (i.e. consultants, permits and fees, etc.) and contingencies.

** Includes approximately $5 M - $10 M of capital repairs forecasted for 225 East Beaver Creek Drive.

*** $17 per square foot net rent capitalized at 6.5%.

**** All Total Net Costs are based on 2019 dollars not including escalation.

7.0 Qualitative Considerations

7.1 Compliance with Guiding Principles

The following guiding principles were considered when assessing the accommodation options. These guiding principles were originally developed as part of the scope of the previous Civic Precinct Project. They remain relevant for the purposes of this Report, however in light of the direction provided by Council in 2018 to investigate alternate options to accommodate future City Hall growth and the cancellation of the Civic Precinct Project, certain principles are given more weight than others, specifically principles related to balancing financial impacts and flexibility in implementation (discussed in Section 7.4). The principles were explained in section 2.2 above.

1) **Shared and Flexible Spaces**

2) **Modernizing the Work Environment**

3) **Functionality and Synergies Amongst Departments**

4) **Proximity to Amenities**

5) **Balance Financial Impacts**

6) **Reduce or Mitigate our Environmental Impact**

The first two guiding principles of Shared and Flexible Spaces and Modernizing the Work Environment are equally capable of being implemented throughout all options and therefore do not warrant further consideration here, unless a decision is made not to proceed with renovations at the existing location for Options 4, 5 and 6. If such a decision is made, then those options incorporating the existing building would be viewed as not as favourable as the other options where these guiding principles would be capable of being implemented.

The guiding principle of Balancing Financial Impacts is best assessed through review of the previous section and so will not be discussed further here.

In assessing each option's ability to comply with the guiding principle of Functionality and Synergies Amongst Departments, this principle favours single site options rather than multiple site or satellite options. Therefore, Options 1, 2 and 3 are favourable to Option 4, which in turn is favourable to Options 5 and 6.

As well, when considering Proximity to Amenities, the options featuring ease of public transportation and access to retailers and food outlets include any option that includes the existing location (i.e. Options 4, 5 and 6). Option 1 Richmond Green offers the best access to recreational amenities. It is presumed that any of the market available options (i.e. Options 3 and 6) can be sourced within reasonable proximity to desired amenities.

Finally, in consideration of Reduce or Mitigate our Environmental Impact, those options with proximity to transit or that are located effectively as a single site are most favourable. As well, options involving renovation of existing facilities rather than construction of new facilities are considered more environmentally friendly and sustainable due to investment in existing infrastructure, reduced waste and import of materials. Thus, Option 4 would be viewed as most favourable.

7.2 Civic Presence and Placemaking

In addition to the guiding principles considered above, the City may also wish to consider the ability of each option to create a sense of civic presence and pride for the residents of Richmond Hill. Civic spaces are an extension of the community, serving as a stage for public life such as providing a setting for cultural celebrations, events and social interaction. The City Hall is the centre of civic life and as such, should foster a sense of placemaking and capture the spirit and aspirations of the City's population. Typically, civic centres tend to be situated in areas that are highly visible with distinct architecture to set it apart as a focal point for the municipality.

All of the Single Site Options have the potential to create that civic impact to varying degrees. For the new construction options (i.e. Options 1 – 3), they have the best opportunity to create civic presence and placemaking through the design and architecture of the building itself. Additionally, for Option 1 Richmond Green, there is already a heavy civic presence at that location already with the significant amount of community amenities developed. For Option 3 Representative Market Available, depending on where it is situated, there may be the opportunity for high visibility if located next to a major thoroughfare, such as Highway 404. The location of Option 2 Brodie House is not ideal from a visibility perspective.

For the renovation and expansion options (i.e. Options 4A and 4B), while there is not the same opportunity to create a civic presence with a blank slate building design, there is still the opportunity to enhance the existing building architecture to capture that civic pride, particularly with the current building at 225 East Beaver Creek Drive under Option 4A. The current building appears as a mostly non-descript standard office building with nothing other than the building signage at the top identifying it as a focal point and centre of civic life of the City.

For the satellite options (i.e. Options 5 and 6), by dispersing the accommodations for City staff, it is also diluting the potential for a well defined civic presence. Further, with the satellite options, it is not contemplated to improve upon the current state of civic placemaking.

7.3 Reciprocal Agreement Impact

Another consideration is the impact to Options 1 through 4 due to the existing Reciprocal Agreement. The City is subject to a Reciprocal Agreement which governs the overall site, of which the existing building at 225 East Beaver Creek Drive forms one part. This Reciprocal Agreement dates back to the original development of the lands, which are now comprised of the office building at 225 East Beaver Creek Drive, a high-rise condominium, the Sheraton hotel, the Best Western Hotel, and several retail properties, including the Shoppes of the Parkway. The current Parties to the Reciprocal Agreement are the owners of the properties on the site. Any major decisions that impacts any portion of the site is subject to the voting approval of a Management Committee, whose members are comprised of representation from each of the Parties to the Reciprocal Agreement. The number of votes of each Party is determined by the total area owned by that Party with the largest landowner having the most votes.

All options contemplating new construction (i.e. Options 1, 2, and 3) and the Option 4 EBC Expansion contemplate a major change to the site, either through the sale of the existing building, as in Options 1 through 3, or the construction of an expansion on the site, either on the City-owned lands temporarily displacing some of the surface parking in the lot on the northeast of the site which is considered a Shared Facility under the Reciprocal Agreement or on the privately-owned lands on the other side of the retail mall. From a review of the Reciprocal Agreement, the City would need the approval of the Management Committee prior to being able to engage in any sort of disposition activity in support of the New Construction options or development of any expansion to the existing building. Therefore, it is

recommended that, prior to proceeding with further investigations on any of Options 1 through 4, the City approach the Management Committee to determine the level of support from the other Parties.

For clarity, any renovations the City contemplates within its owned existing building is not subject to Management Committee approval.

7.4 Other Considerations

For the City-owned new construction options, the existing zoning and heritage by-laws pose a challenge. For Option 1 Richmond Green, the existing zoning does not allow for office use. Therefore, a site specific exemption would be needed to allow such a development to occur. For Option 2 Brodie House, there is an existing heritage by-law that would need amending to allow for the relocation of the existing heritage property. In addition, a suitable site would need to be found for the relocation of the heritage property. It is presumed a suitable City-owned site could be found for the heritage property, such as within the David Dunlap Observatory lands.

For those options associated with market available properties (i.e. Options 3 and 6), it is presumed that suitable properties exist within the market and are readily available, however that may not be the case at the time the City is ready to move forward with a specific option. The size of the real estate market in the City of Richmond Hill is not so large nor is the level of activity such that it can be presumed that suitable properties are always obtainable. Due to this unpredictability, if the City desires certainty in outcome, it may be better to pursue those options that are wholly within the City's control and ownership.

Finally, flexibility in implementation may be a consideration as well. Factors controlled by the City, such as Work from Home Policy and even factors outside of the City's control, such as rate of population growth impacting staffing needs and changes in service delivery models shifting staff between levels of government, may disrupt the planned approach to satisfying the City's space needs. As well, growth in staff count may occur slower than forecasted. To mitigate against these risks, options that may be phased in rather than undertaken all at once may be more desired. Therefore, Options 1 through 3 would be less desirable from this perspective as compared to Options 5 and 6.

8.0 Findings and Recommendations

8.1 Findings

In reviewing the accommodation options presented, three natural groupings form:

1) New Construction Options
    - Option 1 – Richmond Green
    - Option 2 – Brodie House
    - Option 3 – Market New Construction

2) Renovation and Expansion Options
    - Option 4A: EBC Expansion on City owned lands
    - Option 4B: EBC Expansion on Market Available Lands

3) Renovation and Satellite Options
    - Option 5 – EBC Renovation + Satellite (City-Owned)
    - Option 6 – EBC Renovation + Satellite (Market Available)

Within the first grouping, while the two City-owned options do not require any outlay of funds to acquire a site, this is offset by different factors. For Option 1 Richmond Green, it is the extensive amount of parking that is anticipated as required given the recreation use of the surrounding site that significantly increases the cost of that option (885 parking spaces as compared to 707 parking spaces for Options 2 or 3). For Option 2 Brodie House, there is the impact due to the need to construct two levels of underground parking and the existing heritage property. As well, when considering the qualitative factors, such as complexity in zoning and heritage by-laws, these options do not compare favourably to Option 3A Market New Construction. This presumes a straightforward acquisition process, which may not be the case. Note that Option 3B Market New Construction will no longer be considered as the cost of constructing the additional underground parking that is required under that option is not offset by the reduction in land acquisition costs (additional $6.7 M in land acquisitions costs as compared to an additional $26.7 M - $32.4 M for the additional underground parking). In all three of these options, there is little to no flexibility in implementation as the space needs will need to be specified up front and, once constructed, will be difficult to adjust should anticipated needs change.

Within the second grouping, it is clear that the additional outlay of funds needed to construct the expansion facilities to accommodate space needs under the current space standard exceeds the funds estimated to renovate the existing building to the new space standards (core and shell construction costs only for the expansion building range from $409 - $504 per square foot as compared to $107 - $132 per square foot for the renovation). Therefore, from a financial standpoint as well as from a space use perspective, it is better to renovate the existing facilities at EBC and construct a smaller expansion to house the excess space needs in the next 20 years rather than forgo the renovation and construct more expansion space. This also presents some flexibility in implementation as the completion of the renovation of the existing building may be sufficient in the near term to house the increase in space needs thereby allowing for a better estimate of future space needs to inform the amount of space needed to construct for the expansion.

In the third grouping, there is a slight shortfall of space at the Operations Centre currently to fully house the anticipated growth for the next 20 years, however there is immediate availability to house staff as an interim measure. As for leasing satellite space in the market, while it is a cost effective solution in the

near term, the City would need to consider how well this aligns with their strategic objectives on a long term basis. This grouping of options offers the most flexibility in implementation as it may be actioned at any time and incrementally as space needs present themselves, however this piecemeal approach may result in a fragmented use of space which may negatively impact functionality and synergies amongst departmental groups.

A scorecard is presented below showing how each option performs against the identified quantitative and qualitative criteria.

Table 8-1: Options Summary

	Option 1: Richmond Green	Option 2: Brodie House	Option 3A: Market New Construction	Option 4A: EBC Expansion – City Lands	Option 4B: EBC Expansion – Market Lands	Option 5: EBC Renovation + Satellite (City Owned)	Option 6: EBC Renovation + Satellite (Market Available)
Total Building Area	222,656 SF (159,040 usable)	222,656 SF (159,040 usable)	222,656 SF (159,040 usable)	195,000 SF (159,040 usable)	195,000 SF (159,040 usable)	178,704 SF (158,170 usable)	189,771 SF (159,040 usable)
Total Parking Requirements	885	707	707	Existing + 200	Existing + 102	Existing	Existing
Number of Levels of Parking	1 under ground	2 under ground	1 under ground	1 under ground	2 above ground	N/A	N/A
Estimated Project Duration	5.75 years	6.0 years	5.75 years	5.75 years	5.75 years	5.0 years	5.0 years
Estimated Total Net Cost	$176.9 M	$170.4 M	$158.4 M	$89.1 M	$80.4 M	$41.8 M	$48.6 M
Estimated Total Net Cost per Usable SF	**$795**	**$765**	**$711**	**$457**	**$412**	**$234**	**$256**

Table 8-2: Options Scorecard

	Option 1: Richmond Green	Option 2: Brodie House	Option 3A: Market New Construction	Option 4A: EBC Expansion – City Lands	Option 4B: EBC Expansion – Market Lands	Option 5: EBC Renovation + Satellite (City Owned)	Option 6: EBC Renovation + Satellite (Market Available)
Financial Scoring (weight = 2)	6	6	6	4	4	2	2
Flexibility/Phased Approach (weight = 2)	6	6	6	4	4	2	2
Functionality and Synergies Amongst Departments (weight = 1)	1	1	1	1	1	2	2
Proximity to Amenities (weight = 1)	2	3	2	1	1	1	1
Reduce / Mitigate Environmental Impact (weight = 1)	2	2	2	1	1	2	2
Civic Presence and Placemaking (weight = 1)	1	1	1	2	2	3	3
Reciprocal Agreement Impact (weight = 1)	3	3	3	2	2	1	1
Existing Zoning and Heritage By-law Compliance (weight = 1)	3	3	1	1	1	1	1
Readily Available and Actionable (weight = 1)	1	1	3	1	1	1	3
Total Score	**25**	**26**	**25**	**17**	**17**	**15**	**17**
Overall Ranking	**3**	**4**	**3**	**2**	**2**	**1**	**2**

8.2 Recommendations

Colliers recommends the City proceed with further investigations on the EBC renovation and City owned satellite option (Option 5) as it best meets the City's requirements as outlined in this Report, as this option represents the least cost to achieve as well as the most flexible phased approach, allowing the City to increase in space commensurate with real time growth needs. Option 5 can have a flexible phased implementation plan that could take from 5 to 15 years based on actual space needs. This flexibility also allows Option 5 to be the least risk option in terms of scope changes due to unforeseen project circumstances (e.g. soil condition, environmental issues, reciprocal agreement changes etc.) that could impact the project schedule and cost. Next steps include but not limited to reviewing projected City staff growth and its impact to the space need, a building condition, accessibility, code audit, detailed programming, space standards and further due diligence study (e.g. environmental study) on both existing buildings (225 East Beaver Creek Drive and 1200 Elgin Mills Road) to better understand what systems and structures will need upgrading to accommodate the anticipated occupancies. In addition, some preliminary block layout and phasing plans for implementation and costing would be advantageous to complete. This would assist in confirming that the two locations can accommodate the anticipated staff growth and how that might look.

Projected City staff growth was provided by City staff and should these growth estimates change, there would be a corresponding change in space needed. Therefore, the first next step should be to update the City staff 2020 growth projection and finalize the space requirements in gross and usable square feet, taking into consideration the impact of innovation and/or policy changes such as the Work from Home Policy that is being considered by the City.

Below is a description of the next steps that are recommended for further investigation and preparation for implementation of the recommended option by utilizing the services of professional consultants. A phased approach can be adopted to make it more flexible to address the next steps.

1. **Update the City staff 2020 growth projection and space requirements:** Based on changes influenced by internal and external elements that may impact the service delivery model, the first step would be updating growth projections that directly influence space requirements to better inform the detailed implementation program of the recommended option.

2. **Detailed programming:** Detailed plan for building/renovation design and construction. The plan describes the sequence in which tasks must be carried out so that a project can be completed on time and on budget, identifying costs, dates and duration allocated to tasks. The detailed plan will also identify the strategy on the timing of the different floors which should be renovated and the swing space solution during the construction.

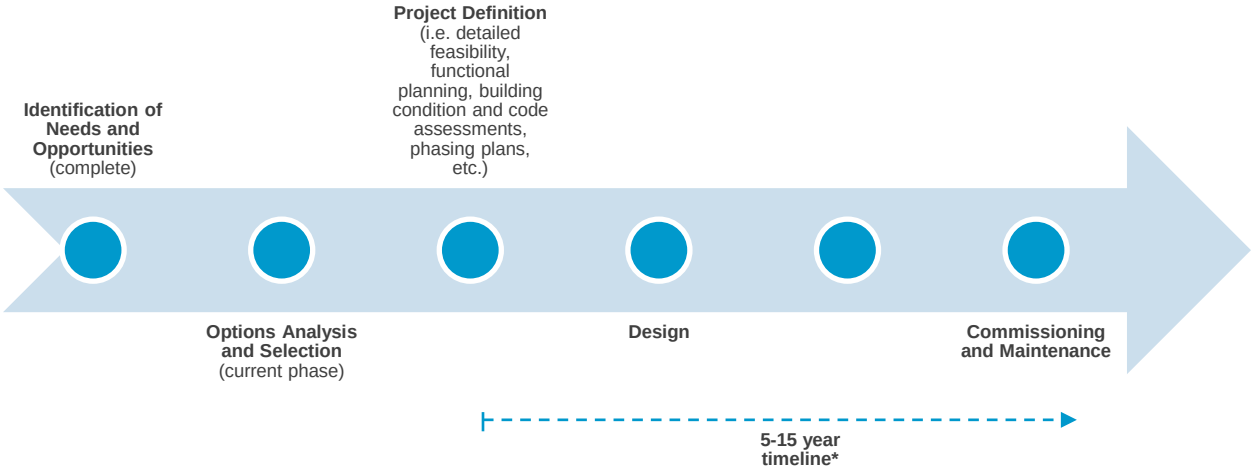
3. **Space standards application:** Apply the new space specifications into the definition and design of the new office space for each space category.
4. **Building condition assessment:** Evaluation of the conditions of a building's envelope performance, structural foundation and superstructure, and mechanical systems, including heating and cooling.

5. **Accessibility assessment:** Examination of a building's interior and exterior environments according to an established set of accessibility criteria, measuring the overall barrier free usability of a building. The assessment will check the level of compliance with the standards of the Accessibility for Ontarians with Disabilities Act.

6. **Code audit:** Review of the building plans in order to determine compliance with the requirements of the Ontario Building Code. The Ontario Building Code is a set of minimum provisions regarding the safety of buildings, including aspects of Health and Safety, Fire protection, Structural sufficiency, Construction materials, and Plumbing and Mechanical system.

7. **Due diligence:** Additional studies which is necessary for the project, such as but not limited to, review or prepare environmental reports and studies; review building permits, licenses, certificates of occupancy; verify if parking is adequate; review and verify utility site plan, verify adequate utility hook-ups, verify all utility hook-up requirements.

Figure 8-1: High-Level Timeline of Activities



* Timeline is flexible and can be stretched and accelerated for even less than 5 years based on actual space needs.

Appendix A – Needs Analysis

Needs Analysis- ReValue Engineered

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3888 - CAC**

Date: November 9 2018

Org. Chart	Departments	Head Count		SQ.FT.
Chart B	Office of the CAO	65	Net Component Area	8,464
Chart C	Corporate & Financial Services	164	Net Component Area	16,221
Chart D	Planning & Regulatory Services	163	Net Component Area	20,687
Chart E	Environment & Infrastructure Services	110	Net Componet Area	11,666
Chart F	Community Services	74	Net Component Area	7,197
Note Existing Compliment is 492				
Sub-Total of Net Areas to 2026 (at 14.7 per year)		**576**	Including 30% Program Circulation	**64,235**
Staff Projections to 2041 (at 6.6 per year)				
Sub-Total of Net Area		**100**	Including 30% Program Circulation	**28,600**

			QTY	SIZE	UNIT SQ.FT.	
Governance	Council Chambers	(Seat 120 + standing)	1	45 x 75	3375	3375
	Mayors Office		1	15 x 20	300	300
	Private Washroom		3	6 x 8	48	144
	Councilors Offices		9	10 x 12	120	1080
	Councilors Conference Room		1	20 x 30	600	600
	Reception Space		1	15 x 25	375	375
	Committee Room		1	20 x 35	700	700
	Catering Facilities		1	10 x 20	200	200
	Utility Room		1	10 x 20	200	200
	Sub-total of Net Areas					6974
	Circulation 30%					2,024
Sub-total	Note: Administration Support is captured in Clerks staff count					**8,998**
Shared Spaces	Lobby/Atrium/Gallery		1	60 x 80	4800	4800
	Event Equipment Storage		1	46 x 76	3496	3496
	Small Business Enterprice Center	(possible Satelite)	1	25 x 40	1000	1000
	Conference Rooms	Seating for 16 to 20	8	20 x 35	700	5600
	Large Meeting Rooms	Seating for 10 to 12	10	15 x 25	375	3600
	Medium Meeting Rooms	Seating for 6 to 8	15	12 x 15	180	2700
	Multi-Purpose Rooms	ion space&Weddings)	3	25 x 35	875	2625
	Training Room		1	25 x 35	875	875
	Team Rooms	Seating for 4 to 6	16	10 x 12	120	1975
	Breakout Areas	Seating for 3 to 4	29	8 x 8	64	1843
	Refreshment Space		8	10 x 15	150	1200
	Utility Supply Room		7	10 x 15	150	1080
	Printer Stations, Multi Functional Floor Models		10	5 x 5	25	240
	Hub Closet		6	10 x 10	100	576
	Coats		20	2 x 6	12	240
	Security		1	12 x 15	180	180
	The Roost, Cafeteria, Seating for	225	1	50 x 85	4250	4250
	Records		1	34 x 44	1496	1496
	Shipping Receiving, Mail & Production		1	35 x 50	1750	1750
	Additional Maintanenace Supervisor		1	6 x 9	54	54
	Additional Maintanenace Team		1	5 x 5	25	25
	Building Supplies Secure Room		1	20 x 20	400	400
	Janitorial Storage		1	10 x 10	100	100
	Wellness Center, Yoga & Arobics		1	30 x 50	1500	1500
	Showers/Change Rms		2	30 x 40	1200	2400
	Bike Storage, to be outside with shelter	pole & gathering space	0	10 x 15	150	0
	Sub-total of Net Areas					44005
	Circulation 30%					13,202
Sub-total						**57,207**
Grand Sub-total						**159,040**
Building Infastruture Gross Up				Add 40%		63,616
Grand Gross Building Total						**222,656**
Note:	Not including Child Care Facilities	not required				3,000
	Not including Zamboni Requirements	not required				

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N3
416.868.1616 bullockwooddesign.com

Needs Analysis, Office of the CAO

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3860**

Date: October 10 2018

DIVISION	DEPARTMENT	SPACE	QTY	SIZE	UNIT SQ.FT.	REQUIRED SQ.FT.
Office of The CAO (Chart B)	**Executive**	Chief Administrative Officer	1	15 x 15	225	225
		Executive Assistant	1	9 x 9	81	81
	Strategic Initiatives	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	3	10 x 12	120	360
		Workstations A	4	9 x 9	81	324
		Workstations B	4	6 x 9	54	216
		Workstations C	0	6 x 6	36	0
		Workstations D	0	5 x 6	30	0
	Projection to 2026	Future Manager Office	0	10 x 12	120	0
		Workstations A	1	9 x 9	81	81
		Future B	1	6 x 9	54	54
		Future C	1	6 x 6	36	36
		Filing	5	1.5 x 3	4.5	22.5
	Legal Services	Town Solicitor	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Private Office	5	10 x 12	120	600
		Workstations A	5	9 x 9	81	405
		Workstations B	1	6 x 9	54	54
		Workstations C	0	6 x 6	36	0
		Workstations D	0	5 x 6	30	0
	Projection to 2026	Future Manager Office	1	10 x 12	120	120
		Future B	2	6 x 9	54	108
		Coilating area	1	8 x 8	64	64
		High density Filing	1	6.5 x 8	52	52
		Bookcases	8	1 x 3	3	24
		Printer Stations	1	5 x 5	25	25
	Communication Services	Director Office	1	10 x 15	150	150
	Including Access RH	Administrative Assistant	1	6 x 9	54	54
		Manager Office	3	10 x 12	120	360
		Workstations A	6	9 x 9	81	486
		Workstations B	0	6 x 9	54	0
		Workstations C	16	6 x 6	36	576
		Workstations D	0	5 x 6	30	0
	Projection to 2026	Future A	0	9 x 9	81	0
		Future B	4	6 x 9	54	216
		Marketing Material	1	10 x 10	100	100
		Resource Area	1	10 x 10	100	100
		Collaboration Area	1	15 x 20	300	300
		Colour Printer Area	1	5 x 8	40	40
		Public Counter Payment	1	20 x 40	800	800
		Vault	1	10 x 12	120	120
	Total Staff		65			
	Sub-total of space required					6,562
	Circulation +/-			30%		1,903
	Total Usable Area					**8,464**

Note:
Not in cluding Shared Facilities, Meeting Space, Refreshment & Other like spaces

Sign-off _____

Date _____

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N3
416.868.1616 bullockwooddesign.com

Needs Analysis, Corporate & Finance Services

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3860**

Date: October 31 2018

DIVISION	DEPARTMENT	SPACE	QTY	SIZE	UNIT SQ.FT.	REQUIRED SQ.FT.
Corporate & Financial Services (Chart C)	**Executive**	Commisioners Office	1	15 x 15	225	225
		Executive Assistant	1	9 x 9	81	81
	Legislative Services Town Clerk	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	2	10 x 12	120	240
	(10 are Governance)	Workstations A	16	9 x 9	81	1296
	(2 are Governance)	Workstations B	4	6 x 9	54	216
		Workstations C	3	6 x 6	36	108
		Workstations D	2	5 x 6	30	60
	Projection to 2026	Future B	0	6 x 9	54	0
		Future C	0	6 x 6	36	0
		Filing	16	1.5 x 3	4.5	72
		Receiving Counter	1	8 x 8	64	64
	Information Technology	Chief Information Officer	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	4	10 x 12	120	480
		Workstations A	9	9 x 9	81	729
		Workstations B	0	6 x 9	54	0
		Workstations C	0	6 x 6	36	0
		Workstations D	41	5 x 6	30	1230
	Projection to 2026	Future A	2	9 x 9	81	162
		Future D	7	5 x 6	30	210
		Computer Room	1	15 x 18	270	270
		Environment Room	1	10 x 14	140	140
		Project Room	1	12 x 15	180	180
		Parts Storage	1	14 x 20	280	280
		Work Area	1	5 x 20	100	100
		Filing	3	1.5 x 3	4.5	13.5
	Financial Services	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	5	10 x 12	120	600
		Workstations A	14	9 x 9	81	1134
		Workstations B	13	6 x 9	54	702
		Workstations C	21	6 x 6	36	756
		Workstations D	1	5 x 6	30	30
	Projection to 2026	Future A	1	9 x 9	81	81
		Future C	-6	6 x 6	36	-216
		Filing	42	1.5 x 3	4.5	189
		Secure Storage	1	10 x 15	150	150
		Auditors Room	1	10 x 12	120	120
		High density Filing	1	4 x 15	60	60
		Public Facing Counter	0	10 x 15	150	0
	Human Resources	Director Office	1	10 x 15	150	150
		Manager Office	2	10 x 12	120	240
		Workstations A	6	9 x 9	81	486
		Workstations B	0	6 x 9	54	0
		Workstations C	2	6 x 6	36	72
		Workstations D	4	5 x 6	30	120
	Projection to 2026	Future A	1	9 x 9	81	81
		Future C	0	6 x 6	36	0
		Future D	1	5 x 6	30	30
		High Density Filing	1	15 x 30	450	450
		Records	1	10 x 10	100	100
		Filing	4	1.5 x 3	4.5	18
		Interview Room	1	12 x 15	180	180
		Wellness Room	1	8 x 10	80	80
		Testing Area	1	8 x 12	96	96
	Total Staff		164			
	Sub-total of space required					12,478
	Circulation +/-			30%		3,743
	Total Usable Area					**16,221**

Note:
Not in cluding Shared Facilities, Meeting Space, Refreshment & Other like spaces

Sign-off _____

Date _____

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N3
416.868.1616 bullockwooddesign.com

Needs Analysis, Planning & Regulatory Services

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3860**

Date: October 10 2018

DIVISION	DEPARTMENT	SPACE	QTY	SIZE	UNIT SQ.FT.	REQUIRED SQ.FT.
Planning & Regulatory Services (Chart D)	**Executive**	Commisioners Office	1	15 x 15	225	225
		Executive Assistant	1	9 x 9	81	81
	Policy Planning	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	4	10 x 12	120	480
		Workstations A	14	9 x 9	81	1134
		Workstations B	0	6 x 9	54	0
		Workstations C	4	6 x 6	36	144
		Workstations D	0	5 x 6	30	0
	Projection to 2026	Future A	9	9 x 9	81	729
		Future B	1	6 x 9	54	54
		Filing	11	1.5 x 3	4.5	49.5
	Development Engineering & Transportation	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	3	10 x 12	120	360
		Workstations A	18	9 x 9	81	1458
		Workstations B	1	6 x 9	54	54
		Workstations C	0	6 x 6	36	0
		Workstations D	0	5 x 6	30	0
	Projection to 2026	Future A	9	9 x 9	81	729
		Future B	2	6 x 9	54	108
		Filing	34	1.5 x 3	4.5	153
		Layout Space	4	2.5 x 6	15	60
		Resource Room	1	10 x 15	150	150
	Development Planning	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Secretary/Treasurer	1	10 x 12	120	120
		Treasurer Assistant	1	10 x 12	120	120
		Manager Office	3	10 x 12	120	360
		Workstations A	13	9 x 9	81	1053
		Workstations B	1	6 x 9	54	54
		Workstations C	0	6 x 6	36	0
		Workstations D	3	5 x 6	30	90
	Projection to 2026	Future A	4	9 x 9	81	324
		Future B	1	6 x 9	54	54
		Layout Space	4	5 x 5	25	100
	Regulatory Services CBO	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	5	10 x 12	120	600
		Workstations A	14	9 x 9	81	1134
		Workstations B	5	6 x 9	54	270
		Workstations C	3	6 x 6	36	108
		Workstations D	3	5 x 6	30	90
	Projection to 2026	Future A	1	9 x 9	81	81
		Future B	2	6 x 9	54	108
		Future C	2	6 x 6	36	72
		Future D	4	5 x 6	30	120
		Counter Permit intake	1	10 x 30	300	300
		Review Counter	1	5 x 20	100	100
		Stagging In/Out	2	10 x 20	200	400
		Zoning Counter	1	10 x 12	120	120
		Express Counter	1	10 x 10	100	100
		Filing	15	1.5 x 3	4.5	67.5
	Support Services	Supervisor Office	1	9 x 9	81	81
	Administrative	Workstations A	1	9 x 9	81	81
		Workstations B	8	6 x 9	54	432
		Workstations C	5	6 x 6	36	180
		Workstations D	0	5 x 6	30	0
	Projection to 2026	Future B	1	6 x 9	54	54
		Future C	3	6 x 6	36	108
		Future D	1	5 x 6	30	30
	Service	Supervisor Coordinator	1	9 x 9	81	81
	Projection to 2026	Future C	1	6 x 6	36	36
	Shared Spaces	High Density Filing	2	30 x 35	1050	2100
	Total Staff		**163**			
	Sub-total of space required					15,913
	Circulation +/-			30%		4,774
	Total Usable Area					**20,687**

Note:
Not in cluding Shared Facilities, Meeting Space, Refreshment & Other like spaces

Sign-off _____

Date _____

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N3
416.868.1616 bullockwooddesign.com

Needs Analysis, Environment & Infrastructure

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3860**

Date: October 16 2018

DIVISION	DEPARTMENT	SPACE	QTY	SIZE	UNIT SQ.FT.	REQUIRED SQ.FT.
Enviro. & Infrastructure Services (Chart E)	**Executive**	Commisioners Office	1	15 x 15	225	225
		Executive Assistant	1	9 x 9	81	81
		Filing Clerk/Receptionist	1	6 x 9	54	54
		Financial Mgt. Advisor (CFS)	1	9 x 9	81	81
	Projection to 2026	Procurment Advisor (CFS)	0	9 x 9	81	0
		GIS Advisor (SFS)	1	6 x 9	54	54
	Design & Construction Services	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	3	10 x 12	120	360
		Workstations A	20	9 x 9	81	1620
		Workstations B	2	6 x 9	54	108
		Workstations C	0	6 x 6	36	0
		Workstations D	12	5 x 6	30	360
	Projection to 2026	Future A	1	9 x 9	81	81
		Future D	2	5 x 6	30	60
		Layout Space	1	5 x 15	75	75
		Central Filing	1	12 x 20	240	240
		Lock Storage	1	10 x 20	200	200
		Resource Library	1	12 x 15	180	180
	Facility Design, Construction & Maintenance Services	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Facility Services Clerk	1	6 x 9	54	54
		Manager Office	3	10 x 12	120	360
		Workstations A	11	9 x 9	81	891
		Workstations B	0	6 x 9	54	0
		Workstations C	0	6 x 6	36	0
		Workstations D	6	5 x 6	30	180
	Projection to 2026	Future A	3	9 x 9	81	243
		Future B	4	6 x 9	54	216
		Future C	1	6 x 6	36	36
		Future D	3	5 x 6	30	90
		Filing 5H	18	1.5 x 3	4.5	81
		Control Room	1	12 x 15	180	180
		Resource Library	1	12 x 15	180	180
	Asset Management Planning & Environmental Services	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	4	10 x 12	120	480
		Workstations A	9	9 x 9	81	729
		Workstations B	2	6 x 9	54	108
		Workstations C	0	6 x 6	36	0
		Workstations D	7	5 x 6	30	210
	Projection to 2026	Future A	3	9 x 9	81	243
		Future B	2	6 x 9	54	108
		Filing	11	1.5 x 3	4.5	49.5
		Clothing Storage	1	8 x 8	64	64
		Equiment Storage, BM	1	10 x 15	150	150
	Total Staff		**110**			
	Sub-total of space required					9,044
	Circulation +/-			30%		2,623
	Total Usable Area					**11,666**

Note:
Not in cluding Shared Facilities, Meeting Space, Refreshment & Other like spaces

Sign-off _____

Date _____

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N3
416.868.1616 bullockwooddesign.com

Needs Analysis, Community Services

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3860**

Date: November 7 2018

DIVISION	DEPARTMENT	SPACE	QTY	SIZE	UNIT SQ.FT.	REQUIRED SQ.FT.
Community Services (Chart F)	**Executive**	Commisioners Office	1	15 x 15	225	225
		Financial Mgt. Advisor	1	6 x 9	54	54
		Executive Assistant	1	9 x 9	81	81
	Recreation & Cultural Services	Director Office	1	10 x 15	150	150
		Administrative Assistant	1	6 x 9	54	54
		Manager Office	2	10 x 12	120	240
		Workstations A	20	9 x 9	81	1620
		Workstations B	5	6 x 9	54	270
		Workstations C	0	6 x 6	36	0
		Workstations D	0	5 x 6	30	0
	Projection to 2026	Future A	1	9 x 9	81	81
		Future B	2	6 x 9	54	108
	Fire Services	Fire Services, not located at 225 East Beaver Creek				
	Public Works Operations	Public Works Operation, not located at 225 East Beaver Creek				
	By-law & Licensing Enforcement	Director Office	1	10 x 15	150	150
		Administrative Assistant	0	6 x 9	54	0
		Managers Office	0	10 x 12	120	0
		Workstations A	5	9 x 9	81	405
		Workstations B	6	6 x 9	54	324
		Workstations C	13	6 x 6	36	468
		Workstations D	0	5 x 6	30	0
		Parking Officers	8	2.3 x 6	13.5	108
	Projection to 2026	Future Mangers Office	1	10 x 12	120	120
		Future Screening Officer	1	9 x 9	81	81
		Future A - Admin plus	2	9 x 9	81	162
		Future C	2	6 x 6	36	72
	Shared Spaces	Receiving Area	1	15 x 20	300	300
		Waiting Space	1	5 x 20	100	100
		Facilitation Screening Rm	1	10 x 15	150	150
		Imaging Area	1	8 x 8	64	64
		Locker Male & Female	2	8 x 12	96	192
	Store with other event items	Event/Equipment Storage	0	15 x 20	300	0
	Total Staff		**74**			
	Sub-total of space required					5,579
	Circulation +/-			30%		1,618
	Total Usable Area					**7,197**

Note:
Not in cluding Shared Facilities, Meeting Space, Refreshment & Other like spaces

Sign-off _____

Date _____

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N3
416.868.1616 bullockwooddesign.com

Needs Analysis- Satellite

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3888 - CAC**

Date: December 20 2018

Org. Chart	Departments	Head Count		SQ.FT.
Chart B	Office of the CAO	0	Net Component Area	
	Access Richmond Hill, portion (could be at the Operations Center)	12		1,500
Chart C	CFC - IT, Applications & PM	33	Net Component Area	1716
	CFC-Accounts Payable	17		1212
Chart D	Planning & Regulatory Services	0	Net Component Area	
Chart E	Facilities Design, Construction & Maintenance Services	34	Net Componet Area	2,715
Chart F	Community - Event Services (could be at the Operations Center)	6	Net Component Area	525
	ByLaw & Licensing	39		2,696
			30% Program Circulation	3,109
Sub-Total of Net Areas to 2026 (at 14.7 per year)		**141**	Including 30% Program Circulation	**13,473**
Portion of Projections to 2041				
Sub-Total of Net Area		**24**	Including 30% Program Circulation	**6,864**

			QTY	SIZE	UNIT SQ.FT.	USUABLE SQ.FT.
Shared Spaces	Small Business Enterprice Center		1	25 x 40	1000	1000
	Reception, Public Counter		1	20 x 35	700	700
	Conference Rooms	Seating for 16 to 20	1	20 x 35	700	700
	Large Meeting Rooms	Seating for 10 to 12	2	15 x 25	375	750
	Medium Meeting Rooms	Seating for 6 to 8	3	12 x 15	180	540
	Multi-Purpose Rooms		0	25 x 35	875	0
	Team Rooms	Seating for 4 to 6	4	10 x 12	120	480
	Breakout Areas	Seating for 3 to 4	6	8 x 8	64	384
	Refreshment Space		2	10 x 15	150	300
	Utility Supply Room		1	10 x 15	150	150
	Printer Stations, Multi Functional Floor Models		4	5 x 5	25	100
	Hub Closet		2	10 x 10	100	200
	Coats		7	2 x 6	12	83
	Sub-total of Net Areas					5387
	Circulation 30%					1,616
Sub-total						**12,389**

Total Usable Area Required			**32,726**
Building Rentable Gross Up	add 15%	vs 40% for new building	4,908.92
Gross Rentable Building Area			**37,635**

Note : Space Requirements based on projections to 2041

Existing 225 East Beaver Creek has usable area of 144,470

Needs Analysis for New CAC has a total usable area of 159,040

Minimu Satellite Space usable area required is **14,570**

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N3
416.868.1616 bullockwooddesign.com

Needs Analysis, Current Standards

Project: **Town of Richmond Hill, Accommodation Study**
225 East Beaver Creek
Richmond Hill, Ontario

Job #: **3860**

Date: March 20 2019

Org. Chart	Departments	Head Count		SQ.FT.
Chart B	Office of the CAO	65	Net Component Area	10,627
Chart C	Corporate & Financial Services	164	Net Component Area	19,106
Chart D	Planning & Regulatory Services	163	Net Component Area	23,009
Chart E	Environment & Infrastructure Services	110	Net Componet Area	13,371
Chart F	Community Services	74	Net Component Area	8,969
Note Existing Compliment is 492				
Sub-Total of Net Areas to 2026 (at 17 per year)		**576**	Including 35% Program Circulatior	**75,082**
Staff Projections to 2041 (at 6.6 per year)				
Sub-Total of Net Area		**100**	Including 35% Program Circulatior	**29,700**

			QTY	SIZE	UNIT SQ.FT.	
Governance	Council Chambers		1	50 x 90	4500	4500
	Mayors Office		1	20 x 30	600	600
	Private Washroom		3	6 x 9	54	162
	Councilors Offices		9	10 x 15	150	1350
	Future Growth		0	10 x 15	150	0
	Councilors Conference Room		1	20 x 30	600	600
	Reception Space		1	15 x 25	375	375
	Committee Room		1	25 x 35	875	875
	Catering Facilities		1	15 x 20	300	300
	Utility Room		1	15 x 20	300	300
	Sub-total of Net Areas					9062
	Circulation 35%					3,172
Sub-total	Note: Administration Support is captured in Clerks staff count					**12,234**
Shared Spaces	Lobby/Atrium		1	60 x 80	4800	4800
	Event Equipment Storage		1	46 x 76	3496	3496
	Small Business Enterprice Center	(possible Satelite)	1	25 x 40	1000	1000
	Conference Rooms	Seating for 16 to 20	8	20 x 35	700	5600
	Large Meeting Rooms	Seating for 10 to 12	10	15 x 25	375	3750
	Medium Meeting Rooms	Seating for 6 to 8	15	12 x 15	180	2700
	Multi-Purpose Rooms	(election space)	3	25 x 35	875	2625
	Training Rooms		1	25 x 35	875	875
	Team Rooms	Seating for 4 to 6	16	10 x 12	120	1920
	Breakout Areas	Seating for 3 to 4	29	8 x 8	64	1856
	Refreshment Space		8	15 x 15	225	1800
	Utility Supply Room		7	10 x 15	150	1050
	Printer Stations, Multi Functional Floor Models		10	5 x 5	25	250
	Hub Closet		6	10 x 10	100	600
	Coats		20	2 x 8	16	320
	Security		1	12 x 15	180	180
	The Roust, Cafeteria, Seating for	225	1	50 x 85	4250	4250
	Records		1	34 x 44	1496	1496
	Shipping Receiving, Mail & Production		1	39 x 55	2145	2145
	Additional Maintanenace Supervisor		1	9 x 9	81	81
	Additional Maintanenace Team		1	5 x 6	30	30
	Additional Security		1	9 x 9	81	81
	Building Supplies Secure Room		1	20 x 30	600	600
	Janitorial Storage		1	10 x 15	150	150
	Wellness Center		1	30 x 50	1500	1500
	Staff Lounge	further consideration	0	30 x 50	1500	0
	Showers/Change Rms		2	30 x 40	1200	2400
	Bike Storage		0	10 x 15	150	0
	Sub-total of Net Areas					45555
	Circulation 35%					15,944
Sub-total						**61,499**
Grand Sub-total						**178,515**
Building Infastruture Gross Up				Add 40%		71,406
Grand Gross Building Total						**249,921**
Note:	Not including Child Care Facilities					3000 sqft

184 Front Street East, Suite 603, Toronto, Canada, M5A 4N
416.868.1616 bullockwooddesign.com

Appendix B – Site Options and Floor Plans

Richmond Hill
Civic Administration Centre

Potential Building Sites - Evaluation Study
October 7, 2019

Contents

A. Building Program | **What's Needed?**

B. Five Potential Sites:

1. Richmond Green Site
2. Brodie House Site
3. New Build Site - Representative Market Available
4. East Beaver Creek Site
5. East Beaver Creek Satellite Option – City Owned
6. East Beaver Creek Satellite Option – Market Leased

C. Concept Model Views | **What could it look like?**

What's Needed?

NEEDS ANALYSIS
ReValue Engineered

Bullock+Wood
November 2018

Total Usable Area of 225 East Beaver Creek
144,000 SF
Total Gross area of 225 East Beaver Creek
165,000 SF

Total Useable area required (renovation)
159,040 SF
Total Gross area required (new build)
222,656 SF

Departments	Head Count		SQ.FT.
Office of the CAO	65	Net Component Area	8,464
Corporate & Financial Services	164	Net Component Area	16,221
Planning & Regulatory Services	163	Net Component Area	20,687
Environment & Infrastructure Services	110	Net Component Area	11,666
Community Services	74	Net Component Area	7,197
Governance - such as Council Chambers, Mayor's/ Councillor's Offices, Conference Room, Reception		Net Component Area	8,998
Shared Spaces - such as Meeting/Training Rooms, The Roost, Small Business Enterprise, Lobby		Net Component Area	57,207
Growth to 2041	100		28,600
		Net Floor Area Total*	**159,040**
40% is the area added to include shared core areas, building envelope, meet accessibility criteria and adequate public space for a civic centre.		40% Gross Up for New Build	**63,616**
		Gross Floor Building Area**	**222,656**

*Net Floor Area: Defined as the usable floor area which does not include shared core areas (elevator core area, washrooms, corridor etc).
** Gross Floor Area: Defined as the total floor plate (footprint) of each floor.

3 options to achieve:

#1 New Build | 3 options

#2 Renovation+New Build | 2 options

#3 Renovation+Satellite | 2 options

NOTES ON CALCULATING THE AREAS NEEDED

NET FLOOR AREA

The Needs Analysis includes a Gross-up factor of 1.30% for internal circulation and interior walls which are needed to make the net areas into functional department or components.

GROSS FLOOR AREA includes building areas which are needed to enclose the building, enter and exit the building, circulate through it and provide for building mechanical, electrical and other infrastructure pathways. A typical market office building will have a Gross-up factor of 1.20%. For a civic building, a larger Gross-up factor is needed for larger populations needing increased open, gathering and circulation space. A Gross-up factor of 1.40% has been used in this study.

3 options to achieve:
#1 New Build

Design Brief for a New Build

3 Potential Sites

New Construction Approximately
159,040 SF Usable Area
(222,656 SF GFA)
+

CORPORATE OFFICE COMPLEX	FEATURES/GOALS • MODERN WORK ENVIRONMENT • OPTIMIZED DELIVERY OF SERVICES • FLEXIBILITY FOR EMERGING WORKPLACE TRENDS • MAXIMIZE SHARED RESOURCES AND SPACES • REDUCE OR MITIGATE ENVIRONMENTAL IMPACT
ARCHITECTURAL DESIGN	• 222,656 SF/ 7 FLOORS • LEED® SILVER OR EQUAL LEVEL OF SUSTAINABLE DESIGN • CURTAIN WALL SYSTEM, METAL/STONE PANEL CLADDING • SPRINKLERED • 3 ELEVATORS IN WASHROOM CORE INCLUDING UNIVERSAL WASHROOM WITH DOOR OPERATORS • ACCESSIBLE RAMP WITH GLASS GUARD RAILINGS • PORCELAIN TILE IN LOBBIES, CARPET IN OFFICES • NEW FURNITURE, EQUIPMENT & MILLWORK
SITE WORKS	• SWM, MUNICIPAL SERVICES, GRADING • LANDSCAPING • CIVIC PLAZA • MECHANICAL AND ELECTRICAL DEVELOPMENT (TRANSFORMER+)
STRUCTURE	• STEEL FRAME • CONCRETE DECK • CONCRETE SPREAD FOOTINGS AND FOUNDATION • FIREPROOFING W 1 HR FRR FLOOR TO FLOOR • CONCRETE CORE SHEAR WALLS
MECHANICAL	• HEAT PUMP SYSTEM WITH MUA UNITS • BOILERS FOR PERIMETER RADIATION THROUGHOUT • PENTHOUSE FOR AIR HANDLING C/W COOLING • COOLING TOWER • BAS, DDC CONTROLS, THERMOSTATS, PENTHOUSE SCREENING, SPRINKLER SYSTEM, PLUMBING & DRAINAGE, STANDPIPE
ELECTRICAL	• SERVICE SIZE TBD, 600V, 3 PHASE • LIGHTING CONTROLS, OCCUPANCY SENSORS, DAYLIGHT SENSORS, EMERGENCY POWER, TWO STAGE FIRE ALARM SYSTEM • LED LIGHTING • GENERATOR FOR EMERGENCY POWER LOCATED IN ENCLOSURE AT GRADE (LIFE SAFETY AND DATA CENTRE)

COMMUNICATIONS	• INTEGRATED SYSTEMS • CAT 6 COPPER W FIBRE BACKBONE • WIRELESS ACCESS THROUGHOUT • SPECIALTY COMMUNICATIONS IN COUNCIL CHAMBERS (BROADCAST, TV, CCTV ETC) • IT (SECURITY, ACCESS CONTROL, DATA CENTRE ETC) • A/V SYSTEM
SPECIALTY ITEMS	• COMMERCIAL KITCHEN ON MAIN LEVEL (THE ROOST) • WAYFINDING & SIGNAGE
PARKING	• AS SHOWN ON EACH SITE PLAN OPTION

SITE SPECIFIC INFORMATION

RICHMOND GREEN 1300 Elgin Mills Road E	• City-owned property; approx. 3.5 acre site • Demolition of existing parking • Excavation for ramp and 442 underground parking spaces • Regrading/ Relocation of SWM pond
NEW BUILD – MARKET AVAILABLE Richmond Hill	OPTION 1 • Purchase 6.2 acre site • Site grading/ Relocation of SWM pond • Surface parking for 414 spaces OPTION 2 • Develop 3.2 acres; Sell/ lease remaining 3.2 acres • Site grading/ Relocation of SWM pond • Surface parking for 414 spaces • Excavation for ramp and 300 underground parking spaces

BRODIE HOUSE
9481 Leslie Street
	• City-owned property; site size unknown
	• Relocation of existing house
	  ○ Decommissioning, abatement & demolition of foundations
	  ○ Relocation
	  ○ New foundation, services, mechanical, electrical
	OPTION 1
	• Surface parking for 91 spaces
	• Excavation for ramp and 1 level of underground parking for 274 spaces

3 options to achieve:
#2 Renovation + New Build

Design Brief for Renovation+New

Market Available Site
Renovation of Existing
89,280 SF Usable Area
+
New Build – 3 Storey
69,760 SF Usable Area
(97,664 SF GFA)

CORPORATE OFFICE COMPLEX	FEATURES/GOALS • MODERN WORK ENVIRONMENT • OPTIMIZED DELIVERY OF SERVICES • FLEXIBILITY FOR EMERGING WORKPLACE TRENDS • MAXIMIZE SHARED RESOURCES AND SPACES • REDUCE OR MITIGATE ENVIRONMENTAL IMPACT • CREATE A NEW BRAND WITH NEW ADDITION
ARCHITECTURAL DESIGN	EXISTING OFFICE BUILDING • RENOVATE EXISTING BUILDING DEMOLITION OF EXISITNG BILDING NEW OFFICE BUILDING • CONSTRUCT NEW BUILDING
PARKING	EXISTING OFFICE BUILDING SITE • EXISTING SURFACE PARKING FOR 250 SPACES TO REMAIN NEW OFFICE BUIDING SITE • EXISTING SURFACE PARKING FOR APPROX 34 SPACES TO REMAIN • ADD APPROX 29 NEW SPACES
STRUCTURE	EXISTING OFFICE BUILDING • ASSUMED CONSTRUCTION STEEL FRAME, CONCRETE DECK, CONCRETE CORE SHEAR WALLS: TO BE CONFIRMED NEW OFFICE BUILDING • ASSUMED CONSTRUCTION STEEL FRAME, CONCRETE DECK; CONCRETE SHEAR WALLS, CONCRETE SPREAD FOOTINGS; FIRE PROOFING 1-HR FRR FLOOR TO FLOOR
MECHANICAL	EXISTING OFFICE BUILDING • REPLACE EXISTING HVAC EXISTING CINEMA BUILDING • REPLACE EXISTING HVAC
ELECTRICAL	EXISTING OFFICE BUILDING • UPGRADE ELECTRICAL SYSTEMS INCLUDING CONVERSION OF LIGHTING TO LED ETC EXISTING CINEMA BUILDING • UPGRADE ELECTRICAL SYSTEMS INCLUDING CONVERSION OF LIGHTING TO LED ETC

AS SHOWN ON EACH SITE PLAN OPTION

SITE SPECIFIC INFORMATION

MARKET AVAILABLE Richmond Hill	EXISTING OFFICE BUILDING • RENOVATE 89,280 SF USABLE AREA / 6 FLOORS • (FURNITURE & PARTITION WALLS, MAJOR MECHANICAL& ELECTRICAL ADJUSTMENTS, SEE MECHANICAL AND ELECTRICAL SECTIONS) • CONDITION ASSESSMENT REQUIRED • PHASING OF SWING SPACE/ TEMPORARY RELOCATIONS • NEW ENTRANCE CANOPY INTEGRATED WITH ELEVATED WALKWAY NEW OFFICE BUILDING • CONSTRUCT NEW 69,760 SF USABLE (97,664 SF GFA)/ 5 FLOORS • NEW COUNCIL CHAMBERS 1 ½ STOREYS HIGH • ACCESSIBLE RAMP WITH GLASS GUARD RAILINGS, • PORCELAIN TILE IN LOBBIES, CARPET IN OFFICES • NEW FURNITURE, EQUIPMENT & MILLWORK

3 options to achieve:
#2 Renovation + New Build

Design Brief for Renovation+New

225 EBC | Options 1+2
East Beaver Creek
Renovation approximately
137,500 SF Usable Area
+
New Build – 3 Storey
21,540 SF Usable Area
(30,000 SF GFA)

City Hall 225 East Beaver Creek **Option 1**	**FEATURES/GOALS** • MODERN WORK ENVIRONMENT • OPTIMIZED DELIVERY OF SERVICES • FLEXIBILITY FOR EMERGING WORKPLACE TRENDS • MAXIMIZE SHARED RESOURCES AND SPACES • REDUCE OR MITIGATE ENVIRONMENTAL IMPACT • CREATE A NEW BRAND WITH NEW ADDITION
ARCHITECTURAL DESIGN	**EXISTING BUILDING** • RENOVATE 144,000 SF/ 9 FLOORS • (FURNITURE & PARTITION WALLS, MAJOR MECHANICAL& ELECTRICAL ADJUSTMENTS, SEE MECHANICAL AND ELECTRICAL SECTIONS) • CONDITION ASSESSMENT REQUIRED • PHASING OF SWING SPACE/ TEMPORARY RELOCATIONS • NEW ENTRANCE CANOPY INTEGRATED WITH ELEVATED WALKWAY **NEW BUILDING** • 30,000 SF ON 3 LEVELS • LEED® SILVER OR EQUAL LEVEL OF SUSTAINABLE DESIGN • CURTAINWALL SYSTEM, METAL/STONE PANEL CLADDING • ELEVATED WALKWAY ON ONE OR TWO LEVELS • SPRINKLERED • 3 ELEVATORS IN WASHROOM CORE INCLUDING UNIVERSAL WASHROOM WITH DOOR OPERATORS • NEW COUNCIL CHAMBERS 1 ½ STOREYS HIGH • ACCESSIBLE RAMP WITH GLASS GUARD RAILINGS, • PORCELAIN TILE IN LOBBIES, CARPET IN OFFICES • NEW FURNITURE, EQUIPMENT & MILLWORK
SITE WORKS	**EXISTING PARKING AREA FOR NEW BUILDING** • DEMOLITION OF EXISTING PARKING • EXCAVATION FOR NEW UNDERGROUND PARKING, TUNNEL CONNECT TO EXISTING BUILDING • SWM, MUNICIPAL SERVICES, GRADING • LANDSCAPING • NEW CIVIC PLAZA WITH MODERATE LANDSCAPING INTEGRATED WITH EXISTING SWM POND • MECHANICAL AND ELECTRICAL DEVELOPMENT
STRUCTURE	**NEW BUILDING** • STEEL FRAME • CONCRETE DECK • CONCRETE SPREAD FOOTINGS AND FOUNDATION • FIRE PROOFING W 1 HR FRR FLOOR TO FLOOR • CONCRETE CORE SHEAR WALLS • CONNECTING TUNNEL UNDERGROUND TO NEW PARKING • CONNECTING ELEVATED WALKWAY (STEEL FRAME, GLASS)

MECHANICAL	**EXISTING BUILDING** • REPLACE EXISTING HVAC **NEW BUILDING** • HEAT PUMP SYSTEM WITH MUA UNITS • BOILERS FOR PERIMETER RADIATION THROUGHOUT • PENTHOUSE FOR AIR HANDLING UNIT C/W COOLING • COOLING TOWER • BAS, DDC CONTROLS, THERMOSTATS, PENTHOUSE SCREENING, SPRINKLER SYSTEM, PLUMBING & DRAINAGE, STANDPIPE
ELECTRICAL	**EXISTING BUILDING** • UPGRADE ELECTRICAL SYSTEMS INCLUDING CONVERSION OF LIGHTING TO LED ETC **NEW BUILDING** • SERVICE SIZE TBD, 600V, 3 PHASE • LIGHTING CONTROLS, OCCUPANCY SENSORS, DAYLIGHT SENSORS, EMERGENCY POWER, TWO STAGE FIRE ALARM SYSTEM • LED LIGHTING • GENERATOR FOR EMERGENCY POWER LOCATED IN ENCLOSURE AT GRADE IF REQUIRED – REVIEW OF EXISTNG REQUIRED (LIFE SAFETY AND DATA CENTRE)
COMMUNICATIONS	**NEW BUILD + INTEGRATION WITH EXISTING** • INTEGRATED SYSTEMS • CAT 6 COPPER W FIBRE BACKBONE • WIRELESS ACCESS THROUGHOUT • SPECIALTY COMMUNICATIONS IN COUNCIL CHAMBERS (BROADCAST, TV, CCTV ETC) • IT (SECURITY, ACCESS CONTROL, DATA CENTRE ETC) • UPGRADE IT CABLING SYSTEMS ETC. AT EBC • A/V SYSTEM • LIGHTNING PROTECTION
SPECIALTY ITEMS	**NEW BUILD + INTEGRATION WITH EXISTING** • COMMERCIAL KITCHEN ON MAIN LEVEL (THE ROOST) • WAYFINDING & SIGNAGE • EXTERIOR SIGNAGE
PARKING	• NEW RAMP TO 2 LEVELS OF UNDERGROUND PARKING • SURFACE PARKING FOR 30 SPACES
CITY HALL 225 East Beaver Creek **OPTION 2**	• RENOVATION + FIT-UP OF EXISTING 9 STOREY BUILDING AS OPTION 1 • LEASE/PURCHASE NEW 3 STOREY BUILDING ON WEST SIDE OF MALL; 10,000 SF PER FLOOR • ADDITIONAL LEVEL OF PARKING TO BE PROVIDED ON EXISTING NORTH PARKING LOT • CONSIDER PURCHASE OF MALL SPACE FOR ACCESS BETWEEN BUILDINGS

3 options to achieve:
#3 Renovation+Satellite

Design Brief for Renovation + Satellite

255 EBC | Option 1
Renovation of Existing
137,500 SF
Renovation of City Owned Space
13,704 SF GFA

255 EBC | Option 2
Renovation of Existing
137,500 SF
Renovation of Market Available
21,540 SF

OPTION 1 CITY HALL RENOVATION + RENOVATION OF CITY OWNED SATELLITE SPACE PARKING	• RENOVATION+ FIT-UP EXISTING 9 STOREY BUILDING AS DESCRIBED IN 'RENOVATION + NEW BUILD' SECTION • SATELLITE SPACE @ CITY-OWNED LANDS (SWING SPACE OR ANNEX) LEVEL 1: 7582 SF (704 SM) AVAILABLE LEVEL 2 (AREA 2.1) :2954 SF (274.5 SM) AVAILABLE LEVEL 2 (AREA 2.2): 3167SF (294SM) AVAILABLE FOR STORAGE (NO NATURAL LIGHT FOR OFFICE SPACE) PARKING ASSUMED ADEQUATE
OPTION 2 CITY HALL RENOVATION + RENOVATION OF MARKET AVAILABLE SATELLITE SPACE PARKING	• RENOVATION + FIT-UP OF EXISTING 9 STORWY BUILDING AS DESCRIBED IN 'RENOVATION + NEW BUILD' SECTION • 45 VOGELL ROAD, LEASABLE OFFICE SPACE (PERMANENT OR TEMP) LEVEL 1 (AREA 1.1) 727sm | 7 829 SF LEVEL 1 (AREA 1,2) 772 sm | 8 307 SF LEVEL 2 (AREA 2.1) 1721 sm | 18 521 SF LEVEL 2 (AREA 2.2) 413 sm | 4 445 SF LEVEL 3 (AREA 3.1) 198 sm | 2 131 SF LEVEL 4 (AREA 4.1) 376 sm | 4 043 SF LEVEL 5 (AREA 5.1) 1144 sm | 12 318 SF LEVEL 6 (AREA 6.1) 2124 sm | 22 867 SF PARKING ASSUMED ADEQUATE

Five Potential Sites
Multiple Options

NEW BUILD

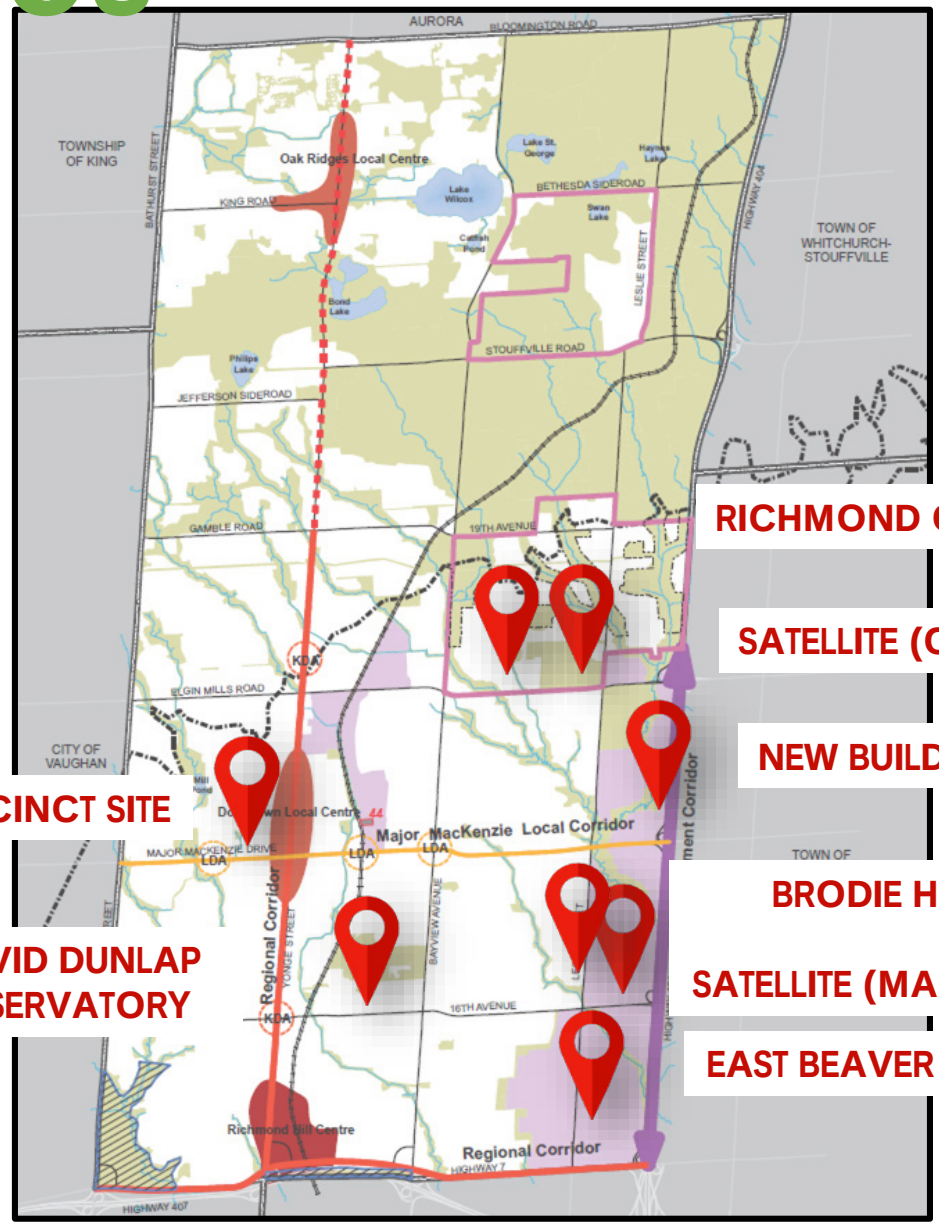
1. RICHMOND GREEN
2. BRODIE HOUSE
3. NEW BUILD – MARKET AVAILABLE

RENOVATION + NEW BUILD

4. EAST BEAVER CREEK

EBC RENOVATION + SATELLITE

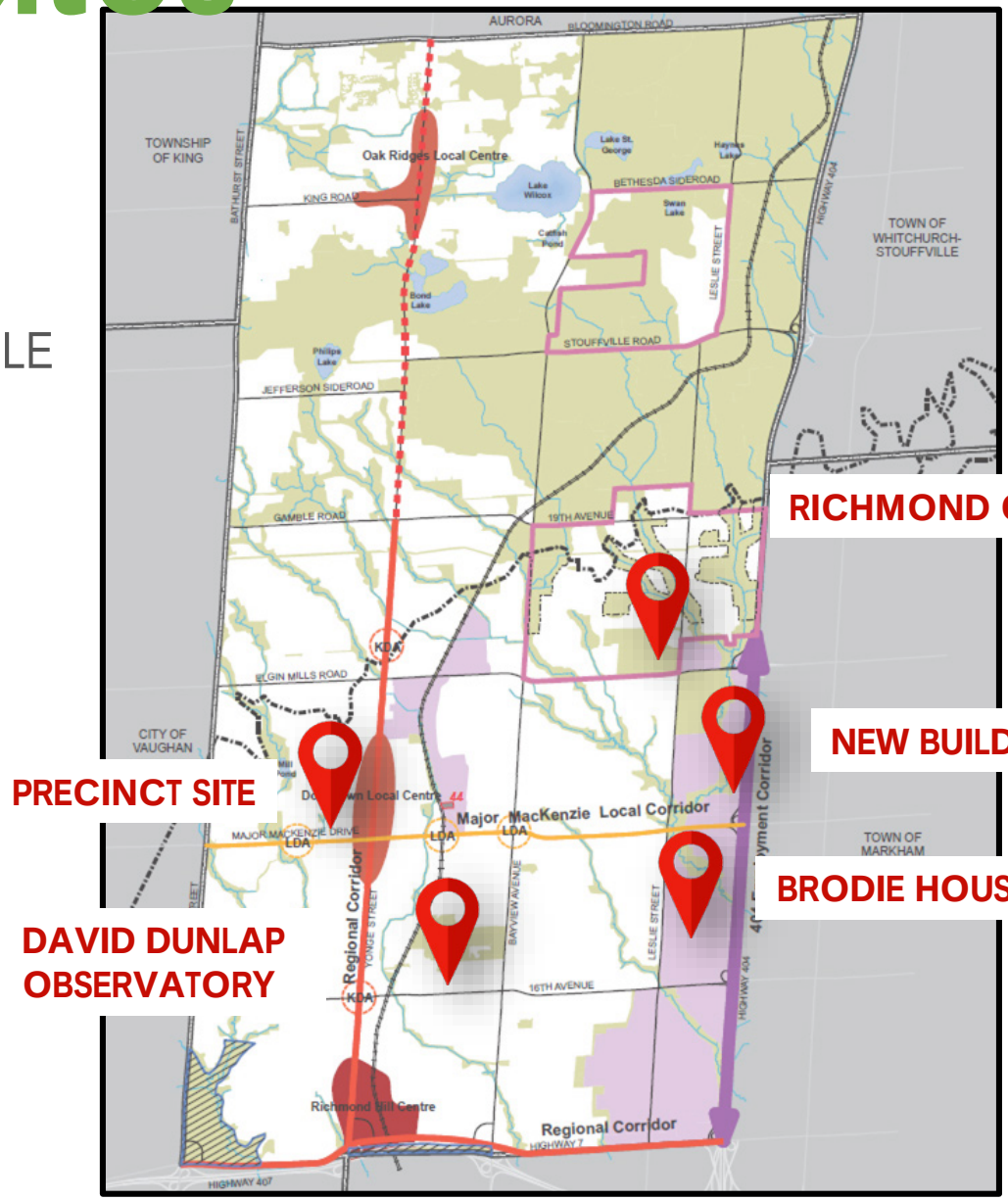
5. SATELLITE – CITY OWNED
6. SATELLITE – MARKET LEASED



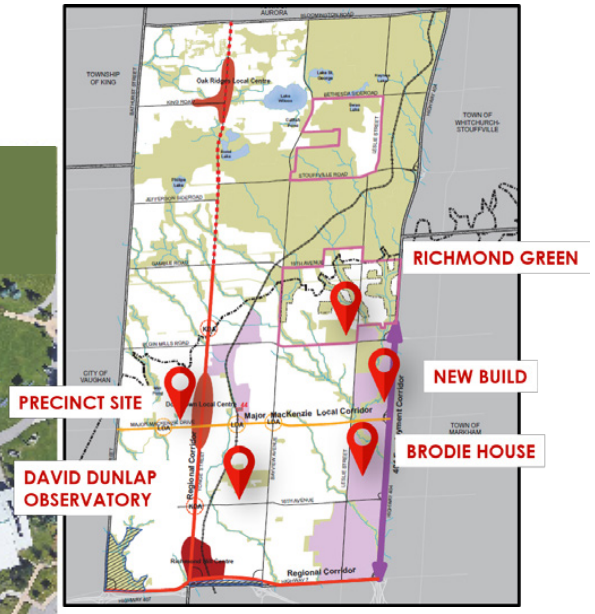
Five Potential Sites

NEW BUILD

1. RICHMOND GREEN
2. BRODIE HOUSE
3. NEW BUILD – MARKET AVAILABLE

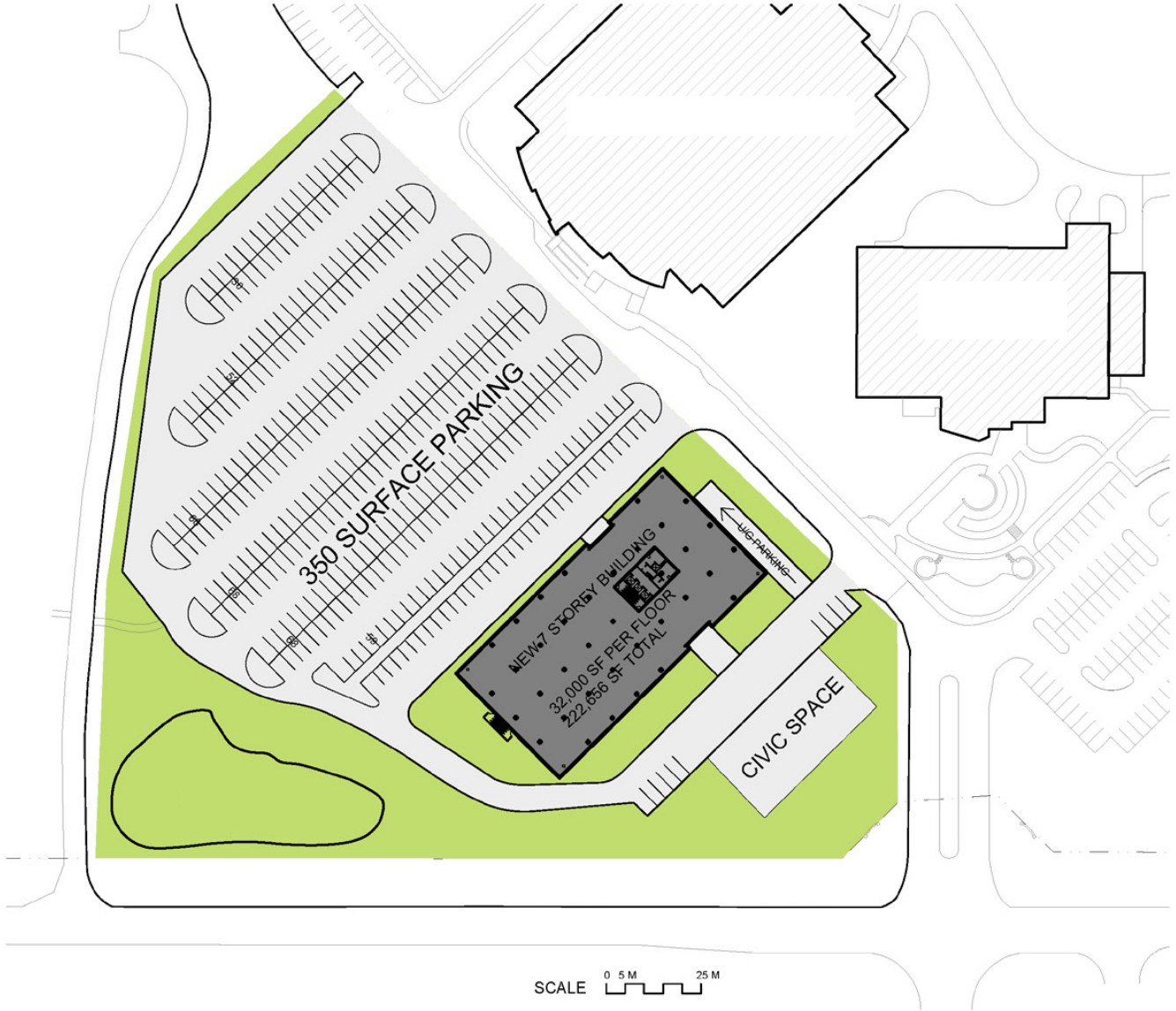


Richmond Green



LOCATION
City of Richmond Hill

1 Richmond Green

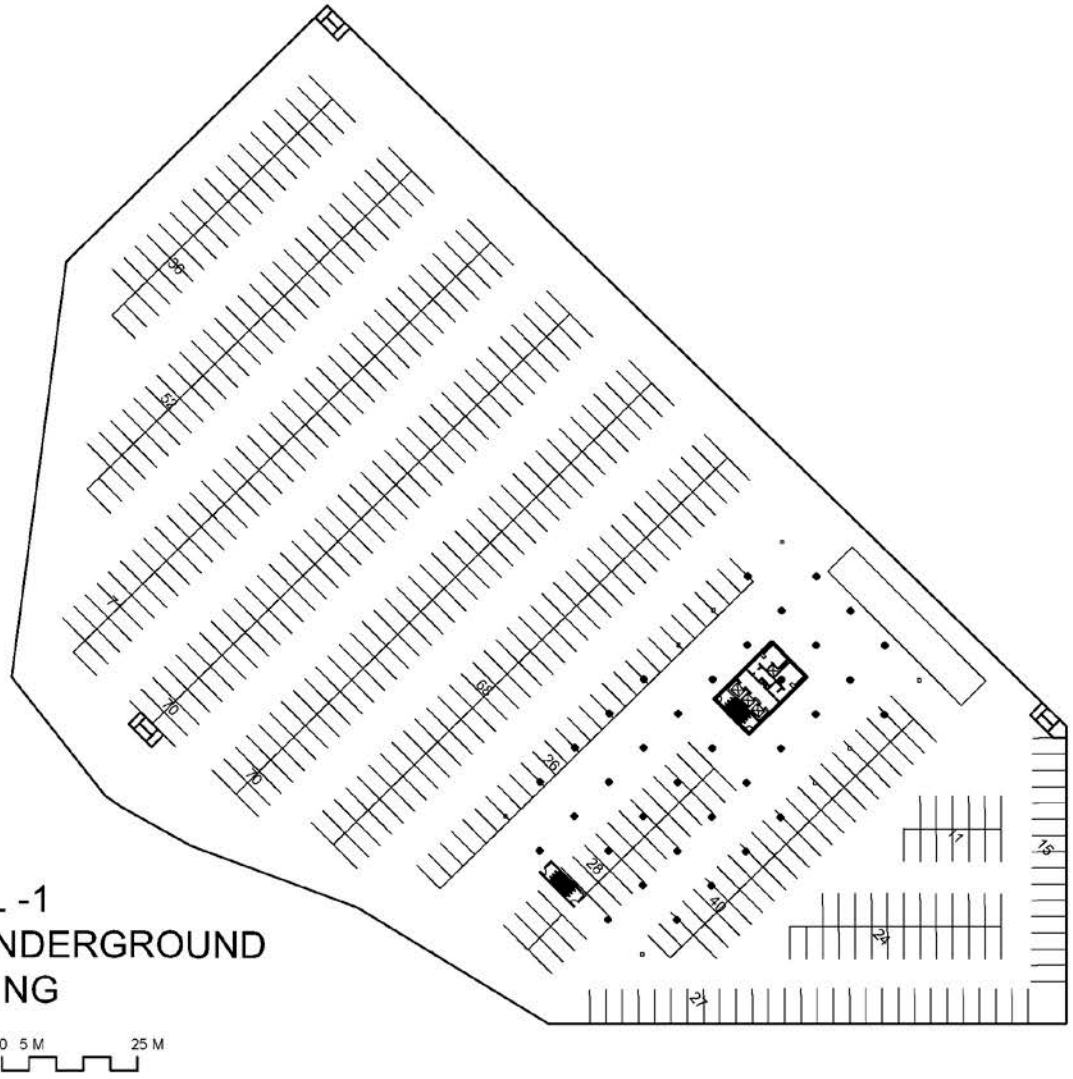


ZONING
- Agricultural

SITE
- New Civic Space
- Approx. 7.3 acre
- TOTAL PARKING REQUIRED :885 Spaces
- 350 Surface Parking Spaces
- 548 Underground Parking Spaces

BUILDING
- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable)
- 222,656 SF Total GFA (159,040 SF Total Usable)

Richmond Green

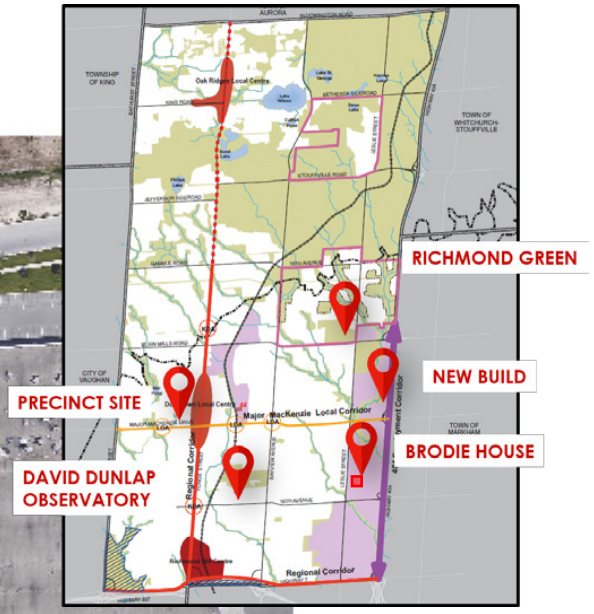


ZONING
- Agricultural

SITE
- New Civic Space
- Approx. 7.3 acre
- TOTAL PARKING REQUIRED :885 Spaces
- 350 Surface Parking Spaces
- 548 Underground Parking Spaces

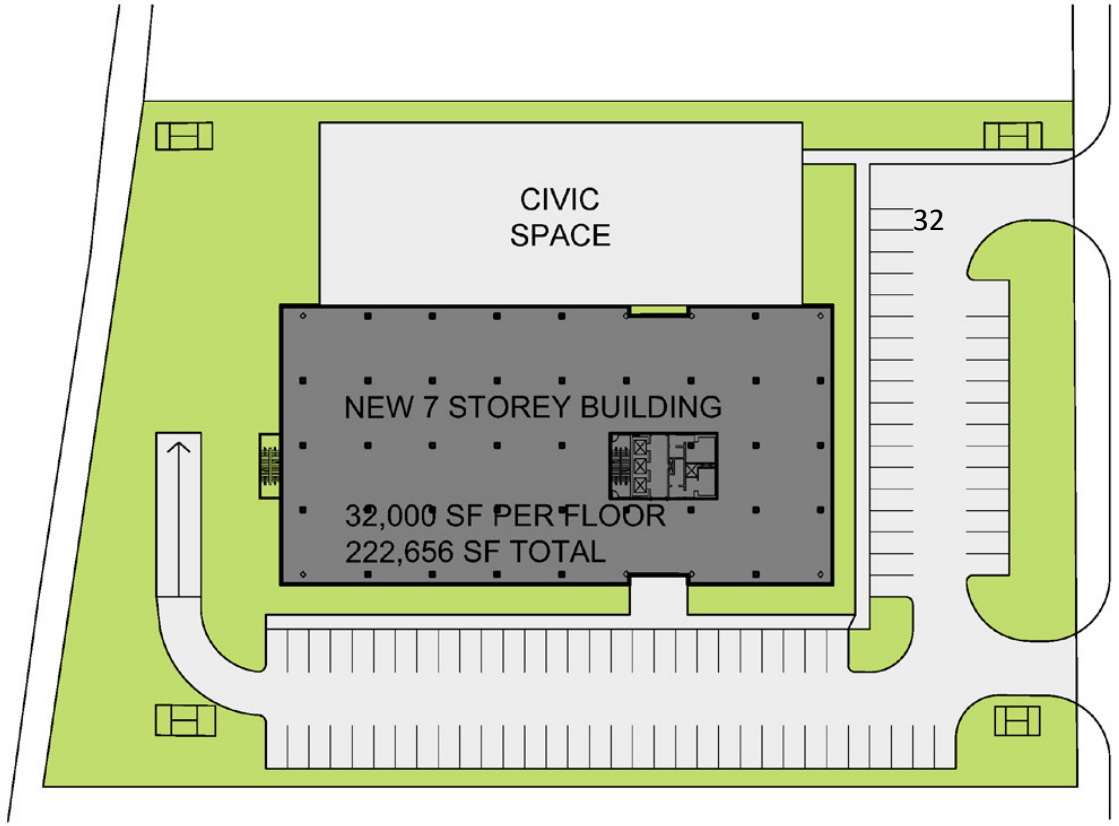
BUILDING
- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable)
- 222,656 SF Total GFA (159,040 SF Total Usable)

Brodie House



LOCATION
City of Richmond Hill

Brodie House



BRODY HOUSE SITE

ZONING
MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

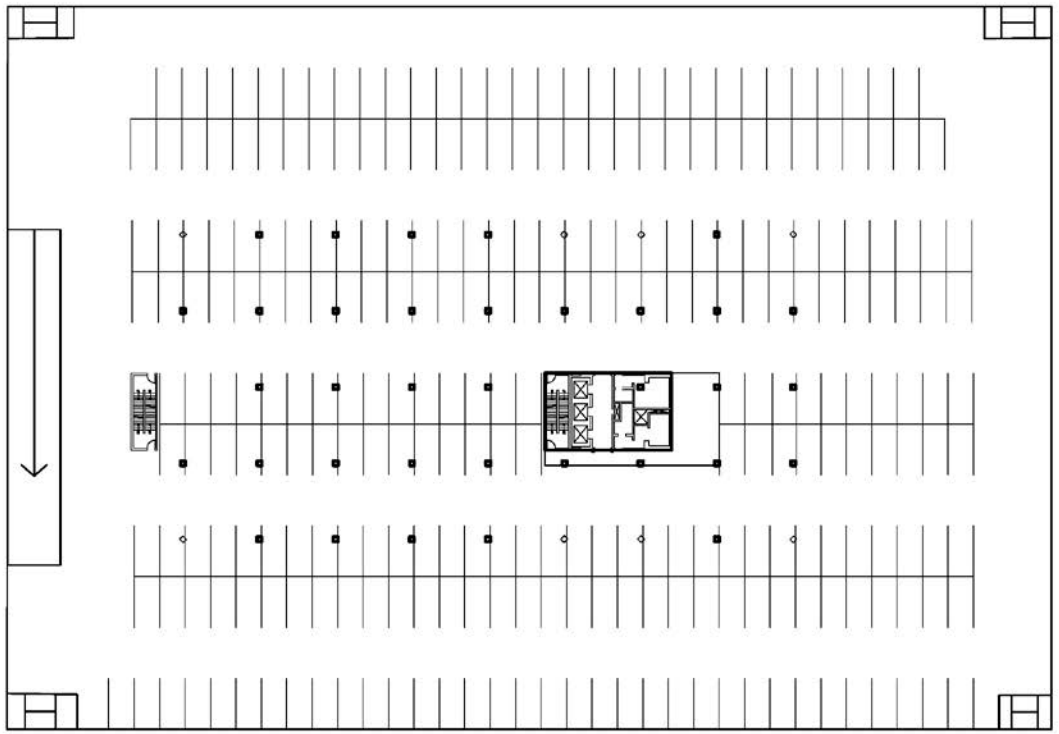
15

SITE
- Site Area approx. 3.2 acres
- New Civic Space

TOTAL PARKING REQUIRED:707 Spaces
95 Surface parking spaces
612 Underground (2 levels)

BUILDING
- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)

Brodie House



300 UNDERGROUND PARKING SPACES

SCALE 0 5 M 25 M

ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE

- Site Area approx. 3.2 acres
- New Civic Space

TOTAL PARKING REQUIRED:707 Spaces

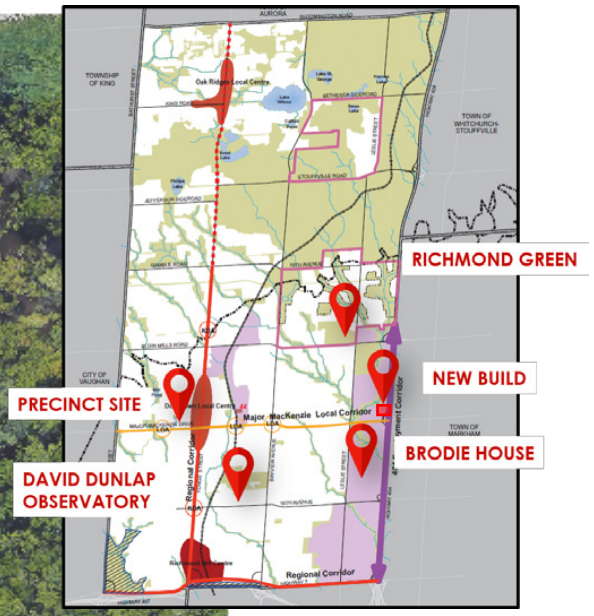
95 Surface parking spaces

612 Underground (2 levels)

BUILDING

- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)

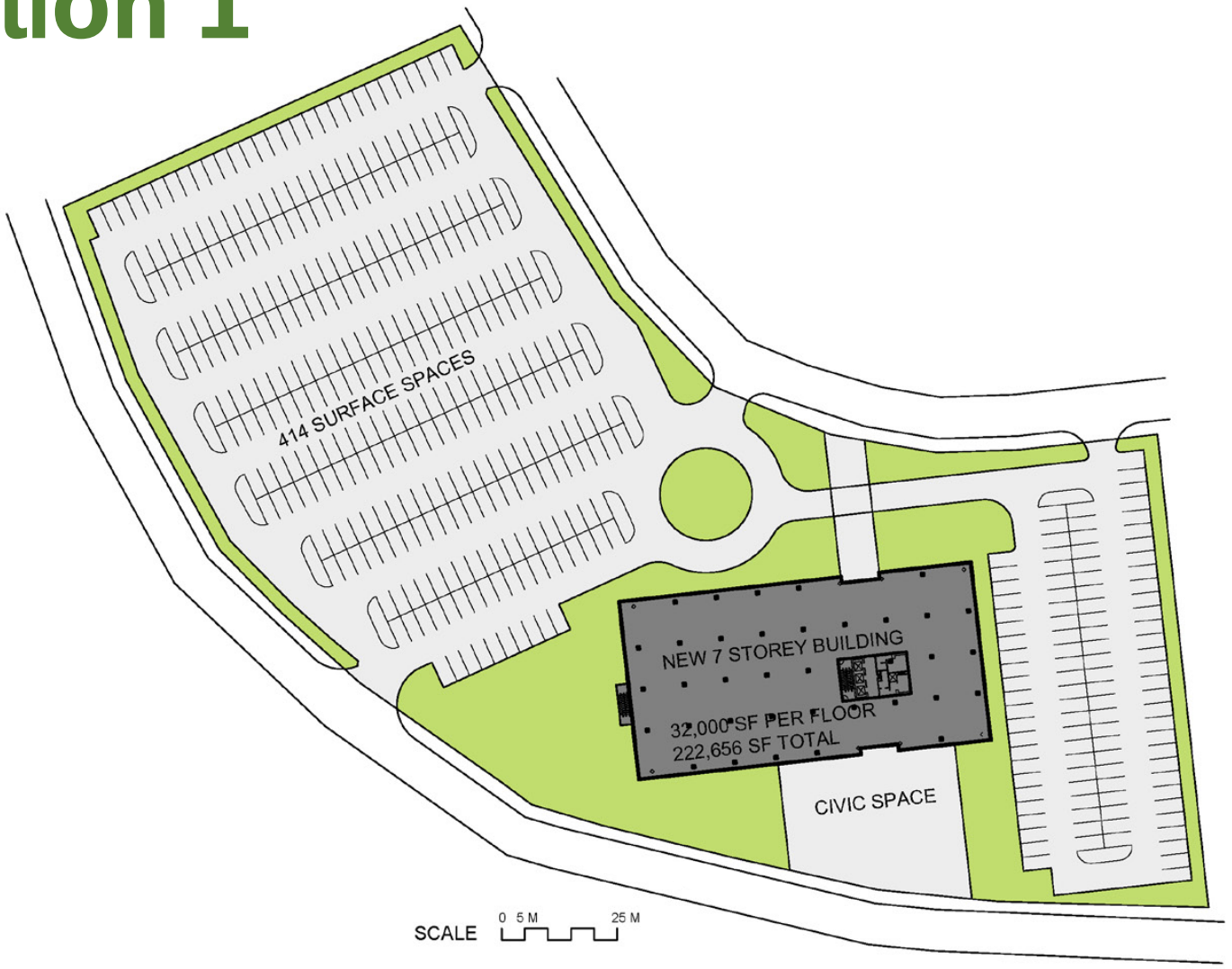
New Build Site – Market Available



LOCATION
City of Richmond Hill

New Build Site – Market Available

Option 1



ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE

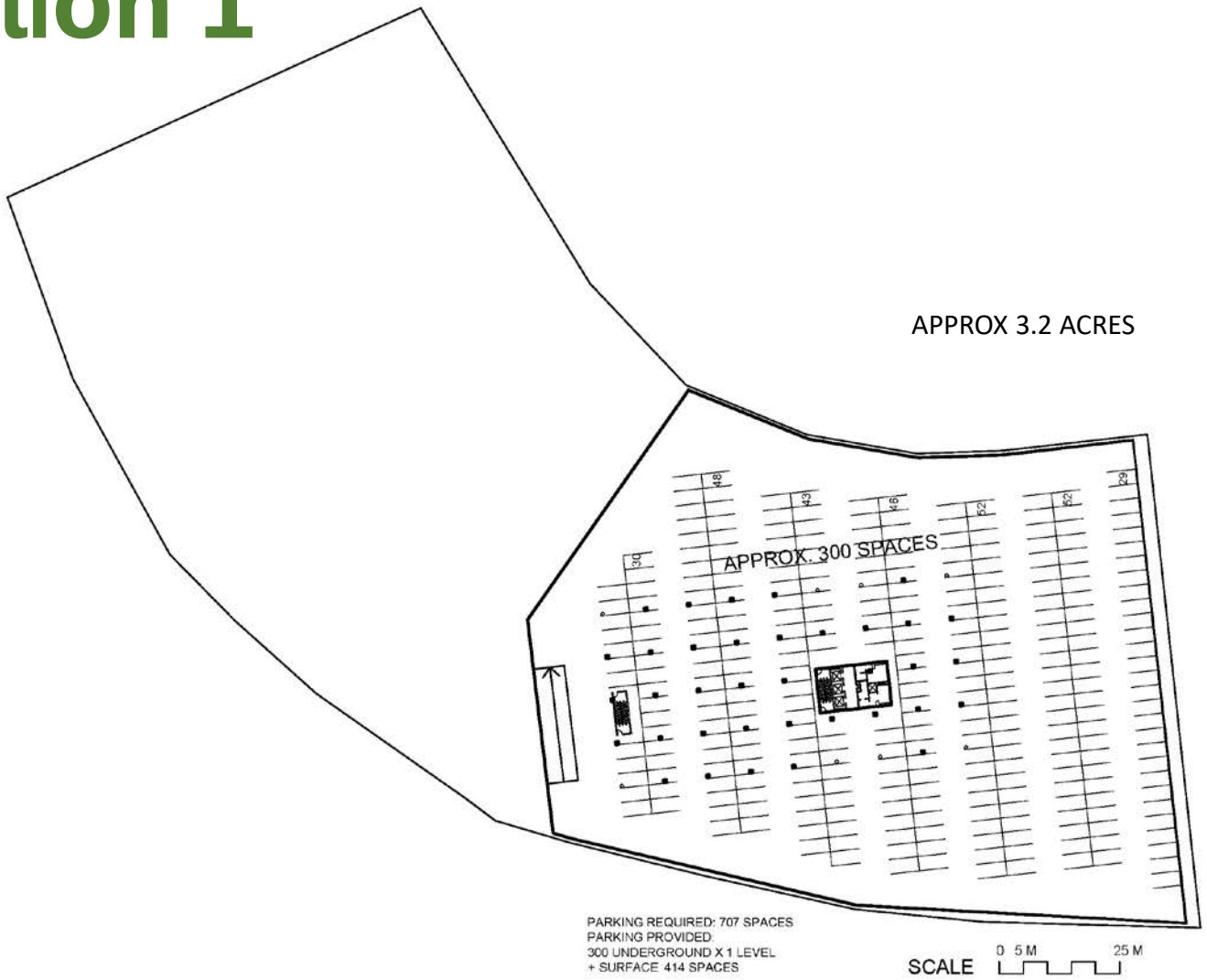
- Site Area approx. 6.2 acres
- New Civic Space
- TOTAL PARKING REQUIRED: 707 Spaces
- 414 Surface Parking Spaces
- 300 Underground (1 level)

BUILDING

- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)

New Build Site – Market Available

Option 1



ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE

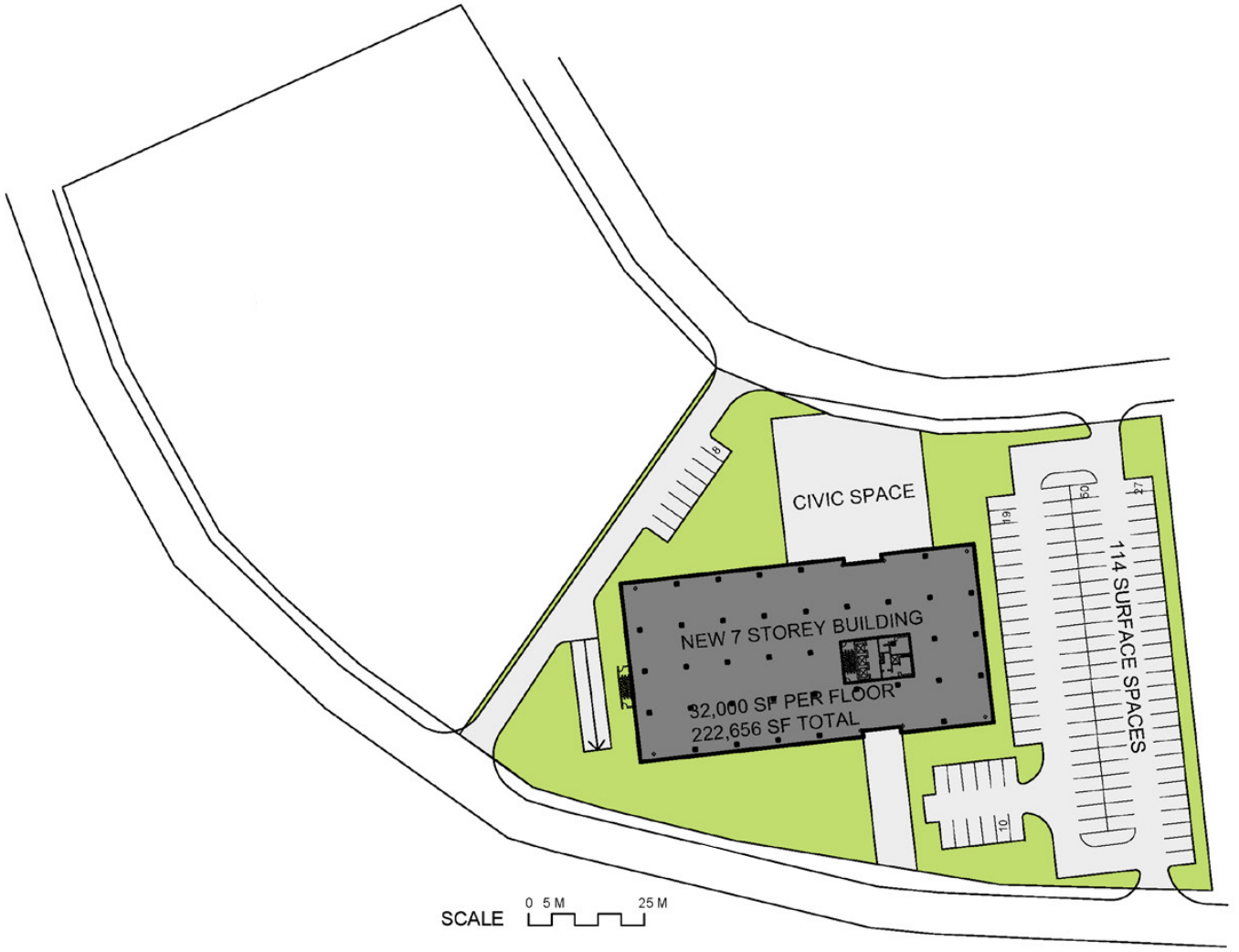
- Site Area approx. 6.2 acres
- New Civic Space
- TOTAL PARKING REQUIRED: 707 Spaces
- 414 Surface Parking Spaces
- 300 Underground (1 level)

BUILDING

- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)

New Build Site – Market Available

Option 2



ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE

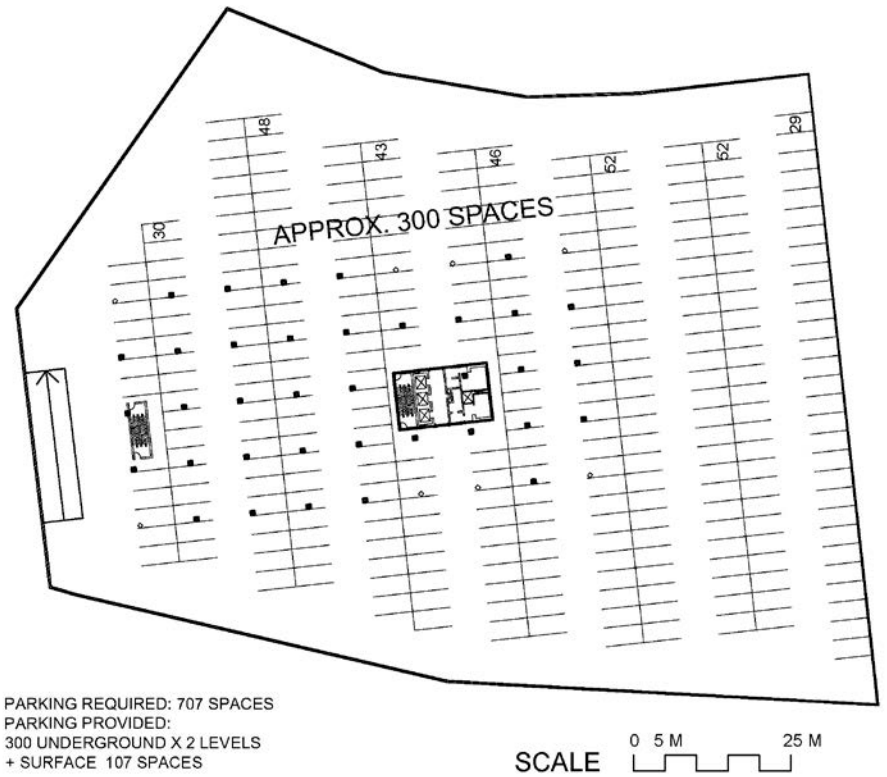
- Site Area approx. 3.2 acres
- New Civic Space
- TOTAL PARKING REQUIRED:707 Spaces
- 107 Surface parking spaces
- 600 Underground (2 levels)

BUILDING

- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)

New Build Site – Market Available

Option 2



ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE

- Site Area approx. 3.2 acres
- New Civic Space
- TOTAL PARKING REQUIRED:707 Spaces
- 107 Surface parking spaces
- 600 Underground (2 levels)

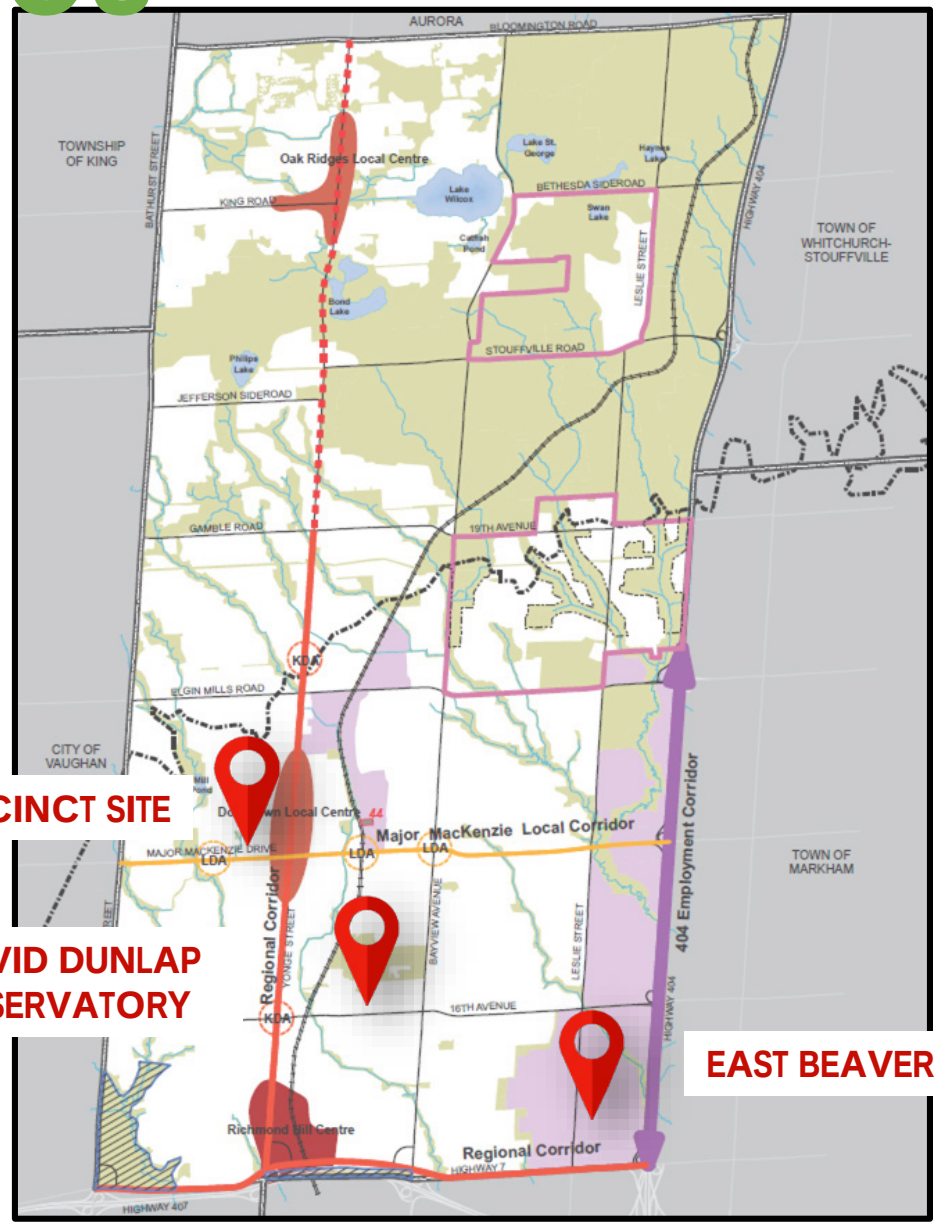
BUILDING

- 7 Storeys
- 32,000 SF per Floor GFA (22,720 SF per Floor Usable
- 222,656 SF Total GFA (159,040 SF Total Usable)

Five Potential Sites

RENOVATION + NEW BUILD

4. EAST BEAVER CREEK

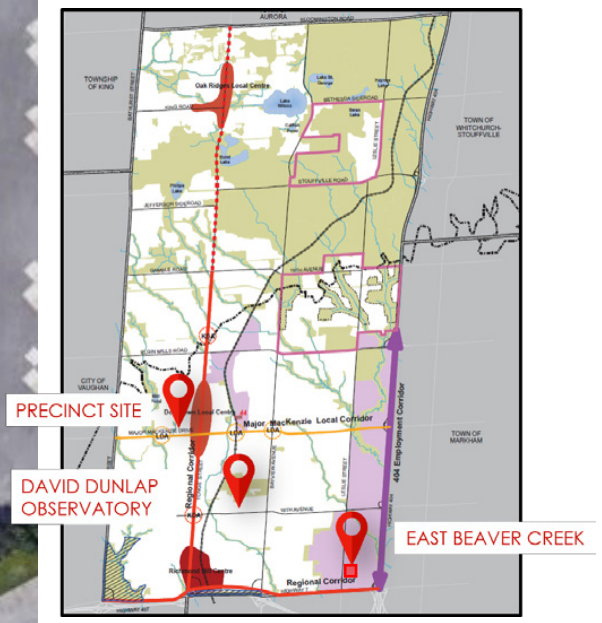


East Beaver Creek Site

225 East Beaver Creek

OPTION 1

Expansion on City-owned Land

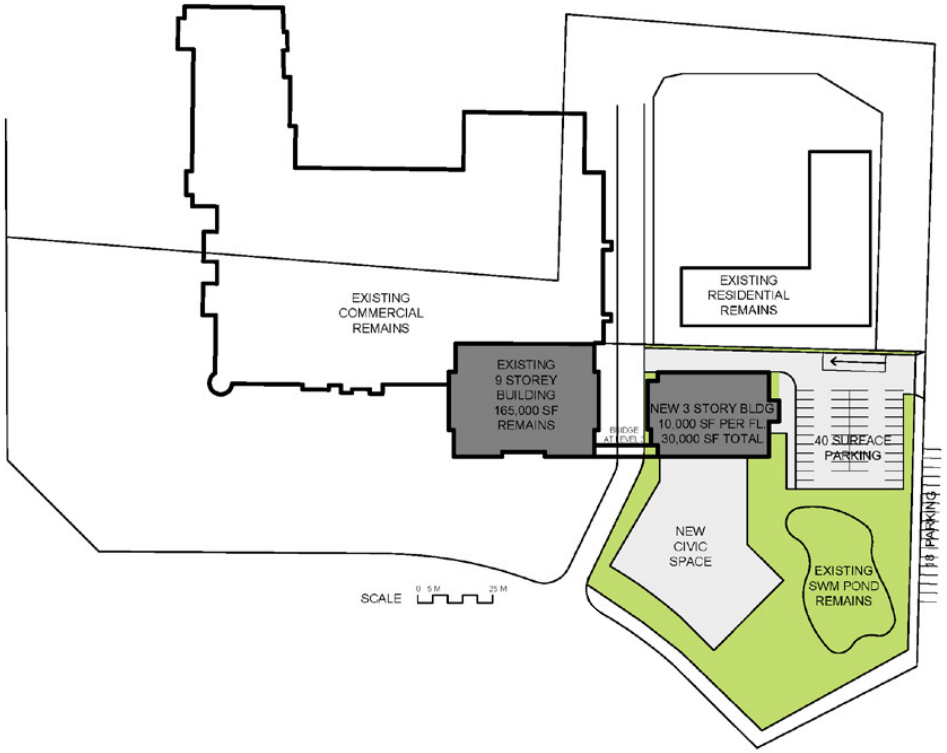


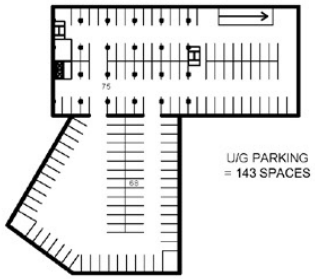
East Beaver Creek Site

225 East Beaver Creek

OPTION 1

Expansion on City-owned Land





ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE

- New Civic Space
- TOTAL PARKING REQUIRED:200 Spaces (new build)
- 59 surface parking spaces
- 143 Underground Parking Spaces (1 level)

BUILDINGS

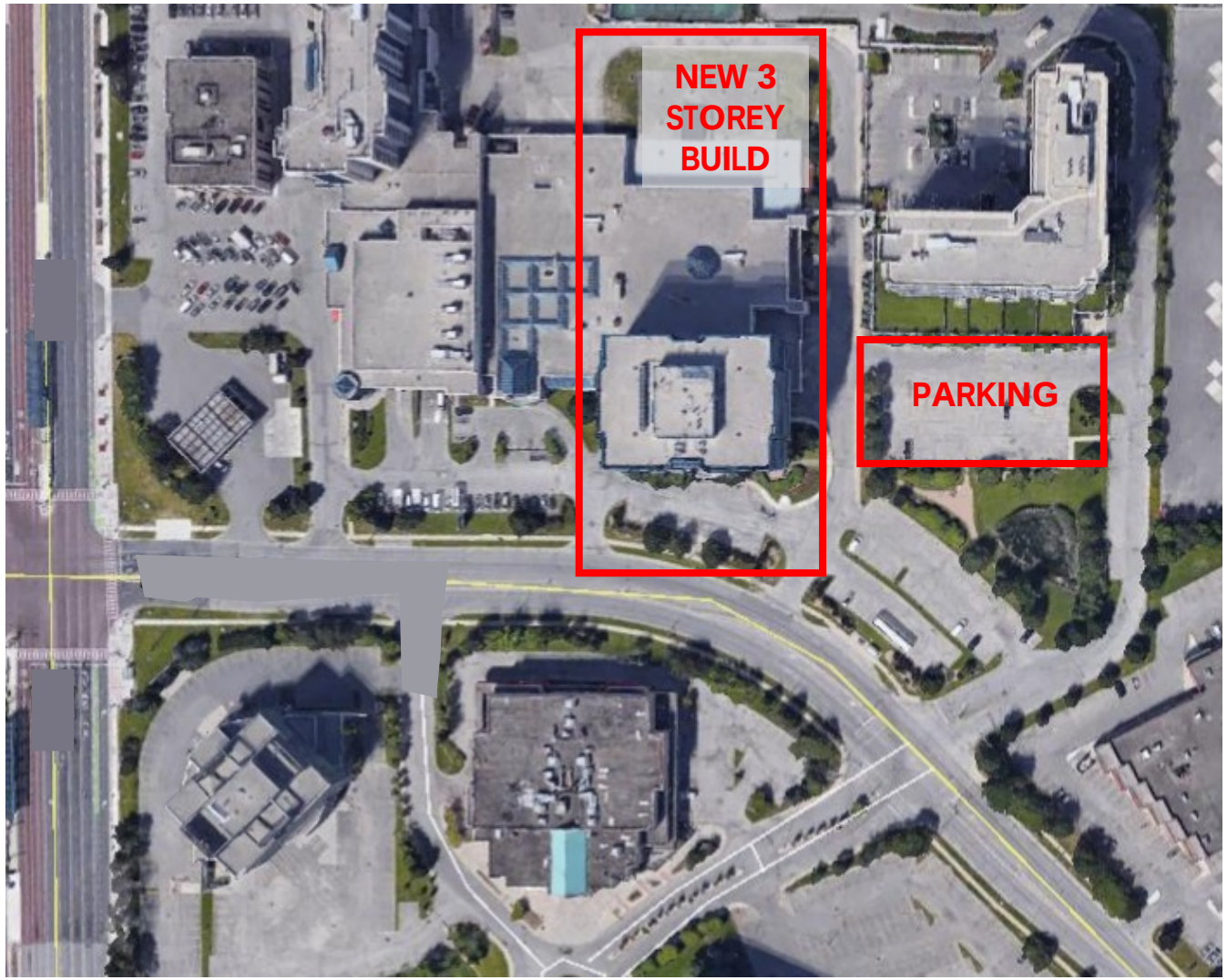
- Renovate existing 144,000 SF usable area (165,000 SF GFA)
- New 3 storey addition on existing parking lot 21,540 SF usable area (30,000 SF GFA)

East Beaver Creek Site

225 East Beaver Creek

OPTION 2

Expansion on Private-owned Land



ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

BUILDING

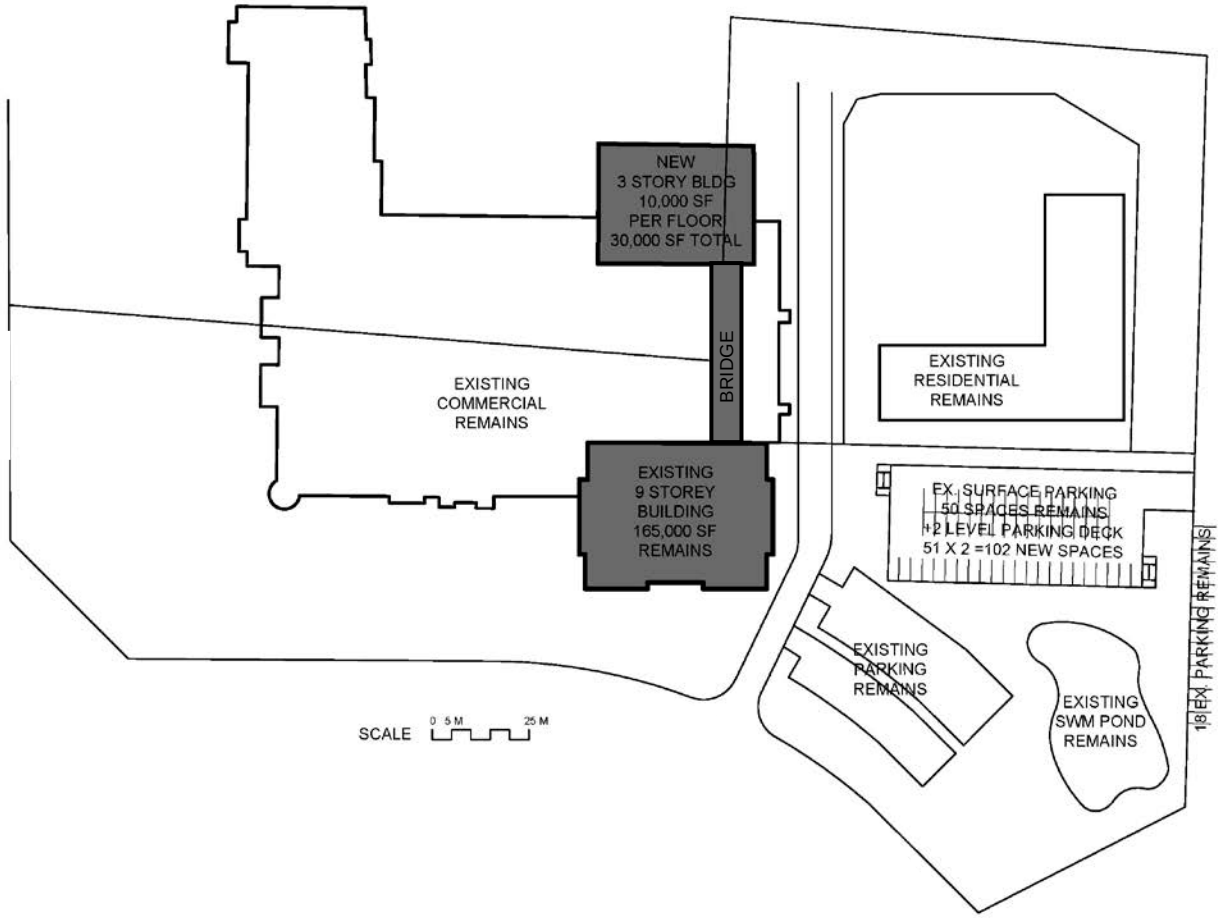
- Renovate existing 144,000 SF usable area (165,000 SF GFA)
- New 3 storey addition on west side of building (top) lot 21,540 SF usable area (30,000 SF GFA)

East Beaver Creek Site

225 East Beaver Creek

OPTION 2

Expansion on Private-owned Land



ZONING

MC-1, High Performance Industrial-Commercial One By-Law 150-80 as amended

Front Yard:	12.0 metres
Side Yard:	6.0 metres
Rear Yard:	12.0 metres
Flankage:	6.0 metres
Coverage:	N/A
FAR:	100%
Height:	30.5 metres

SITE

- TOTAL NEW PARKING REQUIRED:101 Spaces
- 102 Spaces on Parking Deck (2 levels)

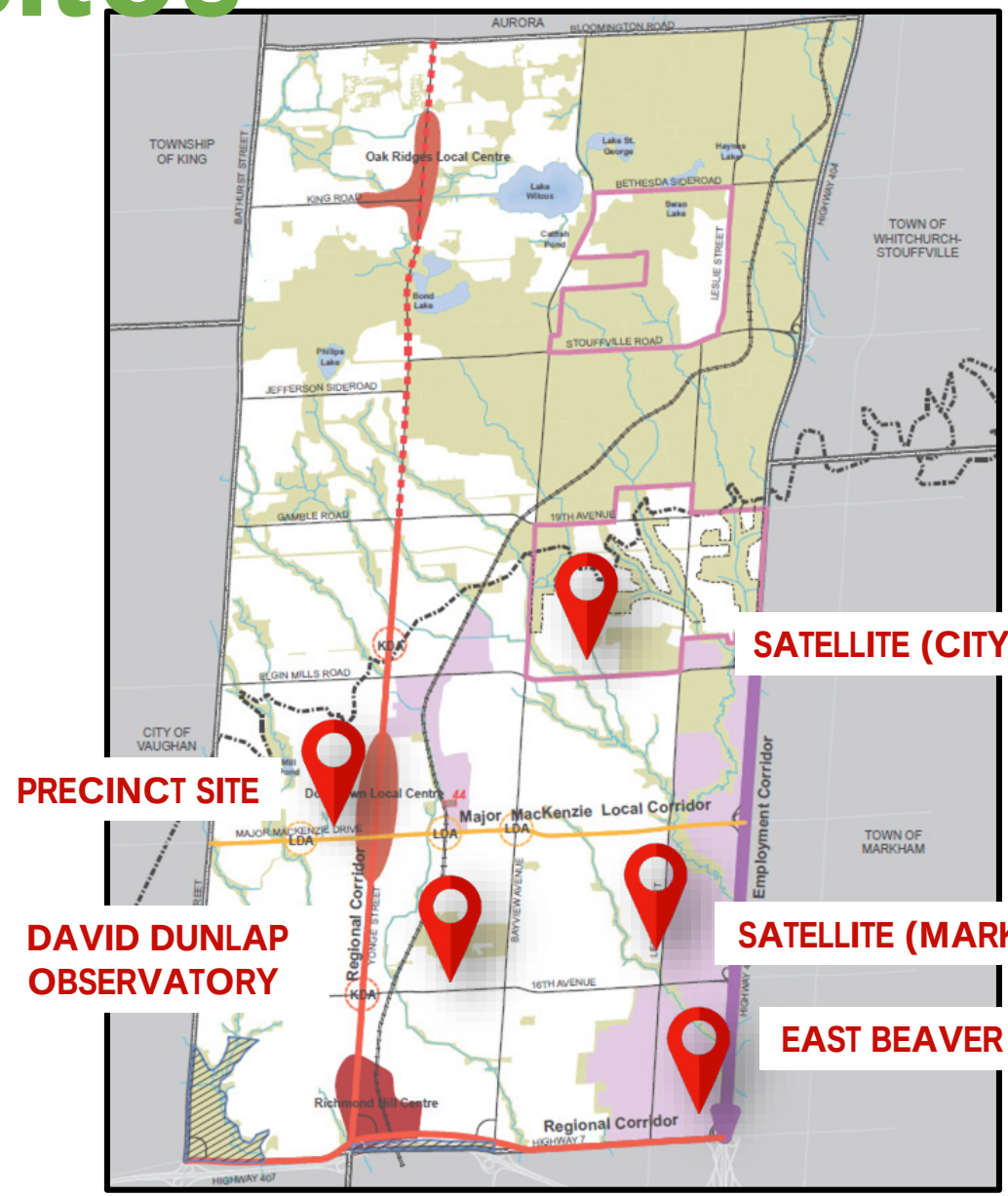
BUILDING

- Renovate existing 144,000 SF usable area (165,000 SF GFA)
- New 3 storey addition on west side of building (top) lot 21,540 SF usable area (30,000 SF GFA)

Five Potential Sites

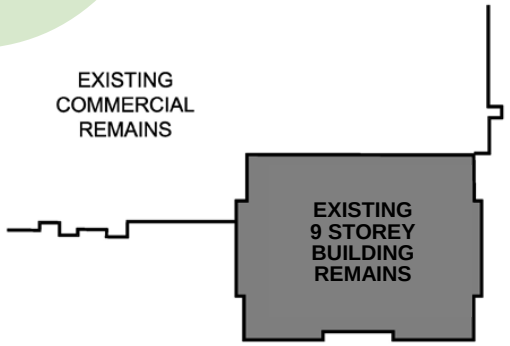
EBC RENOVATION + SATELLITE

5. SATELLITE – CITY OWNED
6. SATELLITE – MARKET LEASED

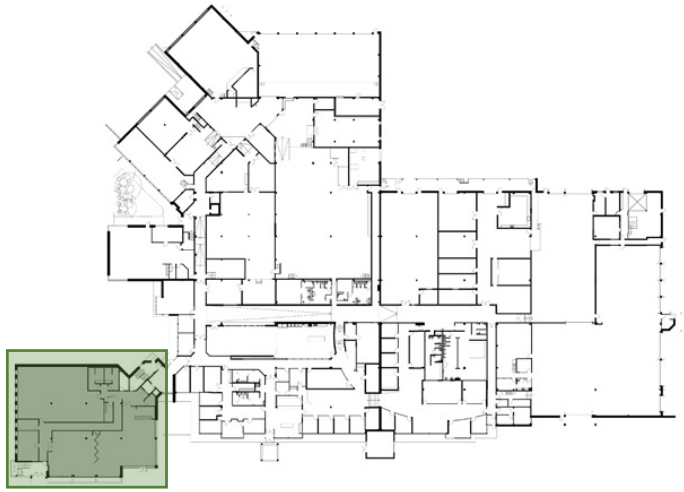


East Beaver Creek

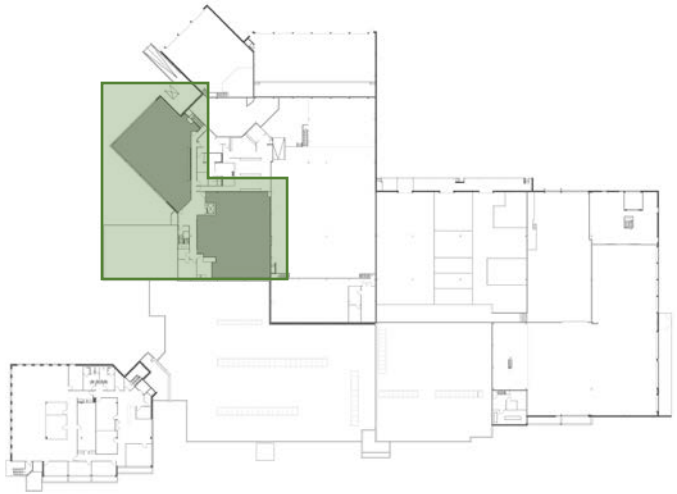
Option 1 | City-owned Satellite Space



+



LEVEL 1



LEVEL 2

(225 EBC + OPERATIONS CENTRE OPTIONS

LEVEL 1
- 704.4sm | 7582.1sf
  (not including electrical room)

LEVEL 2
- 568.7sm | 6121.4sf

)

East Beaver Creek

Option 2 | Satellite Leased Space

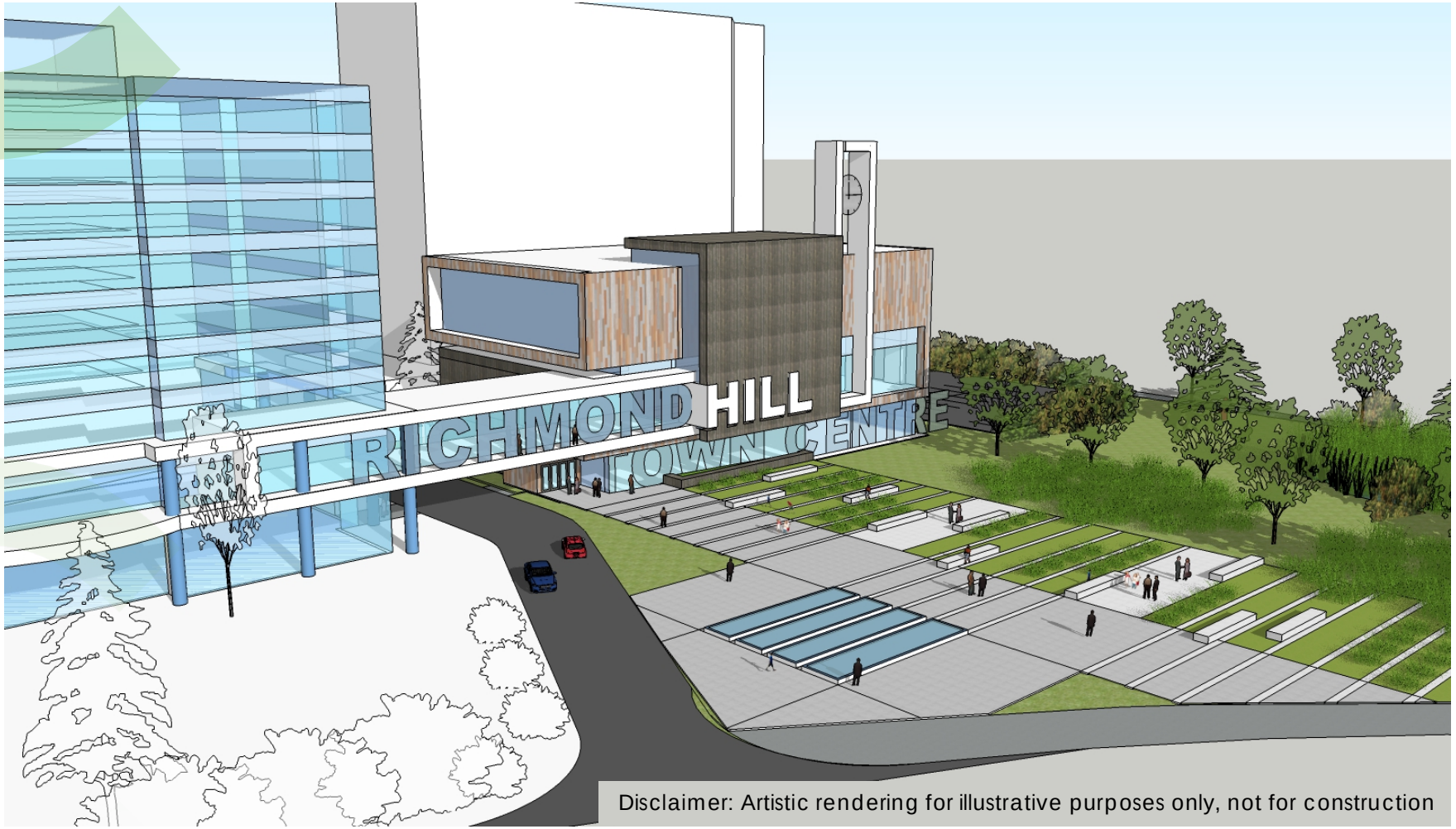
- **Level 1** **1,499** sm | 16,136 sf
- **Level 2** **2,134** sm | 22,966 sf
- **Level 3** **198** sm | 2,131 sf
- **Level 4** **376** sm | 4,043 sf
- **Level 5** **1,144** sm | 12,318 sf
- **Level 6** **2,124** sm | 22,867 sf

What could it look like?

Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Concept Model Views

East Beaver Creek Site



Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Concept Model Views

East Beaver Creek Site

Disclaimer: Artistic rendering for illustrative purposes only, not for construction

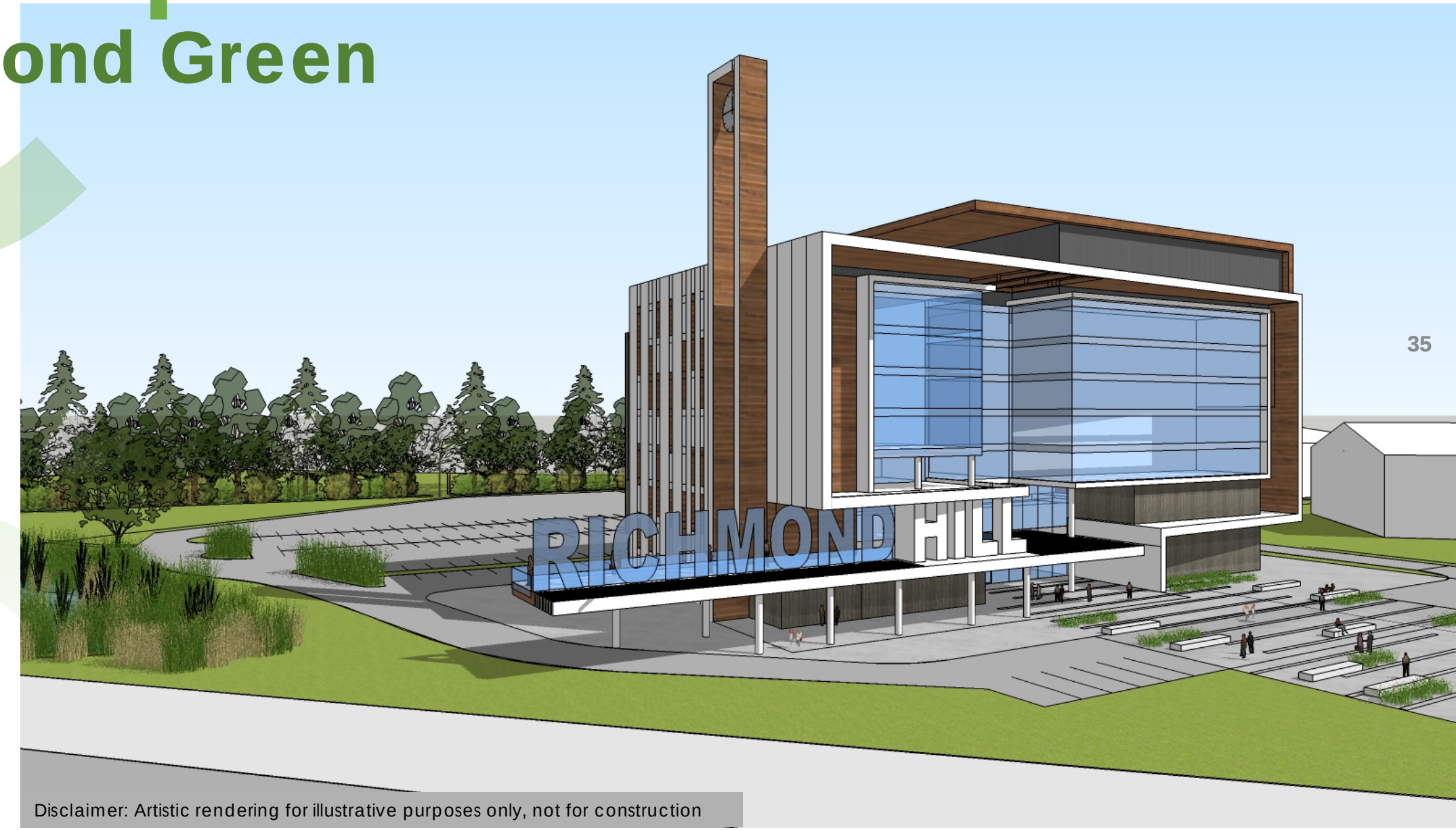
Concept Model Views

East Beaver Creek Site

Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Concept Model Views

Richmond Green

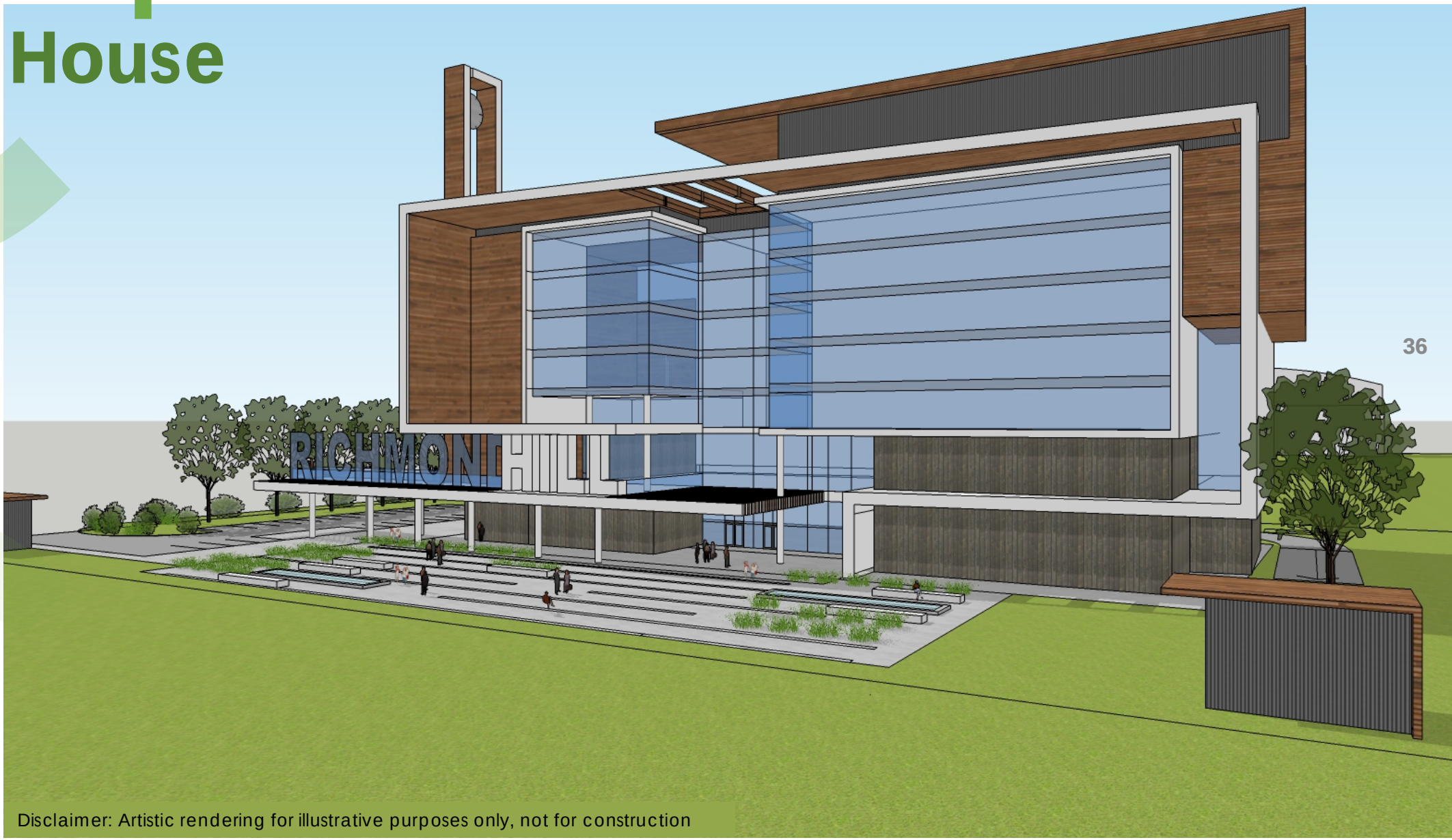


Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Colliers INTERNATIONAL

Concept Model Views

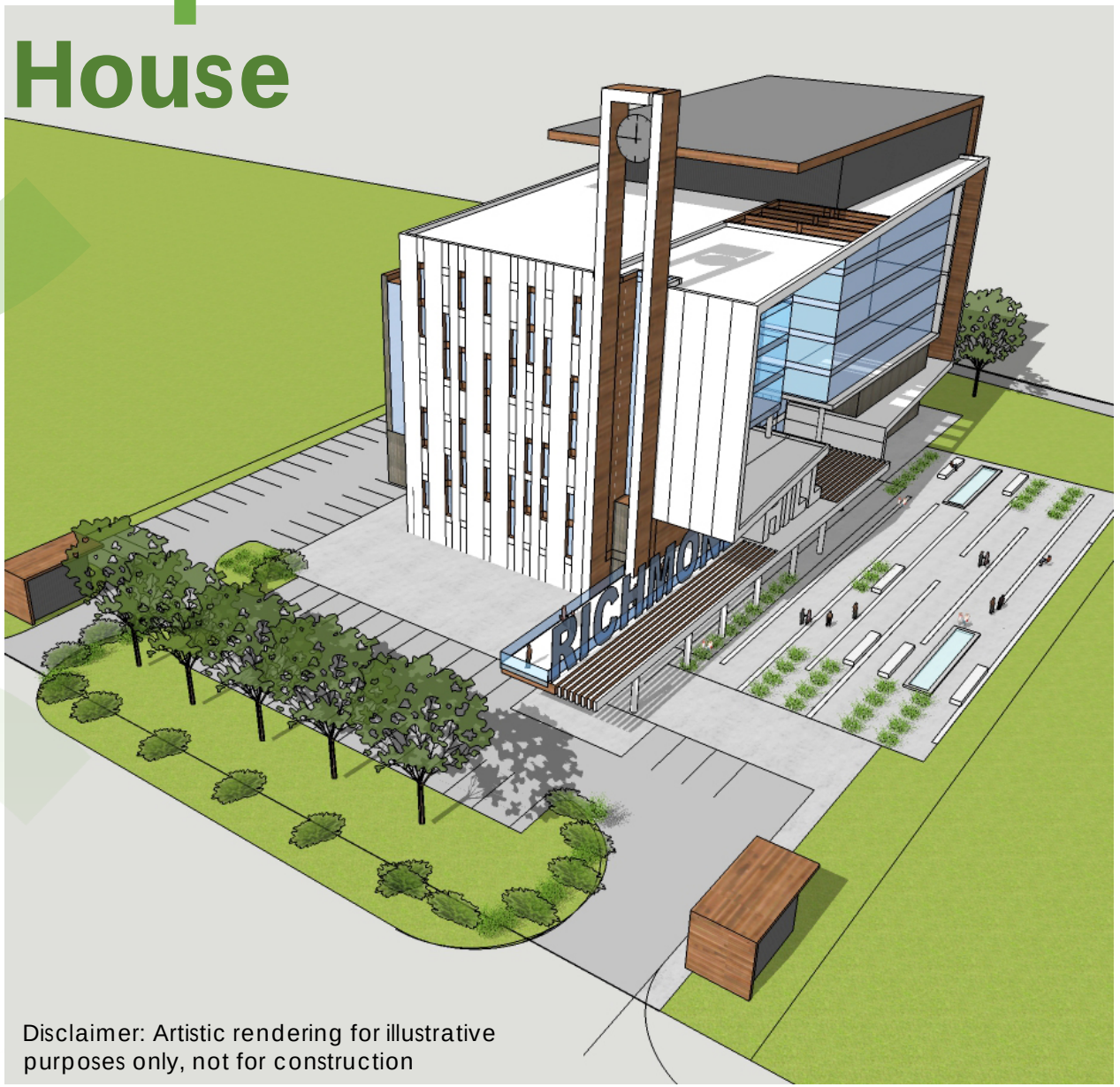
Brodie House



Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Concept Model Views

Brodie House



Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Concept Model Views

Market Available Site

Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Concept Model Views

Market Available

Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Concept Model Views

Market Available

Disclaimer: Artistic rendering for illustrative purposes only, not for construction

Appendix C – Parking Analysis

Stantec

Memo

To:	Josie Lee	From:	Brandon Orr
	Colliers Project Leaders		Stantec Consulting Ltd.
File:	160500008	Date:	May 21, 2019

Reference: Richmond Hill Civic Building – Parking Analysis

1.0 INTRODUCTION

The objective of this memo is to compare and analyse the parking requirements for the five new build/expansion development option locations for the Richmond Hill Civic Building. The following sections summarise the proposed development and staffing needs, as well as the applicable parking by-law requirements, and the associated parking needs based on each site's context and applicable transportation demand management measures (TDM). The culmination of this memo is a recommended parking supply that is conducive to supplying the Richmond Hill Civic Building with an adequate number of vehicular parking spaces, while simultaneously maximizing the infrastructure in a way that is conducive to regional and municipal multi-modal transport planning goals.

1.1 DEVELOPMENT SITE OPTIONS

There are five new build/expansion development site options that are being explored for the consolidation of Richmond Hill civic staff:

- Richmond Green | 1300 Elgin Mills Road E;
- Brodie House | 9841 Leslie Street;
- Market Available | New Construction;
- Market Available | Existing Building; and
- 225 East Beaver Creek;

These sites represent a subset of the total list of site options which also include satellite offices.

Richmond Green | 1300 Elgin Mills Road E: The existing City owned Richmond Green Sports Centre and Park comprises 102 acres and consists of the Tom Graham Arena complex with two ice rinks, three outdoor soccer fields, seven baseball diamonds, an outdoor basketball court, an indoor sports dome, state-of-the-art skateboard park, seasonal bocce courts, skating trail, an outdoor amphitheatre seating 300 people, and agricultural barn and paddock, among other amenities. To the northeast of the Richmond Green Sports Centre and Park are the Richmond Green Public Library and Richmond Green Secondary School.

The Richmond Green option is subject to the North Leslie secondary plan and is currently designated as 'Park' and zoned 'Agricultural'. The development of the site was permitted through exceptions on a site-specific basis to allow for community recreational purposes. The current zoning, Official Plan and Secondary Plan do not allow for office use on this site, however there is sufficient available acreage conducive to development of an office building in the southwest corner of the site adjacent to the Tom Graham Arena within the surface parking lot. In addition to the prototypical 7 storey, 222,656 SF building with a floor plate of approximately 32,000 SF per floor, a single level of underground parking would also need to be included to replace the displaced surface parking (178 spaces) and also to conform to the typical Town's zoning by-laws for minimum parking spaces for office use.

Brodie House | 9481 Leslie Street: is an existing City owned property that includes the heritage Brodie House at 9481 Leslie Street. This is a mid-block parcel of land comprising approximately 3.2 acres with

access to both Leslie Street and Brodie Drive. Prior to development of an office building, the existing heritage homestead would need to be relocated, which will require an amendment to the existing heritage by-law applicable to this particular site. Similar to the concept envisioned at the Richmond Green site of a prototypical 7 storey, 222,656 SF building with a floor plate of approximately 32,000 SF per floor, there would also need to be two levels of underground parking constructed.

Market Available | New Construction: Within the City, there exist several areas of privately-owned developable lands located in designated business parks or employment areas. An example of such a site is considered under two potential configurations – one where most of the parking is located on the surface with one level of underground parking thereby allowing for future expansion on the site should the City need a larger building past 2041 (approximately 6.4 acres), and a second where two levels of underground parking are constructed with the site acquired being sufficient for the City's forecasted needs to 2041 only (approximately 3.2 acres). One of the determining factors when considering which of these two configurations would continue to be considered lies in balancing the costs of land acquisition against the cost of constructing additional underground parking.

Market Available | Existing Building: Another potential market available scenario involves the acquisition of an existing building within the City. From a review of existing office buildings, there is not one of sufficient size to fully accommodate the City's office space needs forecasted out to 2041. Therefore, any potential acquisition of an existing building would also necessitate the construction of an annex or extension, which may require extensive demolition. One such potential site is a 6 storey office building with an adjacent smaller building which could be demolished and a new 5 storey building constructed in its place.

225 East Beaver Creek: This last single site option presented looks at the existing building at 225 East Beaver Creek Drive and contemplates the development of an expansion to the building, either on City owned lands or through acquiring privately owned lands, including potentially portions of the retail mall that is directly attached to the existing building. The size of the expansion required will be dependent upon whether a complete renovation of the existing building to the new space standards occurs or not.

Under the expansion on City-owned lands scenario, the surface parking lot directly to the north of the existing building is City owned and would be suitable for a modest 3 or 4 storey extension connected to the existing building via a pedestrian bridge above grade. This would allow for all public facing spaces, such as the Council Chambers, Mayor and Councilors' offices, meeting rooms, etc., to be relocated to the extension space leaving the existing building solely for City administrative needs. This configuration would allow for better security and controls for access after-hours. One level of underground parking is presumed to be sufficient to replace the displaced surface parking (99 spaces) and conform to the City's zoning by-laws for minimum parking spaces, however the exact number of parking levels are to be confirmed.

1.2 STAFFING AND GFA ASSUMPTIONS

The City currently owns and fully occupies the office building at 225 East Beaver Creek Drive. Built in the early to mid-1990's, this 9 storey building totals 165,000 SF (144,470 SF usable) and features a steel frame with glass curtainwall and concrete central core structure resulting in very efficient floor plate layouts. In addition to housing the City's administrative offices, 225 East Beaver Creek Drive is the municipal City Hall where the Mayor and Councilors' offices and Council Chamber can be found.

At the time of the Civic Precinct Project, work was undertaken to determine the total space needs for an administrative office building, forecasting out approximately 20 years to 2041. The initial head counts of 728

applied to the new space standard desired resulted in a total space requirement of 247,689 SF. Subsequent revisions by City staff have now reduced that estimated forecast head count to 676 with an accompanying total space requirement of 222,656 SF as summarized in **Table 1.1**. From previous studies conducted by the City, the growth in City staff is expected to exceed the current capacity of the existing location by or before 2023. In addition to staffing, a need for 45 Richmond Hill Municipal Vehicle spaces was also identified through the Richmond Hill Civic Precinct parking study completed by Stantec in June 2017.

Table 1.1 Forecasted Staffing Levels and Space Requirements

Department	Approved 2018 Staff	Projected 2026 Staff	Projected 2041 Staff
Corporate & Finance Services (CFS)	159	164	***676***
Community Services (CS)	65	74	
Environment & Infrastructure Services (EIS)	90	110	
Planning & Regulatory Services (PRS)	122	163	
Office of the CAO (CAO)	55	65	
Total	***491***	***576***	
		Richmond Hill Municipal Vehicles*	***45***
		Estimated GFA (ft^2)	**222,656**

**identified through the Richmond Hill Civic Precinct Parking Study and coordination with the City of Richmond Hill*
Source: *Town of Richmond Hill Needs Analysis by Bullock Wood Design (October 2018)*

The expansion requirements for each site are different with some existing sites such as 225 East Beaver Creek or Market Available | Existing Building requiring incremental expansion of an existing site to accommodate the projected staffing demand, whereas the remaining option sites would require completely new buildings. **Table 1.2** summarises the total additional GFA required to accommodate all or any additional Richmond Hill staff on site and were used to calculate parking supply needs at each of the sites.

Table 1.2 Required GFA at each option site

Option Site	Type	Gross Floor Area (ft^2)
Richmond Green | 1300 Elgin Mills Road E	New Build	+222,656
Brodie House | 9841 Leslie Street	New Build	+222,656
Market Available | New Construction	New Build	+222,656
Market Available | Existing Building	Renovation + Expansion	+97,664
225 East Beaver Creek	Renovation + Expansion	+30,000

1.3 EXISTING PARKING BY-LAW REQUIREMENTS

The proposed development would be considered a General Office Building under the City of Richmond Hill's existing parking By-Laws[1]. According to City Zoning By-Laws (184-87, 190-87 | 278-96 | 313-96, 42-02 | 76-91) the minimum required parking spaces for a general office building is 3.2 spaces per 100 m^2 of gross floor area (GFA). This rate is uniform across all four development option sites. The resulting required parking

[1] (HDR/iTrans, 2010)

equates to 662 parking spaces plus 45 municipal vehicle spaces for a combined sum of 707 spaces at all option sites as summarized in **Table 1.3**.

Table 1.3 Required Parking based on Zoning By-Laws

Land-Use	Parking Rate	Required
General Office (222,656 ft^2 / 20,685 m^2)	3.2 per 100m^2	(20,685/100) x 3.2 = 662
Richmond Hill Municipal Vehicles*	45	
Total		***707***

**identified through the Richmond Hill Civic Precinct Parking Study and coordination with the City of Richmond Hill*
Source: *Appendix A of Town of Richmond Hill Parking Strategy* (HDR/iTrans, 2010)

1.4 RICHMOND HILL PARKING STRATEGY RECOMMENDED PARKING RATES

The City of Richmond Hill prepared a parking strategy in 2010 outlining recommended parking rates depending on the contextual differences between different areas of the City taking into consideration the land use, built form and availability of alternative transportation options to allow for further granularity in terms of having development parking rates work to support land uses. These rates were split into four broad areas, primarily defined by special stipulations within the Official Plan, or proximity to rapid transit lines as summarised in **Table 1.4**.

Table 1.4 Richmond Hill Parking Strategy Recommended Parking Rates

Area	Description	Applicable Development Option	Parking Rate (Government Office)
Downton Local Centre and Key Development Areas (KDA)	As defined by the City's Urban Structure Plan.	n/a	2 spaces per 100m^2
Richmond Hill Regional Centre	As defined by the City's Urban Structure Plan.	n/a	2 spaces per 100m^2
Rapid Transit Corridors (not including areas listed above)	Areas within 400m walking distance of a rapid transit stop.	• 225 East Beaver Creek • Market Available | Existing Building	2 spaces per 100m^2
Business Parks	As defined in the Official Plan.	• Market Available | New Construction • Brodie House | 9481 Leslie Street	3.2 spaces per 100m^2
Rest of Richmond Hill	All remaining areas of Richmond Hill.	• Richmond Green | 1300 Elgin Mills Road E	3.2 spaces per 100m^2

Source: *Section 4 of Town of Richmond Hill Parking Strategy* **(HDR/iTrans, 2010)**

Reference: **Richmond Hill Civic Building – Parking Analysis**

Between the five development options the recommended parking rates outlined within the Richmond Hill Parking Strategy change between 2 and 3.2 spaces per 100m^2. Due to each site's location different parking rates apply resulting in 56 - 662 spaces plus 45 municipal vehicle spaces as summarised in **Table 1.5**.

Table 1.5 Richmond Hill Parking Strategy Recommended Parking Spaces

Development Option	Land-Use	Rate	Supply
Richmond Green | 1300 Elgin Mills Road E	General Office (222,656 ft^2 / 20,685 m^2)	3.2 per 100m^2	**(20,685/100) x 3.2 = 662**
Brodie House | 9841 Leslie Street		3.2 per 100m^2	**(20,685/100) x 3.2 = 662**
Market Available | New Construction		3.2 per 100m^2	**(20,685/100) x 3.2 = 662**
Market Available | Existing Building	General Office (97,664 ft^2 / 9,074 m^2)	2.0 per 100m^2	**(9,074/100) x 2.0 = 181**
225 East Beaver Creek	General Office (30,000 ft^2 / 2,787 m^2)	2.0 per 100m^2	**(2,787/100) x 2.0 = 56**
Richmond Hill Municipal Vehicles*	45		

**identified through the Richmond Hill Civic Precinct Parking Study and coordination with the City of Richmond Hill*
Source: *Section 4 of Town of Richmond Hill Parking Strategy* **(HDR/iTrans, 2010)**

1.5 INDUSTRY PARKING RATES AND COMPARISONS

The City of Richmond Hill's zoning by-law parking requirements were compared with parking strategy rates, as well as the industry-backed parking generation rates from the Institute of Transportation Engineers (ITE) Parking Manual 4th Edition as summarised in **Table 1.6**. When compared across the board the Parking Strategy rates reflect the lowest rates, while the existing by-law rates are the highest, and the ITE rates are in the middle. The ITE Parking Generation Manual develops rates based on a broad country-wide sample of parking rates across the United States for a given land use. Often, the samples will be from jurisdictions or locations that are much less urban than our proposed development sites, or with fewer multi-modal transportation options. It generally identifies a general parking rate that doesn't consider local mode split, alternative transportation options, or transportation demand management measures.

Table 1.6 Parking Rate Comparison

Development Option	Existing By-Law		Richmond Hill Parking Strategy		ITE Parking Generation Manual	
	Rate	Supply	Rate	Supply	Rate	Supply
Richmond Green | 1300 Elgin Mills Road E	3.2 per 100m^2	662	3.2 per 100m^2	662	0.83 vehicles per employee (LUC #730 – Government Office Building)	561
Brodie House | 9841 Leslie Street						
Market Available | New Construction						
225 East Beaver Creek		89	2.0 per 100m^2	56	3.3 per 1,000ft^2 (LUC #730 – Government Office Building)	99
Market Available | Existing Building		290		181		322
Richmond Hill Municipal Vehicles*	45 vehicles					

**identified through the Richmond Hill Civic Precinct Parking Study and coordination with the City of Richmond Hill*

1.6 SHARED PARKING

Best-practices for parking utilize shared parking strategies to minimize a building's parking footprint while simultaneously maximizing parking utilization. Shared parking serves multiple land uses that have different peak demand periods with one set of parking spaces that are shared as visualized in **Figure 1.1**. Considering the City's official plan, community improvement plan, and the Region's Transportation Master Plan objectives, it is important that the recommended parking rate does not result in an oversupply of parking. An oversupply of parking represents underutilized infrastructure that will continually need to be maintained and paid for with little operational benefit.

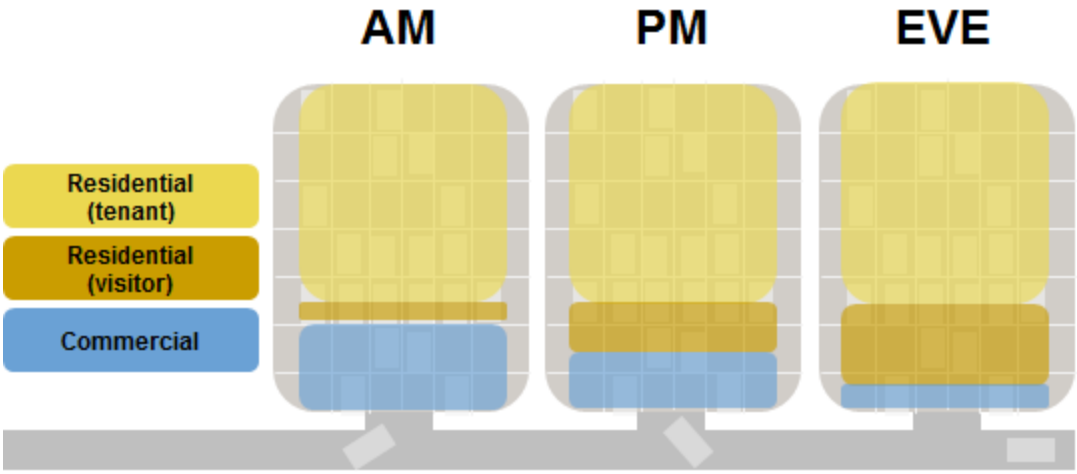


Figure 1.1 Visualization of shared parking between land uses

Two of the option sites share space with different land uses and are applicable for shared parking:

- **225 East Beaver Creek**
  - Shares space with several commercial retail stores within the Shoppes of the Parkway mall, as well as a conference/banquet hall resulting in an existing parking supply of 1,529 spaces
- **Richmond Green | 1300 Elgin Mills Road E**.
  - Currently has several recreational, and community facilities on the site and a total parking supply of 1,166 spaces.

The break-down of shared land-uses and their existing dedicated parking supply is summarized in **Table 1.7**.

Table 1.7 Site Option Additional Land Uses and Existing Parking Spaces

Land Use	Site Option	
	225 East Beaver Creek	**1300 Elgin Mills Road E**
Office	445 existing spaces	N/A
Retail	800 existing spaces	N/A
Conference/Banquet	284 existing spaces	N/A
Recreation	N/A	1,166 existing spaces
Total Existing Parking Supply	**1,529**	**1,166**

The City of Richmond Hill's Parking Strategy defines a framework for shared parking including parking management strategies identified by the Victoria Transport Policy Institute (VTPI) which have shown that there is a potential to reduce parking supply by 10-30%[2]. The Parking Strategy identifies that all developments should be applicable for the implementation of a shared parking formula for mixed-use developments and identifies parking occupancy rates for a few land uses. Due to the nature of where some of the proposed sites are located, they may be sharing parking with additional land uses that are not identified within the Richmond Hill Parking Strategy such as an Arena, or Conference/Banquet Hall land use. Applicable shared parking occupancy rates along with their reference source are summarized in **Table 1.8**:

Table 1.8: Richmond Hill Occupancy Rates for Shared Parking Formula

Land Use	AM (Before 12PM)	MID (12PM-1PM)	PM (1PM-6PM)	EVE (After 6PM)	Source
Office (RH)	100%	90%	100%	10%	Richmond Hill Parking Strategy
Government Office (ITE)	100%	100%	60%	10%	ITE Parking Generation Manual 4th Edition
Retail	80%	95%	95%	90%	Richmond Hill Parking Strategy
Arena	20%	30%	100%	30%	ULI Shared Parking Model
Conference/Banquet	30%	65%	100%	100%	

Sources: *Richmond Hill Parking Strategy* **(HDR/iTrans, 2010)**, *ITE Parking Generation Manual* **(Institute of Transportation Engineers, 2010)**, *ULI Shared Parking Model* **(Urban Land Institute, 2005)**

As a conservative measure due to consultation and feedback from the existing building management regarding limited parking spaces at 225 East Beaver Creek shared parking reductions were only applied to the additional 56 office spaces being added to the site, although the peak shared-parking demand period was calculated including all the other land uses. Shared parking applied to the City of Richmond Hill's parking strategy rates results in a recommended shared parking supply of 50 new office spaces at 225 East Beaver Creek and 397 office spaces at 1300 Elgin Mills Road E as summarised in **Table 1.9**. This represents a potential parking supply after applying shared parking to the Richmond Hill Parking Strategy rates and prior to incorporating TDM measures.

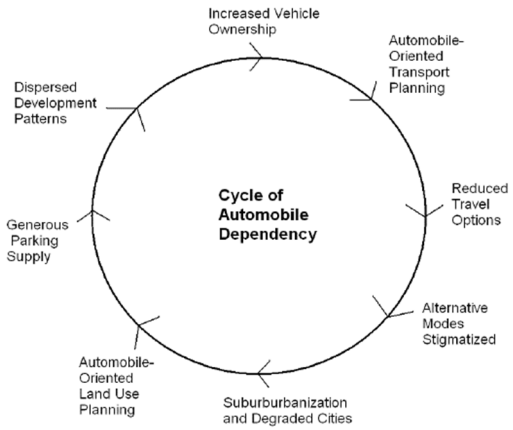
[2] (Litman, 2016)

Reference: **Richmond Hill Civic Building – Parking Analysis**

Table 1.9: Option Site Shared Parking Results

	Option Site	225 East Beaver Creek	1300 Elgin Mills Road E
Required Parking (Parking Strategy)	Office	445 existing + 56 new	662 new
	Retail	800 existing	-
	Conference/Banquet	284 existing	-
	Recreation	-	1,166 existing
	Richmond Hill Municipal Vehicles	45	45
	Total	**1,629**	**1,873**
Shared Parking	*AM*	1,270	940
	MID	1,439	9991
	PM	1,388	1,608
	EVE	1,098	461
	Peak Period:	**MID**	**PM**
	% reduction	**12%**	**14%**
	Office	445 existing + 50 new	397 new
	Retail	800	-
	Conference/Banquet	284	-
	Recreation	-	1,166
	Richmond Hill Municipal Vehicles	45	45
	Total Shared Parking:	**1,623**	**1,608**

It is important to note that while shared parking may reduce parking space, it does not reduce the site's parking utilization or ability to accommodate each land uses peak demand, it focuses on the ability to maximize each parking space so that periods of under-utilization are mitigated. For instance, if dedicated spaces for office activity are provided on-site, they may result in empty, unused spaces overnight. With shared parking, those spaces could be utilized for visitor retail or conference/banquet hall parking in the afternoon and evening when office parking demand is low but recreational demand may be high.



Historically, past parking trends are extrapolated to predict future demand, which are then attempted to be satisfied. This often creates a self-fulfilling prophecy, since parking supply increases vehicle use and urban sprawl, causing parking demand and parking supply to ratchet further upward as illustrated in **Figure 1.2**.

The key goal of shared parking analysis is to find the balance between providing adequate parking to support a development from a commercial viewpoint and minimizing the negative aspects of excessive land area or resources devoted to parking. Mixed-use developments that share parking result in greater density, better pedestrian connections, and, in turn, reduced reliance on driving[3].

Figure 1.2 **Cycle of Automobile Dependency**

[3] (Urban Land Institute, 2005)

225 East Beaver Creek Conference Centre

The City of Richmond Hill has identified that the existing on-site parking at 225 East Beaver Creek experiences occasional over-utilization during special events throughout the year at the adjacent Banquet Hall / Conference Centre. Through discussion with the Banquet Hall they've identified that these events occur approximately four (4) days a year resulting in 500-900 guests. A summary of these key events over the past two years and the upcoming year are highlighted in **Table 1.10**.

Table 1.10 Historical and Upcoming Banquet Hall Major Events

Date	Event	Estimated Guests
April 24, 2017	Hospice	500
November 15-17, 2017	Quest	800-900
April 23, 2018	Hospice	600
November 14-15, 2018	Quest	800-900
April 29, 2018	Hospice	500
November 20-21, 2019	Quest	800-900

To address major influxes the City of Richmond Hill could implement transportation demand management (TDM) measures such as:

- Telecommuting days;
  - Allow staff to work from home on these days.
- Notifications to staff prior to the events;
  - to recommend taking transit or active transportation
- Implement increased paid parking on conference days;
  - Increased parking cost to make it more costly than alternative options for these days
- Coordinate carpooling
  - Work with Smart Commute to coordinate staff carpooling on these specific days

1.7 PROPOSED TDM MEASURES

There are several measures that can be implemented to reduce parking demand ranging from enhancements to single occupant vehicle alternatives to the promotion and dissemination of information regarding trip planning tools and options. The following section details recommended TDM improvements that can be incorporated in the subject sites.

Carpool Parking

Car-pooling presents an opportunity to promote a reduction in car trips to the site as well as simultaneously reduce the demand for vehicle parking by encouraging employees and visitors to maximize the capacity of one vehicle to serve multiple people. Carpool spaces should be at grade, close to the building entrance, given priority and signed for vehicles that arrive with 3 or more people. 225 East Beaver Creek currently already has 8 carpool spaces.

Reference: **Richmond Hill Civic Building – Parking Analysis**

Transit and Active Transportation Improvements

Site access to the YRT/VIVA transit system provides local and regional service that can connect the sites at varying levels to all parts of Richmond Hill, York Region, and beyond. High frequency and higher-order transit route such as the Highway 7 BRT present more enticing options for shifting people onto transit from their vehicles.

All transit trips start and end with a walk or bike ride, often called "the last mile". Therefore, improvements in active transportation are such an important compliment to transit expansion. Active transportation improvements support reductions in parking requirements by improving connections to existing active transportation infrastructure allowing a variety of trips to be shifted away from single occupant vehicles and to foster improved connections with public transit for longer trips.

Based on each site's location good access to local biking facilities such as bike lanes on Highway 7 present opportunities to leverage active transportation to reduce traffic and parking demand at the site. To enhance cycling TDM opportunities, visible, well-lit, short-term bicycle parking should be added on site within 15 m of the building entrance.

A review of bicycle parking rates from the City of Markham's Draft TDM Guidelines coupled with the proposed total gross floor area (GFA) of the Civic Precinct project (20,685 m^2) suggests providing space for **21** bicycles on-site for short term parking and **27** for long term parking for a Total of **48 spaces**. These rates are recommended due to the similar characteristics that the City of Markham shares with the City of Richmond Hill.

Table 1.11 - Markham Draft TDM Guidelines for bicycle parking rates

Land Use	Long-term Parking	Short-term Parking
Office	0.13 spaces/100 m^2 = 27 spaces	Greater of 0.1 spaces/100 m^2 or minimum of 6 spaces = 21 spaces

Source: Correspondence with City staff (November 2016)

Short-term or "visitor" bicycle parking is designed to be used for a few minutes up to a few hours and should be covered for weather protection, visible, and easily accessible with racks that provide a secure point for locking up. Visitor/short-term bicycle parking should be placed at grade with high visibility and that at least one (1) short-term bicycle parking space shall be provided by the main entrance of each building.

More specifically, the short-term parking area should be:

1. Located near all, if not most, building entrances to limit walking and inappropriate parking;
2. Clearly indicated as visitors might be unfamiliar with the site;
3. Out of the way of automobile and pedestrian traffic to avoid accidents; and
4. Off major roadways for convenient access.

Different options for short-term bicycle parking are available, as detailed in **Table 1.12**.

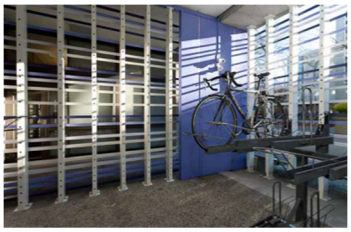
Table 1.12 Examples of Short-Term Bicycle Parking Options

Name	Use	Capacity	Cost	Example
Bike Hitch Rack	An attractive and space efficient rack designed for sidewalks and other narrow space applications.	2	$200	
Alley Rack	Ideal for buildings with limited space, these racks are mounted directly to a wall to minimize footprint.	2	$290	
Broadway Rack	Can be customized in length to hold varying numbers of bikes.	2-11	$279-319	

Source: globalindustrial.ca

Long-term parking is intended for use over several hours for employees. The area must be designed to protect bicycles parked for longer periods of time in an enclosed, secured area with controlled access or individual secure enclosures like bicycle lockers. Where the long-term parking area is located within an underground parking garage, signage is required and shall be strategically placed so that they are visible and easily direct users to the bicycle parking area. Different options for long-term bicycle parking are available, as detailed in **Table 1.13**.

Table 1.13 Examples of Long-term Bicycle Parking Options

Name	Use	Capacity	Cost	Example
Bike Locker	A locker that offers high security for bicycle parking with optional wrapping and branding.	2	$1,700	
Bike Shelter	Shelter offers effective protection against the elements while providing a secure central location.	6-12	Varies by size of shelter + racks	
Bike Room	An indoor, secured bike room away from inclement weather and highly protectable from theft. Usually built within a development with easy access to the roadway.	Flexible	Costly. Determined by construction and design	

Source: globalindustrial.ca

Wayfinding

To bring awareness and encourage the use of alternative modes of transportation the site shall provide electronic-displays in public areas (such as the main office lobby) to display transportation information for employees such as: location of bike parking facilities on-site, car share options and other transit related information such as bus routing and schedules.

Employers on the site shall also prepare and distribute a travel information package to each employee working at the site. The package shall include, but not be limited to, similar information that can be found on the proposed electronic-display board in the main lobby. Proposed information to provide employees are the following:

- Local transit schedule/services (YRT/VIVA, GO Transit);
- York Region, and City of Richmond Hill Cycling route maps;
- Details about the local Smart Commute Program;
- Local car-share programs; and
- Bike and Walk safety information.

Transportation Management Association

The City of Richmond Hill is already a member of Smart Commute. Given a large portion of the proposed development is for office use, there are considerable benefits in continuing to work with Smart Commute Markham, Richmond Hill (SCMRH). The City of Richmond Hill may find there are further opportunities to implement and develop employer based TDM programs that can leverage available transit and active transportation facilities that will be available in proximity to the proposed sites.

Financial Incentives

Financial benefits for reducing automobile trips could be implemented at the tenant-level. These benefits represent the cost savings that result from reduced parking demand. There are various types of incentives. Parking cash-out means that commuters who are offered subsidized parking can choose cash instead. Transit benefits means that employees receive a subsidized transit pass. Universal transit passes mean that a group purchases discounted, bulk transit passes for all members. Another incentive is to provide discounted or preferential parking for rideshare (carpool and vanpool) vehicles. Consumers value these options because they provide positive rewards for those who reduce vehicle trips and parking demand.

Parking Pricing

Implementing parking pricing means that most motorists pay directly for using parking facilities. Rates should be set to optimize parking facility use during business hours which is expected to be the peak period for parking demand. Adjustments to pricing can be made to encourage or discourage use depending on time of week. For instance, a reduced or free parking rate could be implemented on weekends where transit service does not operate or operates at lower frequencies. A pricing strategy should follow performance-based pricing, which means that about 15% of parking spaces are vacant and available at any time (Shoup, 2005 and 2008). While a flat annual or monthly fee will discourage single occupant use for patrons, these typically provide little incentive to use an alternative mode occasionally. Requiring users to pay for parking more frequently brings to question whether that cost could be diminished by shifting to another mode of transportation.

1.8 PROPOSED TDM REDUCTIONS

The recommended transportation demand management (TDM) improvements will assist in managing and reducing parking demand at the subject sites. As there is no standard for TDM parking reductions, they are derived from case studies and technical reports using quantitative data from previous built developments to extrapolate expected reduction rates. The following **Table 1.14** details the qualitative analysis of each site's local context in relation to transit improvements, implementation of active transportation facilities, and car-share spaces.

Table 1.14 Site Specific Qualitative Analysis of TDM measures

TDM Measure	Richmond Green | 1300 Elgin Mills Road E	Brodie House | 9841 Leslie Street	Market Available| New Construction	Market Available | Existing Building	225 East Beaver Creek
Carpool Parking	• Yes – Highly Applicable • Can leverage Smart Commute to help coordinate staff carpools	• Yes – Highly Applicable • Can leverage Smart Commute to help coordinate staff carpools	• Yes – Highly Applicable • Can leverage Smart Commute to help coordinate staff carpools	• Yes – Highly Applicable • Can leverage Smart Commute to help coordinate staff carpools	• Yes – Highly Applicable • Can leverage Smart Commute to help coordinate staff carpools
Cycling	• Yes – Low Applicability • Some cycling facilities near the site, as well as adjacent to low-density residential communities allowing for short trips	• Not Applicable • No cycling facilities, far from residential communities	• Not Applicable • No cycling facilities, far from residential communities	• Not applicable • Parking Strategy rates for Regional Transit Corridor accounts for cycling reductions	• Not applicable • Parking Strategy rates for Regional Transit Corridor accounts for cycling reductions
Walking	• Yes – Low Applicability • Available pedestrian facilities adjacent to low-density residential communities for short trips.	• Not applicable • Not adjacent or close to a major residential area to encourage short walking trips. Location adjacent to a highway and the winding business park road network presents barriers and a further internal walking distance	• Not applicable • Not adjacent or close to a major residential area to encourage short walking trips. Location adjacent to a highway and the winding business park road network presents barriers and a further internal walking distance	• Not applicable • Parking Strategy rates for Regional Transit Corridor accounts for walking reductions	• Not applicable • Parking Strategy rates for Regional Transit Corridor accounts for walking reductions
Transit	• Yes – Low Applicability • Within good catchment distance to the nearest transit stop, but only served by a conventional transit route with low frequencies	• Not Applicable • Considerable walk distance to the nearest transit stop, as well as only being served by a conventional transit route with low frequencies	• Not Applicable • Considerable walk distance to the nearest transit stop, as well as only being served by a conventional transit route with low frequencies	• Not applicable • Parking Strategy rates for Regional Transit Corridor accounts for transit reductions	• Not applicable • Parking Strategy rates for Regional Transit Corridor accounts for transit reductions
Wayfinding / Transportation Management Association	• Not Applicable • Limited alternative mobility options, despite the availability of a conventional transit route.	• Not Applicable • Limited alternative mobility options, despite the availability of a conventional transit route.	• Not Applicable • Limited alternative mobility options, despite the availability of a conventional transit route.	• Yes – Applicable • Availability of Smart Commute and a robust set of multi-modal travel options to encourage use of alternative modes.	• Yes – Applicable • Availability of Smart Commute and opportunities to provide better signage to direct employees to a robust set of multi-modal travel options to encourage use of alternative modes.
Financial Incentives	• Yes – Applicable • Opportunities to provide staff incentives like group transit pass purchases, and financial incentives for employees who do not have a parking pass	• Yes – Applicable • Opportunities to provide staff incentives like group transit pass purchases, and financial incentives for employees who do not have a parking pass	• Yes – Applicable • Opportunities to provide staff incentives like group transit pass purchases, and financial incentives for employees who do not have a parking pass	• Yes – Applicable • Opportunities to provide staff incentives like group transit pass purchases, and financial incentives for employees who do not have a parking pass	• Yes – Applicable • Opportunities to provide staff incentives like group transit pass purchases, and financial incentives for employees who do not have a parking pass
Parking Pricing	• Not Applicable • Few alternative transportation options, changes in parking pricing would have very limited ability to shift staff onto alternative modes.	• Not Applicable • Few alternative transportation options, changes in parking pricing would have very limited ability to shift staff onto alternative modes.	• Not Applicable • Few alternative transportation options, changes in parking pricing would have very limited ability to shift staff onto alternative modes.	• Yes – Highly Applicable • Availability of high-quality transportation options that staff could reasonably be shifted to with minor inconvenience.	• Yes – Highly Applicable • Availability of high-quality transportation options that staff could reasonably be shifted to with minor inconvenience.

Sources : * (Litman, 2016), [R] (HDR/iTrans, 2010), [T] (IBI Group, 2009)

Based on the site-specific qualitative analysis of applicable TDM measures, the option sites along Highway 7 such as 225 East Beaver Creek and Market Available | Existing Building present considerably more opportunities for shifting staff onto alternative modes of transportation while the more suburban or business park locations like 1300 Elgin Mills Road E, Brodie House and Market Available | New Construction present fewer opportunities.

Carpool Parking

While the City of Richmond Hill does not currently have a carpool parking calculation in the by-laws, due to the proposed site's land use, carpooling would be an applicable best practice for parking management. For consideration, the Town of Newmarket's carpool parking rates were applied based on a rate of 2 spaces plus 1 space for every 1,000 m^2 of gross floor area (GFA)[4] to determine the number of carpool spaces. The associated reduction in parking is at a rate of 2 parking spaces for every one carpool space as summarised in **Table 1.15**.

Table 1.15 Estimated Carpool Reductions

Carpool Calculation	Richmond Green | 1300 Elgin Mills Road E	Brodie House | 9841 Leslie Street	Market Available | New Construction	Market Available | Existing Building	225 East Beaver Creek
Office GFA	222,656 ft^2 | 20,685 m^2			97,664 ft^2 | 9,074 m^2	30,000 ft^2 | 2,787 m^2
Estimated Carpool Spaces	23			11	5
Estimated Reductions	46 (2 spaces for each carpool space)			22 (2 spaces for each carpool space)	10 (2 spaces for each carpool space)
Office Spaces (shared parking)	**397 new**	**662 new**	**662 new**	**181 new**	**445 existing + 50 new**
Office Spaces (after carpool)	(397 – 46 + 23) = 374	(662 – 46 + 23) = 639	(662 – 46 + 23) = 639	(181 – 22 + 11) = 170	(495 – 10 + 5) = 490

Other TDM Measures

In addition to carpool reductions, which are primarily focused on maximizing the utilization/occupancy of vehicles arriving on site, other TDM measures focus on shifting automobile users onto alternative modes of transportation. **Table 1.16** details the expected parking reductions based on industry research conducted across Canada by the Victoria Transport Policy Institute and outlined in Todd Litman's *Parking Management: Strategies, Evaluation, and Planning*.

As a conservative estimate for reductions, multiple measures were combined to reduce the combined reduction effect that all the measures would have cumulatively. This is because there are synergies that play into each other. For instance, better wayfinding signage or travel information would inevitably push some drivers onto other alternative forms of transportation that were already going to attract those same people to use them which would mean a combination of these two reductions would be double counting. As a conservative measure an average of the reductions between all the measures was used.

The overall estimated reduction in parking demand with all measures in place is estimated to range between 1-5% after considering overlapping between measures and a recognition of each site's existing transit and active transportation mode split and the Region's mode split targets

[4] (HDR, 2016)

Table 1.16 Applicable TDM Reductions to Parking

TDM Measure	Richmond Green | 1300 Elgin Mills Road E	Brodie House | 9841 Leslie Street	Market Available | New Construction	Market Available | Existing Building	225 East Beaver Creek
Cycling	-5%	0%	0%	0%	0%
Walking	-5%	0%	0%	0%	0%
Transit	-5%	0%	0%	0%	0%
Wayfinding / Transportation Management Association	0%	0%	0%	-5%	-4%
Education / Promotion, Incentives	-4%	-4%	-4%	-5%	-4%
Parking Pricing	0%	0%	0%	-30%	-30%
Total Potential TDM Reduction (average)	**-3%**	**-1%**	**-1%**	**-5%**	**-5%**
Office Spaces (shared parking)	**397**	**707**	**707**	**181**	**495**
Office Spaces (after Carpool)	**352**	**616**	**616**	**170**	**490**
Office Spaces (after TDM reductions)	**342**	**613**	**613**	**151**	**421**
Carpool Spaces	**23**	**23**	**23**	**11**	**5**
Municipal Vehicle Spaces	**45**	**45**	**45**	**45**	**45**
Total Richmond Hill Parking Spaces	**410**	**681**	**681**	**207**	**510**

Sources : (Litman, 2016), (HDR/iTrans, 2010), (IBI Group, 2009)

1.9 RECOMMENDED PARKING SUPPLY

The reduction in parking spaces by scenario (i.e. Existing Requirements, Shared Parking, and TDM) are summarized in **Table 1.17** below. Each site option was evaluated for suitability regarding the proposed parking reductions. For instance, due to the ability to use lower parking rates at 225 East Beaver Creek and Market Available | Existing Building, the effectiveness and ability to apply TDM measures to reduce parking is limited since the parking rates already account for mode shifts to transit, walking and cycling. This was further evaluated in terms of the existing context in which staff at 225 East Beaver Creek expressed difficulty parking, especially given the various land uses on-site including retail and a conference/banquet hall. As a result, applying the required recommended parking rates from Richmond Hill's parking strategy represented a fair balance between providing sufficient parking supply, while leveraging lower parking rates to mitigate an overabundance of parking on-site.

At Richmond Green | 1300 Eglin Mills Road E shared parking is recommended due to the site's ability to leverage the abundance of recreational parking for the adjacent sports complexes. It is anticipated that an additional 442 parking spaces will be required to accommodate Richmond Hill staffing needs, however, due to the abundance of parking on site with the broader sporting complex and limited cycling and transit opportunities, there are limited opportunities for encouraging staff to switch to sustainable modes of transportation.

Reference: **Richmond Hill Civic Building – Parking Analysis**

At the Brodie House | 9841 Leslie Street and Market Available | New Construction, a recommended parking supply of 681 spaces was chosen due to the site's relative proximity to higher-frequency transit routes that are planned to eventually be upgraded to Bus Rapid Transit (along Leslie Street and Major Mackenzie Drive). While both sites are not eligible for lower parking rates due to not being located on Highway 7 or Yonge Street, the site's present realistic opportunities to leverage sustainable modes of transportation to shift a portion of single-occupant drivers into carpooling, transit, and cycling. Overall the proposed reduction in parking accounts for 4% total reduction over the required parking supply.

Beyond vehicular parking, it is recommended that all sites include provisions for 21 short-term and 27 long-term bicycle parking spaces.

In addition to on-site measures and recommended parking supply, 225 East Beaver Creek Drive and Richmond Green | 1300 Elgin Mills Road E are both proposed to displace existing parking spaces to accommodate the construction of the building expansion at 225 East Beaver Creek Drive and a new build within the existing parking lot at Richmond Green. These options will displace 99 and 178 spaces, respectively, which will need to be added to the total supply of additional spaces that will be built as part of these developments to ensure an adequate supply of parking.

The recommended site parking supply to be built incorporating recommended parking reduction measures and accounting for displaced spaces are the following:

- **Richmond Green | 1300 Eglin Mills Road E:**
  - **620 spaces** (397 new office + 45 municipal vehicles + 178 displaces spaces);
  - 21 short-term / 27 long-term bicycle parking spaces
- **Brodie House | 9841 Leslie Street:**
  - **681 spaces** (613 new office + 45 municipal vehicles + 23 carpool spaces);
  - 21 short-term / 27 long-term bicycle parking spaces
- **Market Available | New Construction:**
  - **681 spaces** (613 new office + 45 municipal vehicles + 23 carpool spaces);
  - 21 short-term / 27 long-term bicycle parking spaces.
- **Market Available | Existing Building:**
  - **183 spaces** (181 new office + 45 municipal vehicles – 43 existing spaces)
  - 21 short-term / 27 long-term bicycle parking spaces
- **225 East Beaver Creek:**
  - **200 spaces** (56 new office + 45 municipal vehicles + 99 displaced spaces);
  - 21 short-term / 27 long-term bicycle parking spaces

Reference: **Richmond Hill Civic Building – Parking Analysis**

Table 1.17: Proposed Site Parking Scenario Supply Comparisons

Scenario	Richmond Hill Staffing Needs	1300 Elgin Mills Road E	Brodie House | 9841 Leslie Street	Market Available | New Construction	Market Available | Existing Building	225 East Beaver Creek
Required Parking	New Office space	662	662	662	181	56
	Municipal Vehicles	45	45	45	45	45
	Sub-Total	**707**	**707**	**707**	**226**	**101**
Shared Reduced Parking	New Office space	397	662	662	181	50
	Municipal Vehicles	45	45	45	45	45
	Sub-Total	**442**	**707**	**707**	**226**	**95**
TDM Reduced Parking (Recommended Supply)	New Office space	342	613	613	151	38
	Municipal Vehicle	45	45	45	45	45
	Carpool	23	23	23	11	5
	Reduced Sub-Total	**410**	**681**	**681**	**207**	**88**
	Bicycle	21 Short / 27 Long	21 Short / 27 Long	21 Short / 27 Long	21 Short / 27 Long	21 Short / 27 Long
Recommended Supply	**Recommended Parking Scenario**	**Shared Reduced**	**TDM Reduced**	**TDM Reduced**	**Required**	**Required**
	New Office space	**397**	**613**	**613**	**181**	**56**
	Municipal Vehicles	**45**	**45**	**45**	**45**	**45**
	Carpool	**-**	**23**	**23**	**-**	**-**
	Bicycle	21 Short / 27 Long	21 Short / 27 Long	21 Short / 27 Long	21 Short / 27 Long	21 Short / 27 Long
	Total	**442**	**681**	**681**	**226**	**101**
	Displaced spaces	**178**	**-**	**-**	**-43 (existing not touched)**	**99**
	Supply to be built	**620**	**681**	**681**	**183**	**200**

REFERENCES

City of Mississauga. (2014). *City of Mississauga By-laws: Part 3 - Parking, Loading and Stacking Lane Regulations.* Mississauga: City of Mississauga.

City of Toronto. (n.d.). *Table 200.5.10.1 - Parking, Space Rates and Parking Space Occupancy.* Toronto: City of Toronto.

Gladki Planning Associates, R.E. Millward and Associates, Woodfield Consulting, Clarion Associates, & Anthony Usher. (2015). *Comprehensive Zoning By-law Project: Task 9: Review & Assessment of Parking and Loading Standards.* Markham: City of Markham.

HDR. (2016). *Parking Standards Background Study - Draft Final Report | Area-Specific Zoning By-law for the Urban Centres Secondary Plan.* Newmarket: Town of Newmarket.

HDR/iTrans. (2010). *Richmond Hill Parking Strategy - Final Draft Report.* Town of Richmond Hill: Town of Richmond Hill.

IBI Group. (2009). *Parking Standards Review: Examination of Potential Options and Impacts of Car Share Programs on Parking Standards.* Toronto: City of Toronto.

Institute of Transportation Engineers. (2010). *Parking Generation Manual, 4th Edition.* Washington: Fourth Printing.

Litman, T. (2016). *Parking Management: Strategies, Evaluation and Planning.* Victoria: Victoria Transport Policy Institute.

Town of Oakville. (2014). *Town of Oakville Zoning By-law 2014-014.* Oakville: Town of Oakville.

Urban Land Institute. (2005). *Shared Parking - Second Edition.* Washington D.C.: The Urban Land Institute and the International Council of Shopping Centers.

Stantec Consulting Ltd.

Brandon Orr BES, MCIP, RPP
Transportation Planner

Phone: 416 507 3487
Brandon.Orr@stantec.com

Attachment: none

c.

Appendix D – Costing

RICHMOND HILL CIVIC CENTRE
ORDER OF MAGNITUDE ESTIMATE

20130.102479

PREPARED FOR:

Colliers Project Leaders

5255 Orbitor Drive, Suite 101, Mississauga, Ontario, L4W 5M6

PREPARED BY:

Altus Expert Services

33 Yonge Street, Suite 500, Toronto, ON, M5E 1G4
Phone: (416) 641-9500
Issued Date: R2 - September 11, 2019

September 11, 2019 Project No.: 20130.102479

Colliers Project Leaders
5255 Orbitor Drive, Suite 101
Mississauga, Ontario
L4W 5M6

Attention: Josie Lee

Re: Richmond Hill Civic Centre, Order of Magnitude Estimate R2

Dear Josie,

We submit for your review our Order of Magnitude Estimate, at Q2 2019 in accordance with the terms of our engagement.

The estimate includes all direct and indirect construction costs and general conditions, as well as contractor's overheads and profit. The provisions for contingencies are based on the information provided and defined within the body of this report.

The estimate includes the following contingencies, which are defined within the body of this report.

- 10% for design and pricing contingency
- 5% for post-contract contingency
- 0% escalation contingency - EXCLUDED

It should be noted that this report is not intended for general circulation, publication or reproduction for any other person or purpose without express written permission to each specific instance.

Furthermore, this report was written for the exclusive use of Colliers Project Leaders and is not to be relied upon by any other party. Altus Group Limited does not hold any reporting responsibility to any other party.

Should you have questions related to this report please do not hesitate to contact the undersigned.

Yours truly,

ALTUS GROUP LIMITED

Alex Freeman
Senior Cost Consultant

Marlon Bray
Senior Director

REPORT CONTENTS

1 Introduction

1.1 Scope

This estimate consists of the Richmond Hill Civic Centre project located in Richmond Hill, Ontario.

The Construction Estimate is intended to provide a realistic budget based on the information provided. The estimate reflects our opinion as to the fair market value for the construction of this proposed project and is not intended to predict the lowest bid.

The estimate includes all direct and indirect construction costs consistent with the information available. Certain exclusions and qualifications may apply; please refer to the detail within the estimate report.

1.2 Area / Project Statistics

The areas have been measured in accordance with the Canadian Institute of Quantity Surveyors (CIQS) Standard Method of Measurement. Detailed areas and project statistics are included in Appendix A.

2 Project Details

2.1 General Information

From the information provided, we have measured quantities where possible and applied unit rates considered competitive for a project of this nature, based on historical and current cost data for this type of project. Where design information was limited, we have had discussions with the relevant design disciplines and/or made assumptions based on our experience with projects of a similar type, size, and standard of quality.

2.2 Location

The location cost base for this estimate is Richmond Hill, Ontario.

2.3 Measurement and Pricing

The estimate has been derived using generally accepted principles on method of measurement as per the Canadian Institute of Quantity Surveyors Elemental Cost Analysis and/or Method of Measurement of Construction Works.

The rates used and developed for this estimate where applicable include labour and material, equipment, and subcontractor's overheads and profit. Pricing is based on our experience with similar projects, or quotes provided by subcontractors as noted within the estimate.

We have assumed that union contractors would perform the work. This estimate is not intended to be a prediction of the lowest bid and assumes competitive bidding for all aspects of the work.

2.4 Taxes

Provincial Sales Tax (PST) is included where applicable in the unit rates. However, the Harmonized Sales Tax (HST) and/or the Goods and Services Tax (GST) have not been included.

2.5 General Requirements and Fees

The fee for the General Contractor is included. The general requirements are based on our assumptions of the anticipated construction approach and schedule.

The estimate excludes premiums associated with bonding and insurance.

2.6 Procurement Methodology

We have assumed that the project would be procured with a General Contractor approach under a CCDC standard form of contract.

We have assumed a minimum of three bids would be received for all trade categories to establish competitive bidding and tender results. The estimate is a determination of fair market pricing and not a prediction of lowest bid in any trade category. Please note that should the above minimum bidding conditions not occur on this project, construction bids received could vary significantly from the estimated costs included within this report.

2.7 Schedule / Phasing

The project has been priced to be completed as a single phase. The unit rates in our estimate are based on construction activities occurring during normal working hours and proceeding within a non-accelerated schedule.

3 Scope Assumptions & Exclusions

3.1 Inclusions and Assumptions

The estimate includes all direct and indirect construction costs as described below and within the estimate report.

3.2 Core & Shell vs Fitup

- Estimate core and shell costs are limited to building shell (structure & envelope) and minimal partitions required to building core and service spaces. Finishes are included however are only minimal finishings and fixtures (sealers, painting, etc.)
- Estimate fitout accounts for additional partitionining, final finishes, fittings fixtures, and mechanical/electrical systems

3.3 Substructure

- Standard shallow foundation system including strip and pad footings
- Options requiring 2 levels of below grade parking allow for high groundwater conditions and a tanked basement (raft slab + horizontal/vertical waterproofing)
- Concrete foundation and basement walls
- Caisson wall to 4-sides (where applicable at below grade parking) as required, open-cut where possible within site restrictions
- Excavation in soil; no allowances for rock excavation
- De-watering for the duration of construction

3.4 Structure

- Concrete slab on grade
- Reinforced concrete structure below and above grade including columns, beams and suspended slabs (existing slabs and columns to remain)
- Precast concrete stairs

3.5 Exterior Enclosure

- Reinforced concrete basement perimeter walls
- Precast concrete panels
- Aluminum panels
- Curtain Wall (double glazed)
- Glazed main entry doors, hollow metal exit doors, overhead garage door
- Built-up membrane roofing to tower, waterproofing over garage
- Green roof - allowance
- Entrance canopies

3 Scope Assumptions & Exclusions

3.6 Interior Partitions and Doors

- Reinforced concrete shear / elevator / stair walls
- Concrete block walls in parking garage
- Metal stud and gypsum board at demising walls, corridors, common areas
- Glazed partitions to vestibules and meeting rooms
- Glazed doors at entry vestibules
- Hollow metal doors and frames to parking garage, service areas and stairwells
- Solid core wood doors to offices/meeting rooms, washrooms

3.7 Floor Finishes:

- Paint to stairwells and storage areas
- Epoxy to M&E rooms
- Stone tile to lobbies/vestibules
- Porcelain tile to washrooms
- Carpet to corridors

3.8 Ceiling Finishes:

- Paint to exposed structure in service areas/basement
- Suspended gypsum board to lobbies/vestibules/washrooms
- Acoustical tile ceilings to open office areas
- Allowance for bulkheads
- Allowance included for feature ceilings to lobbies/common gathering areas
- Bulkheads as required

3.9 Wall finishes:

- Allowance for feature wall finishes to common areas
- Porcelain tile to washroom walls
- Paint to balance

3 Scope Assumptions & Exclusions

3.10 Fittings and Fixtures

- Steel handrails and balustrades to stairs
- Miscellaneous metals
- Signage allowance
- Storage / bike lockers
- Common area washroom accessories
- Entrance pedimats
- Kitchennette millwork with solid surface countertops
- Common washroom countertops
- Washroom accessories including dividers

3.11 Equipment and Furnishings

- Window washing equipment
- Garbage handling equipment

3.12 Conveying Systems

- Passenger elevators as identified on documentation

3.13 Mechanical

- Medium quality plumbing fixtures with electronic faucet for core and common area wahsrooms
- below grade parking garage with drainage and sub-drainage
- Domestic piping distribution up to and including plumbing fixtures
- Allowance for ground water filtration system
- Storm water management c/w re-use portable water to flush toilets, urnals, etc
- Allowance for domestic cold water booster pump and sump pumps
- Allowance for common area kitchen oil interceptor
- Allowance for common area and office floors to have full sprinkler and standpipe coverage
- Parking garage and common areas to be sprinklered
- Air handling units c/w hot water/ glycol, heating, chilled water cooling, fans, filters, 100% OA, VAV, heat wheel,etc.
- Common area heating terminal devices includes unit heaters, trench heaters, forceflow heaters
- Emergency generator fuel oil and ventilation system
- Allowance for variable frequency drives, mechaical wiring, etc-no MCC required
- Common area ventilation system
- Allowance for building full BACNet IP control system
- Mechanical site services -connection to mains by others

3 Scope Assumptions & Exclusions

3.14 Electrical

- Main Switchboard
- Service and distribution including emergency power
- UPS System to IT & Security Equipment
- Lighting fixtures, devices and lighting controls
- Fire Alarm system
- Security equipment, cameras and devices
- PA System
- Communication system
- AV System
- Energy Management System
- Sound Masking System
- Snow Melting System
- Lightning protection
- Traffic Signalization - By City
- People Counting System
- Parking Counting Management
- EV Charging Stations
- Electrical site services
- Utility charges

3.15 Site

Allowance for exterior site signage

- Concrete sidewalks and pavers
- Concrete paving and concrete curbs
- Soft landscaping including trees, shrubs, plantings and sod
- Incoming M & E services
- Site lighting
- Site drainage

3 Scope Assumptions & Exclusions

3.16 Exclusions - General

The following items are excluded from the estimate:

1. Land and associated costs
2. Furniture, A/V, interior landscaping
3. Utility connection costs/charges
4. Soft costs and professional fees
5. Permit fees
6. Legal fees
7. Marketing/promotion
8. Realty taxes, levies, insurance
9. Operating expenses
10. Interest/finance charges
11. Remedial work to existing buildings/structures/property (unless noted)
12. Vibration/noise control premiums
13. Municipal off site services connection
14. HST

4 Contingencies

4.1 General

The effective use of contingencies in construction cost planning requires a clear understanding of estimating risks in both a project specific and general construction market sense. The appropriate level of contingency is dependent on the amount of information available, knowledge of the design teams' methods and philosophy, the timing of the estimate preparation relative to the project design and construction schedule, and the anticipated complexity of the construction work.

4.2 Design and Pricing

A design and pricing contingency of 10% has been included in the estimate.

This contingency covers the design and pricing evolution during the remaining design stages of the project. Please note this contingency is not intended to cover additional scope or additional functional program requirements.

4.3 Escalation

An escalation contingency has been excluded from the estimate. This contingency is intended to address anticipated changes in construction costs due to market fluctuations between the date of this report and the anticipated tender date (2021).

4.4 Construction Contingency (Post-Contract)

A construction contingency of 5% has been included in the estimate. It is the intention of this contingency to cover post-contract change orders.

5 General Statement of Liability

5.1 Probable Costs and Ongoing Cost Control

Altus Group Limited does not guarantee that tenders or actual construction costs will not vary from this estimate. Acute market conditions, proprietary specifications, or competition/collaboration among contractors may cause tenders to vary from reasonable estimates based on normal and abnormal competitive conditions.

Altus Group Limited recommends the owner and/or design team review the cost estimate report including line item descriptions, unit prices, allowances, assumptions, exclusions, and contingencies to ensure the appropriate design intent has been accurately captured within the report.

It should be noted that the cost consultants are not qualified to confirm that construction work and design is in accordance with approved plans and specifications.

Details of our Client Data Policy can be found at www.altusgroup.com

6 Glossary

6.1 Glossary

Item	Definition
GCA - Gross Construction Area	The total floor area contained within the building measured to the external face of the external walls, less the Gross Parking Area. Excludes any architectural setbacks or projections (balconies).
GPA - Gross Parking Area	The total above and below grade floor areas for parking contained within the building measured to the external face of the external walls.
TCA - Total Construction Area	Sum of Gross Construction Area + Gross Parking Area.

7 Estimate Documentation

7.1 Documentation

Page Count	Description	Date
54	Richmond Hill Civic Administration Centre - Presentation Document	May 2, 2019
5	Richmond Hill Civic Administration Centre - Design Brief	March 14, 2019
7	Revised Parking Layout options	May 7, 2019

8 List of Appendices

8.1 Order of Magnitude Estimate

A. Option Summary

B. Individual Executive Summaries

Option Summary

MULTIPLE SUMMARY

Building Component	GCA (m2)	GCA (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
1) Richmond Green	20,685 m2	222,650 sf	$594.39 /sf	$132,342,000	$719.53 /sf	$160,204,000
2) Brodie House	20,685 m2	222,650 sf	$575.08 /sf	$128,041,000	$696.15 /sf	$154,997,000
3) Market Available - New Construction	20,685 m2	222,650 sf	$495.54 /sf	$110,332,000	$599.87 /sf	$133,561,000
4) Market Available - New Construction (Alternate)	20,685 m2	222,650 sf	$588.42 /sf	$131,012,000	$712.30 /sf	$158,594,000
5) East Beaver Creek (Option 1)	18,116 m2	195,000 sf	$280.23 /sf	$54,644,000	$339.22 /sf	$66,147,000
6) East Beaver Creek (Option 2)	18,116 m2	195,000 sf	$249.44 /sf	$48,640,000	$301.95 /sf	$58,880,000
7) Satellite - City Owned	16,602 m2	178,703 sf	$123.67 /sf	$22,100,000	$149.70 /sf	$26,752,000
8) Satellite - Leased	17,330 m2	186,540 sf	$122.72 /sf	$22,893,000	$148.56 /sf	$27,712,000

Individual Executive Summaries

132.3M - 160.2M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
1 Level - Below Grade Parking (548 Stalls)	22,900 m2	246,494 sf	$151 /sf	$37,150,000	$182 /sf	$44,971,000
7-Storey - Building (Core and Shell)	20,685 m2	222,650 sf	$253 /sf	$56,363,000	$306 /sf	$68,229,000
7-Storey - Building (Fit-Up)	20,685 m2	222,650 sf	$73 /sf	$16,302,000	$89 /sf	$19,734,000
Site Development (Parking, excluding civic square) 350 Spaces	29,478 m2	317,299 sf	$15 /sf	$4,893,000	$19 /sf	$5,924,000
Site Development (Civic Square)	921 m2	9,914 sf	$38 /sf	$372,000	$45 /sf	$450,000
Subtotal (Excluding Contingencies)	20,685 m2	222,650 sf	$517 /sf	$115,080,000	$626 /sf	$139,308,000
Design & Pricing Contingency (10%)	20,685 m2	222,650 sf	$52 /sf	$11,508,000	$63 /sf	$13,931,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	20,685 m2	222,650 sf	$26 /sf	$5,754,000	$31 /sf	$6,965,000
Total Construction Cost (Excluding HST) (GCA)	20,685 m2	222,650 sf	$594 /sf	$132,342,000	$720 /sf	$160,204,000
Total Construction Cost (Excluding HST) (TCA)	43,585 m2	469,144 sf	$282 /sf		$341 /sf	

128.0M - 155.0M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
Abatement, catalogued demolition, and reconstruction of Brodie House	209 m2	2,250 sf	$528 /sf	$1,188,000	$639 /sf	$1,438,000
2 Levels - Below Grade Parking (612 Stalls) [1]	20,968 m2	225,698 sf	$156 /sf	$35,243,000	$189 /sf	$42,663,000
7-Storey Building (Core and Shell)	20,685 m2	222,650 sf	$253 /sf	$56,363,000	$306 /sf	$68,229,000
7-Storey Building (Fit-Up)	20,685 m2	222,650 sf	$73 /sf	$16,302,000	$89 /sf	$19,734,000
Site Development (Parking, excluding civic square) 95 Spaces	12,105 m2	130,297 sf	$14 /sf	$1,872,000	$17 /sf	$2,266,000
Site Development (Civic Square)	921 m2	9,914 sf	$38 /sf	$372,000	$45 /sf	$450,000
Subtotal (Excluding Contingencies)	20,685 m2	222,650 sf	$500 /sf	$111,340,000	$605 /sf	$134,780,000
Design & Pricing Contingency (10%)	20,685 m2	222,650 sf	$50 /sf	$11,134,000	$61 /sf	$13,478,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	20,685 m2	222,650 sf	$25 /sf	$5,567,000	$30 /sf	$6,739,000
Total Construction Cost (Excluding HST) (GCA)	20,685 m2	222,650 sf	$575 /sf	$128,041,000	$696 /sf	$154,997,000
Total Construction Cost (Excluding HST) (TCA)	41,653 m2	448,348 sf	$286 /sf		$346 /sf	

Notes

[1] Assumes tanked basement, including raft slab and waterproofing

110.3M - 133.6M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
1 Level - Below Grade Parking (300 Stalls)	11,757 m2	126,551 sf	$153 /sf	$19,340,000	$185 /sf	$23,412,000
7-Storey Building (Core and Shell)	20,685 m2	222,650 sf	$253 /sf	$56,363,000	$306 /sf	$68,229,000
7-Storey Building (Fit-Up)	20,685 m2	222,650 sf	$73 /sf	$16,302,000	$89 /sf	$19,734,000
Site Development (Parking, excluding civic square) 414 Spaces	24,653 m2	265,363 sf	$13 /sf	$3,564,000	$16 /sf	$4,315,000
Site Development (Civic Square)	921 m2	9,914 sf	$38 /sf	$372,000	$45 /sf	$450,000
Subtotal (Excluding Contingencies)	20,685 m2	222,650 sf	$431 /sf	$95,941,000	$522 /sf	$116,140,000
Design & Pricing Contingency (10%)	20,685 m2	222,650 sf	$43 /sf	$9,594,000	$52 /sf	$11,614,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	20,685 m2	222,650 sf	$22 /sf	$4,797,000	$26 /sf	$5,807,000
Total Construction Cost (Excluding HST) (GCA)	20,685 m2	222,650 sf	$496 /sf	$110,332,000	$600 /sf	$133,561,000
Total Construction Cost (Excluding HST) (TCA)	32,442 m2	349,201 sf	$316 /sf		$382 /sf	

MARKET AVAILABLE NEW CONSTRUCTION ALTERNATE

131.0M - 158.6M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
2 Levels - Below Grade Parking (600 Stalls) [1]	23,168 m2	249,378 sf	$156 /sf	$38,796,000	$188 /sf	$46,963,000
7-Storey Building (Core and Shell)	20,685 m2	222,650 sf	$253 /sf	$56,363,000	$306 /sf	$68,229,000
7-Storey Building (Fit-Up)	20,685 m2	222,650 sf	$73 /sf	$16,302,000	$89 /sf	$19,734,000
Site Development (Parking, excluding civic square) 114 Spaces	12,105 m2	130,297 sf	$16 /sf	$2,091,000	$19 /sf	$2,532,000
Site Development (Civic Square)	921 m2	9,914 sf	$38 /sf	$372,000	$45 /sf	$450,000
Subtotal (Excluding Contingencies)	20,685 m2	222,650 sf	$512 /sf	$113,924,000	$619 /sf	$137,908,000
Design & Pricing Contingency (10%)	20,685 m2	222,650 sf	$51 /sf	$11,392,000	$62 /sf	$13,791,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	20,685 m2	222,650 sf	$26 /sf	$5,696,000	$31 /sf	$6,895,000
Total Construction Cost (Excluding HST) (GCA)	20,685 m2	222,650 sf	$588 /sf	$131,012,000	$712 /sf	$158,594,000
Total Construction Cost (Excluding HST) (TCA)	43,853 m2	472,028 sf	$278 /sf		$336 /sf	

Notes

[1] Assumes tanked basement, including raft slab and waterproofing

54.6M - 66.1M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
Below Grade Parking (143 Stalls)	5,404 m2	58,168 sf	$183 /sf	$10,622,000	$221 /sf	$12,858,000
3-Storey Building (Core and Shell)	2,787 m2	30,000 sf	$416 /sf	$12,493,000	$504 /sf	$15,123,000
3-Storey Building (Fit-Up) [1]	2,787 m2	30,000 sf	$107 /sf	$3,217,000	$130 /sf	$3,895,000
Bridge connection (Addition - Existing)	93 m2	1,001 sf	$968 /sf	$969,000	$1172 /sf	$1,173,000
9-Storey Building Renovation [2]	15,329 m2	165,000 sf	$109 /sf	$18,006,000	$132 /sf	$21,796,000
Site Development (Parking, excluding civic square) 58 Spaces	9,442 m2	101,633 sf	$18 /sf	$1,837,000	$22 /sf	$2,224,000
Site Development (Civic Square)	921 m2	9,914 sf	$38 /sf	$372,000	$45 /sf	$450,000
Subtotal (Excluding Contingencies)	18,116 m2	195,000 sf	$244 /sf	$47,516,000	$295 /sf	$57,519,000
Design & Pricing Contingency (10%)	18,116 m2	195,000 sf	$24 /sf	$4,752,000	$29 /sf	$5,752,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	18,116 m2	195,000 sf	$12 /sf	$2,376,000	$15 /sf	$2,876,000
Total Construction Cost (Excluding HST) (GCA)	18,116 m2	195,000 sf	$280 /sf	$54,644,000	$339 /sf	$66,147,000
Total Construction Cost (Excluding HST) (TCA)	23,613 m2	254,169 sf	$215 /sf		$260 /sf	

Notes

[1] Includes cost to rework existing core spaces, and building services, including elevators and partial MEP services

[2] Includes cost for demolition/alterations to existing exterior for tie-in of proposed bridge connection

48.6M - 58.9M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
Demolition of existing below grade structure, and tie-in of proposed building to existing mall structure	929 m2	10,000 sf	$30 /sf	$302,000	$37 /sf	$366,000
Freestanding Above grade parking structure	5,924 m2	63,765 sf	$86 /sf	$5,452,000	$104 /sf	$6,600,000
3-Storey Building (Core and Shell) [1]	2,787 m2	30,000 sf	$409 /sf	$12,279,000	$495 /sf	$14,864,000
3-Storey Building (Fit-Up) [2]	2,787 m2	30,000 sf	$107 /sf	$3,217,000	$130 /sf	$3,895,000
9-Storey Building Renovation	15,329 m2	165,000 sf	$107 /sf	$17,629,000	$129 /sf	$21,340,000
Connecting Bridge	185 m2	1,991 sf	$1029 /sf	$2,050,000	$1246 /sf	$2,482,000
Site Development (excluding civic square)	9,442 m2	101,633 sf	$13 /sf	$1,366,000	$16 /sf	$1,653,000
Subtotal (Excluding Contingencies)	18,116 m2	195,000 sf	$217 /sf	$42,295,000	$263 /sf	$51,200,000
Design & Pricing Contingency (10%)	18,116 m2	195,000 sf	$22 /sf	$4,230,000	$26 /sf	$5,120,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	18,116 m2	195,000 sf	$11 /sf	$2,115,000	$13 /sf	$2,560,000
Total Construction Cost (Excluding HST) (GCA)	18,116 m2	195,000 sf	$249 /sf	$48,640,000	$302 /sf	$58,880,000
Total Construction Cost (Excluding HST) (TCA)	24,225 m2	260,757 sf	$187 /sf		$226 /sf	

Notes

[1] Includes cost to rework existing core spaces, and building services, including elevators and partial MEP services

[2] Costs include for foundations and lowest floor construction (no below grade parking)

22.1M - 26.8M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
9-Storey Building Renovation	15,329 m2	165,000 sf	$107 /sf	$17,629,000	$129 /sf	$21,340,000
Reno Existing (Operations Centre) - Demo & Fitup	1,273 m2	13,702 sf	$116 /sf	$1,588,000	$140 /sf	$1,923,000
Subtotal (Excluding Contingencies)	16,602 m2	178,703 sf	$108 /sf	$19,217,000	$130 /sf	$23,263,000
Design & Pricing Contingency (10%)	16,602 m2	178,703 sf	$11 /sf	$1,922,000	$13 /sf	$2,326,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	16,602 m2	178,703 sf	$5 /sf	$961,000	$7 /sf	$1,163,000
Total Construction Cost (Excluding HST) (GCA)	16,602 m2	178,703 sf	$124 /sf	$22,100,000	$150 /sf	$26,752,000
Total Construction Cost (Excluding HST) (TCA)	16,602 m2	178,702 sf	$124 /sf		$150 /sf	

22.9M - 27.7M

PROJECT TOTAL

Building Component	Area (m2)	Area (SF)	Total/SF (Low)	Total (Low)	Total/SF (High)	Total (High)
9-Storey Building Renovation	15,329 m2	165,000 sf	$107 /sf	$17,629,000	$129 /sf	$21,340,000
Reno Existing (Leased) - Demo & Fitup	2,001 m2	21,540 sf	$106 /sf	$2,278,000	$128 /sf	$2,757,000
Subtotal (Excluding Contingencies)	17,330 m2	186,540 sf	$107 /sf	$19,907,000	$129 /sf	$24,097,000
Design & Pricing Contingency (10%)	17,330 m2	186,540 sf	$11 /sf	$1,991,000	$13 /sf	$2,410,000
Escalation Contingency				EXCLUDED		
Construction Contingency (5%)	17,330 m2	186,540 sf	$5 /sf	$995,000	$6 /sf	$1,205,000
Total Construction Cost (Excluding HST) (GCA)	17,330 m2	186,540 sf	$123 /sf	$22,893,000	$149 /sf	$27,712,000
Total Construction Cost (Excluding HST) (TCA)	17,330 m2	186,540 sf	$123 /sf		$149 /sf	

Appendix E – Documents Reviewed

Relocation of the Town of Richmond Hill Municipal Offices Feasibility Study, CS&P Architects Inc., October 31, 2008

Town of Richmond Hill Richmond Green Indoor Soccer, Tennis, and Third Arena Pad Feasibility Study, CS&P Architects Inc., June 17, 2015

225 East Beaver Creek Road Building Condition Assessment, WSP Canada Inc., November 25, 2015

Reciprocal Agreement, September 26, 1991

Assumption Agreement, November 4, 1994

Insurance Trust Agreement, November 4, 1991

Amending Reciprocal Agreement, August 31, 1995

Further Amending Reciprocal Agreement, August 28, 1996

Fourth Amending Reciprocal Agreement, August 26, 1999

Further Amending Reciprocal Agreement and Assumption Agreement, June 10, 2002

Full Set of Structural Drawings for the Operations Centre, Allen & Sherriff Architects Inc., July 16, 1991