



Grant Thornton

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Business Case

Ottawa Public Library Main Library Facility

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Executive Summary

Context

Grant Thornton LLP (“Grant Thornton” or “GT”) has been engaged by the City of Ottawa (the “City”) and Ottawa Public Library (“OPL”) to perform a comprehensive analysis of the potential options for the redevelopment of the OPL Main Library Facility and to develop a detailed business case to be used to help facilitate the OPL Board’s decision making process with respect to the Main Library Facility Project (the “Project”).

In addition to the Project option analysis, the business case developed by GT also includes an assessment of the potential City owned sites on which a new Main Library Facility could be built and recommendations related to potential Project procurement and delivery models as well as on the procurement process.

The work conducted by the GT team started in January and was completed in May 2015. The City and OPL Project team were deeply involved in all aspects of the analysis and provided continuous input and feedback throughout the analysis process and the development of the business case.

Ottawa Public Library Main Facility Project

Since its inception in 1906, the OPL has endeavoured to support reading, learning and research with the provision of high quality information resources. With its 34 branches, including a Virtual branch plus Bookmobile and Kiosk services, the OPL delivers diversified library services to a broad range of customers across the greater Ottawa area.

The Ottawa Main Library, one of the OPL’s branches, opened its doors in 1974. With more than 16,000 visitors weekly, the Main Library is the largest and busiest location in the OPL system.

The current Main Library facility is located at 120 Metcalfe Street, a property owned by the City and OPL. The three-story building includes an underground parking garage and connects to the Sir Richard Scott Building, a 19-story high-rise at 191 Laurier Avenue West. The Main Library’s total gross space is 90,418 square feet and the OPL leases additional space of 18,240 square feet, used for library administration, on the 4th and 5th floors of the Sir Richard Scott Building.

In recent years, the OPL has faced the challenge of transforming its library services to better keep pace with rapidly developing technology, increasing customer expectations and changing demographics in the greater Ottawa area. The Main Library Facility was originally designed based on a book delivery model, which is now outdated, and needs to be upgraded in order to be able to support a modern and

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technology-based delivery model that reflects current needs for library services. The facility has not undergone major renovations for a significant amount of time and in its current state is suffering from service delivery deficiencies in many areas, including:

- Accessibility;
- Infrastructure and building systems;
- Building code deficiencies;
- Vertical lifts (escalators and elevators);
- Technology;
- Shipping and receiving access;
- Lack of windows and natural light; and
- Safety and security.

In order to respond to these issues in May 2012 the OPL Board approved the Main Library as the highest priority location for facility renewal. Later in the year, in November 2012, the OPL Board approved modernization as the recommended option in planning for the renewal, redesign and refresh of the existing Main Library facility. At that time, this was viewed as a mid-term solution that would address the required life cycle maintenance and result in a major renewal and comprehensive renovation of the facility with an ability to focus on maximizing public space.

A series of surveys, investigations and analyses have been conducted by the City in order to gather public opinion on public libraries, assess the facility building conditions, evaluate the functional program requirements and develop a conceptual design for the redevelopment of the library facility.

In July 2014, the OPL Board received an information report titled "Main Library Facility Planning", which presented the results of a study that considered three options (i.e. renewal, renovation and redevelopment) for modernizing the existing Main Library Facility. The report concluded that the functional program space requirement for a modern Main Library would be 130,000 square feet. Upon receiving the report the OPL Board noted that:

- None of the three modernization options fully addresses the deficiencies of the current space;
- There are significant "unknowns" and risks associated with modernizing an existing building;
- All three options considered for the current facility require a significant investment from the City; and
- The scope of the report did not include an analysis of the relative pros and cons for the Library Board and City Council, and ultimately for taxpayers, of proceeding with one of these three options versus building a new Main Library

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facility, or an analysis of the possibility of seeking public-private partnership opportunities.

Based on the above noted conclusions, the OPL Board approved a motion to develop further analysis on an additional option - building a new facility on a new site that would be able to accommodate the 130,000 square foot functional program requirement for the Main Library. This analysis would also include the identification of a potential procurement process that would have the flexibility to allow for the private sector to respond with alternative non-City owned site options for the Main Library.

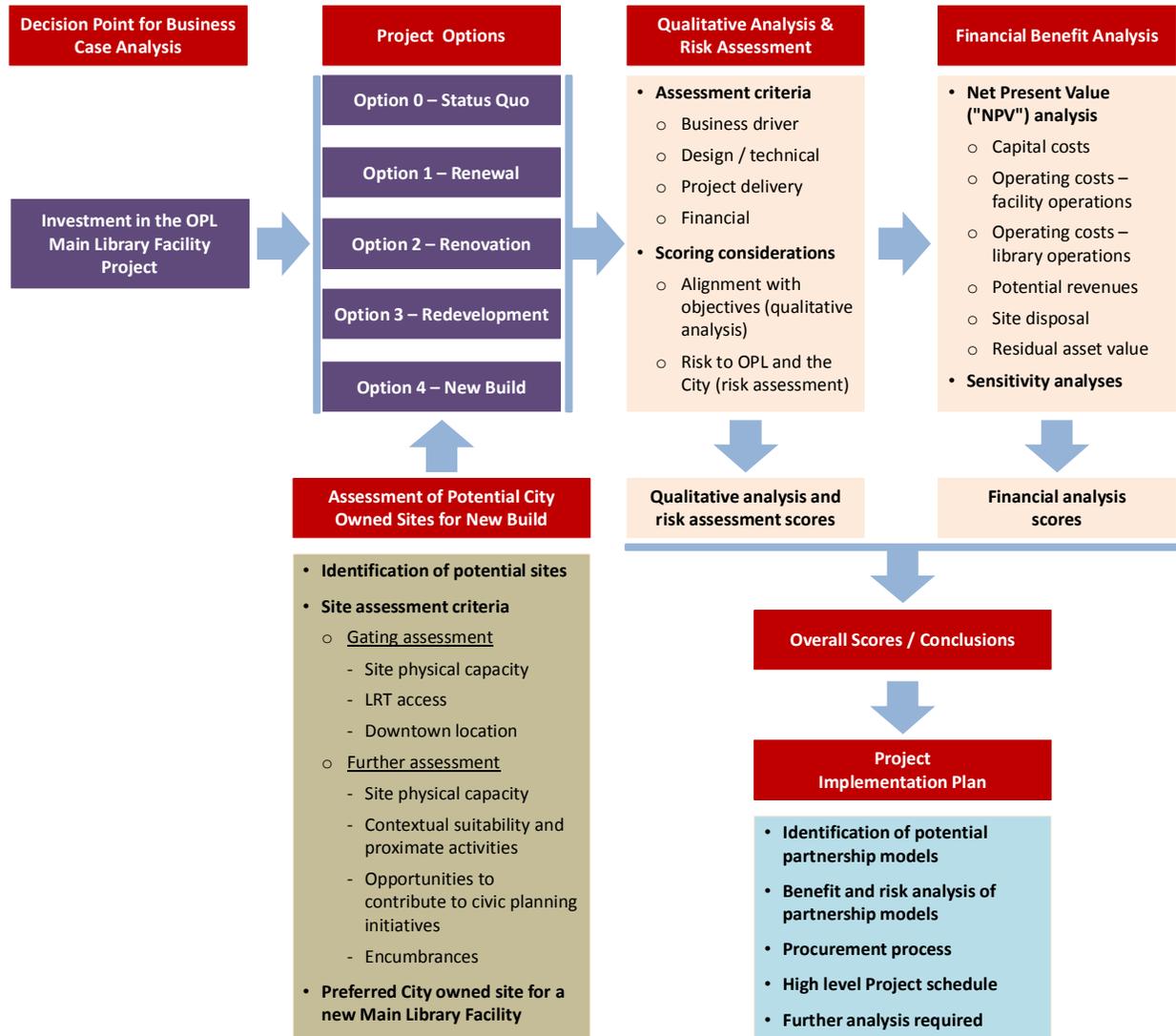
Business Case Analysis Approach

In response to the Board's motion GT, working in conjunction with the City and OPL Project team, developed this business case to help facilitate the Board's decision making process with respect to the redevelopment of the Main Library Facility. The business case includes the following key analysis components:

- **Project option analysis**
 - Identification of the decision point for the business case analysis;
 - Identification of potential Project options;
 - Qualitative analysis and risk assessment;
 - Financial (quantitative) analysis; and
 - Overall assessment and conclusion.
- **Assessment of City owned sites for a new Main Library Facility**
 - Identification of the candidate City owned sites;
 - Gating assessment;
 - Further assessment; and
 - Recommendation on the preferred City owned site.
- **Advice on the Project implementation plan**
 - Identification of potential public private partnership models and their procurement approaches;
 - Benefit and risk analysis of the partnership models;
 - Development of the procurement process and high level Project timelines; and
 - Recommendation on further analysis required.

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The following diagram illustrates the key analysis components and their roles in the development of the business case.



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Project Option Analysis

Project Options

Based on the previous studies prepared for the Project and the Board's motion in July 2014, the following Project options were considered in this business case:

- **Option 0 – Status Quo:** this option proposes maintaining the status quo at the facility with the exception of essential repairs, accessibility and maintenance work.
- **Option 1 – Renewal:** this option proposes cosmetic improvements to the existing library, resulting in a renewed and refreshed facility that would have the same overall look as the current building. The building's exterior would remain essentially unchanged.
- **Option 2 – Renovation:** this option proposes updating the interior and exterior of the library. The current interior space would be expanded and significantly changed.
- **Option 3 – Redevelopment:** this option proposes maximizing and expanding the current building footprint to support a complete redevelopment of the existing facility.
- **Option 4 – New Build:** this option proposes the development of a new library facility at a new City-owned site, specifically 557 Wellington Street.

Qualitative Analysis and Risk Assessment

Assessment Criteria

The qualitative analysis attempts to evaluate the impact of those measures that may not be direct costs incurred but are nonetheless highly impactful in the assessment of a particular project option. These are matters such as the achievement of policy and project objectives, risks, customer experience, technological considerations and impact on the library's operations and service delivery. To enable the analysis of the qualitative benefits and constraints of the five options, 17 assessment criteria, which reflect the strategic aims of the City and OPL as well as the specific objectives and principles of the Project, were developed.

Assessment Approach

Two interactive workshops were held with representatives from the City and OPL to assess each of the five identified Project options against the qualitative assessment criteria.

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Assessment Considerations

Each of the criteria was assessed against two different considerations:

- Alignment with objectives; and
- Risk to the City and OPL.

For alignment with objectives, each option was assessed and scored on a scale of 1 to 5, representing weakest to strongest alignment respectively.

Each option was also scored and assessed on a three point scale to consider the risk presented against the criteria, denoted as low risk (L), medium risk (M) or high risk (H).

These factors were considered initially in isolation. For example, an option may score 5 as being highly compatible with the objective; however, it may be that there is a high degree of risk attached to achieving the objective, in which case the option would be accordingly scored as high risk against the criteria.

The two considerations were then combined to produce a risk weighted, multiplicative score. Weightings for risk were applied as follows:

- High risk (H) = 0.5
- Medium (M) = 1.0
- Low risk (L) = 1.5

Criteria Weightings

In order to reflect the relative importance of an assessment criterion to the Project objectives, each criterion was assigned a weighting, represented as a percentage adding up to 100% for all of the criteria. The scores generated through the above described assessment exercise were then multiplied by the applicable weightings to calculate the overall qualitative analysis score for each of the Project options.

Assessment Threshold

Project options that achieved a total score that was less than 50% of the maximum possible weighted qualitative score (before any risk considerations) were not considered further in the risk assessment or financial analysis processes.

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Conclusion of the Qualitative Analysis and Risk Assessment

Assessment Element	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
Weighted Qualitative Score without Risk Assessment * 10	13.90	16.40	25.20	35.80	48.50
Maximum Possible Weighted Qualitative Score without Risk Assessment * 10	50.00	50.00	50.00	50.00	50.00
Total Qualitative Score without Risk Assessment (%)	27.80%	32.80%	50.40%	71.60%	97.00%
Proceed to the risk assessment?	No	No	Yes	Yes	Yes
Risk Adjusted Qualitative Score * 10	N/A	N/A	19.25	28.20	65.00
Maximum Possible Risk Adjusted Qualitative Score * 10	N/A	N/A	75.00	75.00	75.00
Total Risk Adjusted Qualitative Score (%)	N/A	N/A	25.67%	37.60%	86.67%
Proceed to the financial analysis?	No	No	Yes	Yes	Yes

Based on the above qualitative analysis and risk assessment, the **New Build** option is the preferred alternative for the delivery of the Project from a qualitative perspective. This option represents the closest alignment to the OPL’s and the Project’s strategic objectives and is expected to be relatively low risk as compared to the other Project options under consideration. The New Build option allows OPL to effectively achieve its vision for the Main Library and is able to provide the modern library services that the community expects. When compared to the other options, the New Build option best meets the functional program requirements and provides for the highest likelihood of addressing the social, economic and cultural policy objectives of the Main Library while supporting the City’s public transportation network and other civic initiatives. Furthermore, under this option the new library facility is expected to have a useful life of approximately 60 years, effectively ensuring that the value of the library asset is well maintained.

The **Redevelopment** option addresses most of the building’s current deficiencies by undertaking a complete retrofit of the existing facility. This option would provide additional functional space and allows for greater flexibility in addressing the library’s evolving needs. Overall, this option strongly aligns with the OPL’s and the Project’s objectives. However, it still falls short in that it is not able to meet all of the functional program requirements. Furthermore, this option has a higher risk associated with it as compared to the New Build option. The redevelopment of the existing facility

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would be constrained by the current conditions of the building and site, as well as the potential issue concerning the air rights above the existing building which could restrict the ability to increase the functional space of the Main Library Facility. Similar to the New Build option, a complete redevelopment of the existing facility would significantly extend the useful life of the building. Although the redeveloped facility would be based on the existing 40 year old building shell, it is still expected to have a useful life of approximately 45 years. The investment in the redevelopment would effectively restore the value of the facility asset.

The **Renovation** option is expected to create significant improvements to the existing facility through the redesign, expansion and refresh of the current functional spaces. Renovation would include material changes to the interior of the building, as well as to the building's entrance and exterior facade. However, due to the constraints associated with the existing building layout and footprint, this option is not able to fully address the functional program and design requirements. Furthermore, this option is considered relatively high risk due to the potential impact of any "unknowns" associated with the existing facility that may arise during the design and construction stages. The Renovation option is expected to extend the useful life of the facility by approximately 25 – 35 years. Although the Renovation option is not as favourable as the New Build and Redevelopment options when considering asset value, it still ensures that there would be a reasonable return on the investment made.

The **Renewal** option would maintain the overall exterior and interior architectural appearance of the building. With a Renewal critical building systems such as heating, ventilation, electrical, fire and life safety systems, as well as the washrooms and the finishes throughout the building, would be upgraded to a minimum acceptable standard. Although the Renewal option would improve some of the existing functional program spaces, it does not address many of the building's current deficiencies such as the lack of windows, natural light, escalators and elevators. Furthermore, this option does not effectively address the necessary functional program requirements, which jeopardizes the OPL's ability to achieve its vision. The Renewal option is expected to extend the useful life of the facility by approximately 15 years, which is much shorter than the New Build, Redevelopment and Renovation options described above. Although the upfront costs of the Renewal option would appear to be less than the other three options, the capital investment committed would only add limited value to the facility asset. At the time when the useful life of the facility expires, a similar decision to the one being considered now would have to be made regarding whether to make a significant investment to "renew" the building once again or to dispose of the outdated building at a diminished value and invest in a new facility in order for library services to continue.

The **Status Quo** option maintains the current facility as is – i.e. an aging piece of infrastructure that does not allow for the delivery of modern library services. Under this option, only critical repairs and maintenance work would be performed, which is insufficient to address the building's current deficiencies or meet the functional program requirements. Continuing with the status quo makes it difficult for the OPL to

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achieve its mission and vision or to deliver on the values for which it stands. In addition, the disparaged state of the existing facility inherently creates high risk for the City and OPL, which results in this being an even less attractive alternative. The Status Quo option, with its minimum repairs and maintenance, is expected to extend the useful life of the facility by only approximately 10 years. Similar to the Renewal option, the City would have to make another major investment decision in the near term when the useful life of the facility expires.

In summary, the Status Quo and Renewal options appear to be the options that provide the least value to the City and OPL. These options take a “minimum maintenance” approach to addressing the facility’s deficiencies and fail to meet the minimum target of delivering a Main Library Facility that allows for the provision of modern library services and meets changing community needs. Both options would fail to enhance, and may even deter, the operations and future growth of the library. Financially, although these options appear to require less upfront capital investment as compared to the other Project options, the City and OPL may end up spending significantly more in 10 – 15 years to redevelop the facility again due to the limited extension in useful life that would result from the current investment.

The combination of these considerations leads to the conclusion that the Status Quo and Renewal options are short-term “band-aid” alternatives for the Project that do not meet the minimum strategic requirements and would require a new investment in 10-15 years. Given that a major renovation would still be required within the foreseeable future, these options are truly a deferral and do not provide a viable solution to meet the OPL’s vision and functional program requirements. As such, both options did not meet 50% of the maximum possible weighted qualitative score (before risk assessment) and were not considered further in the risk assessment or financial analysis processes.

The Renovation, Redevelopment and New Build options are further analyzed in the “Financial Benefits” section of the business case.

Other Considerations

It is worth noting that since the Sir Richard Scott Building at 191 Laurier Avenue West is fully connected to the existing library facility, the interrelation between the two building structures could have a significant impact on the costs, timeline and ultimately even the feasibility of the Project if either the Renovation or Redevelopment options are undertaken. Under both of these options there is the potential for the following additional issues:

- The Renovation/Redevelopment of the library facility could potentially trigger a code requirement to upgrade the connected building tower and parking garage to current building code standards at the time the library facility renovation/redevelopment is undertaken.
- The Renovation/Redevelopment of the library facility could potentially have a

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significant adverse impact on the right of the tenants of the office tower to enjoy a quiet environment during and after the construction work is performed on the library facility.

Given the above noted concerns, a City initiated Renovation/Redevelopment of the library facility without the cooperation of the current owner of the Sir Richard Scott office tower could present significant risk. A potential solution to help mitigate this risk would be to coordinate with the current owner of the Sir Richard Scott office tower to jointly renovate or redevelop the library facility, the office tower and the parking garage concurrently. However, at this time, without any detailed investigation or preliminary communication with the current owner, it is premature to assess as to what level the City and OPL and the current owner could practically cooperate.

As discussed in the “Implementation Plan” section of the business case, allowing the current owner of the Sir Richard Scott office tower to redevelop the entire 191 Laurier Street West and 120 Metcalfe site is considered as a potential solution for the Project, depending on the outcome of the competitive procurement process.

Financial Benefit Analysis

Approach

Based on the outcome of the qualitative analysis and risk assessment, the Renovation, Redevelopment and New Build options were further considered for financial analysis in order to assess their costs and benefits from a quantitative perspective.

The financial analysis involves a comparative assessment of the net financial costs attached to each Project option. A holistic approach to the cost assessment was employed to ensure that all costs, both capital and operating, as well as the forecasted revenues, were fully taken into account.

In order to compare the Project options at the same point in time, the concept of net present value (“NPV”) was used. This forms the basis of the financial analysis. The NPV for each Project option was calculated using a discounted cash flow model. Capital and operating cash flows over the 36-year analytical term (2015 – 2050) were discounted to January 1, 2015 using a discount rate of 5%, the City’s discount rate for planning and forecasting. Furthermore, the fiscal year for the City ends on December 31st and as such all cost and revenue cash flows have been presented consistent with the fiscal year ending on that date.

Financial Analysis Results

The financial analysis indicates that the net cost of the New Build option (\$156M in present value terms) is approximately \$28M less than that of the Redevelopment option and approximately \$9M less than that of the Renovation option in present value terms.

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Financial Analysis	Project Options		
	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
NPV of Costs and Revenues	\$165.15M	\$183.84M	\$155.99M
Cost Savings (relative to the option that has the highest NPV of Costs and Revenues)	\$18.69M	-	\$27.85M
Financial Analysis Score (%)	10.17%	-	15.15%

Conclusion of the Option Analysis

The following table summarizes the outcomes of the risk-adjusted qualitative and financial assessments of the five Project options:

Assessment	Project Options				
	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
Weighted Qualitative Score without Risk Assessment * 10	13.90	16.40	25.20	35.80	48.50
Maximum Possible Weighted Qualitative Score without Risk Assessment * 10	50.00	50.00	50.00	50.00	50.00
Total Qualitative Score without Risk Assessment (%)	27.80%	32.80%	50.40%	71.60%	97.00%
Proceed to the risk assessment?	No	No	Yes	Yes	Yes
Risk Adjusted Qualitative Score * 10	N/A	N/A	19.25	28.20	65.00
Maximum Possible Risk Adjusted Qualitative Score * 10	N/A	N/A	75.00	75.00	75.00
Total Risk Adjusted Qualitative Score (%)	N/A	N/A	25.67%	37.60%	86.67%
Proceed to the financial analysis?	No	No	Yes	Yes	Yes

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Assessment	Project Options				
	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
NPV of Costs and Revenues	N/A	N/A	\$165.15M	\$183.84M	\$155.99M
Cost Savings (relative to the option that has the highest NPV of Costs and Revenues)	N/A	N/A	\$18.69M	-	\$27.85M
Financial Analysis Score (%)	N/A	N/A	10.17%	-	15.15%
Overall Assessment Score (%)	N/A	N/A	17.92%	18.80%	50.91%

Notes:

- The Total Qualitative Score without Risk Assessment (%) was calculated by dividing the Weighted Qualitative Score without Risk Assessment by the Maximum Possible Weighted Qualitative Score without Risk Assessment;
- The Total Risk Adjusted Qualitative Score (%) was calculated by dividing the Risk Adjusted Qualitative Score by the Maximum Possible Risk Adjusted Qualitative Score;
- The Cost Savings was calculated as the difference between the highest NPV of Costs and Revenues among all three analyzed Project options and a specific option’s NPV;
- The Financial Analysis Score (%) was calculated by dividing a specific Project option’s Cost Savings by the highest NPV of Costs and Revenues; and
- The Overall Assessment Score (%) was calculated as an average of the Total Risk Adjusted Qualitative Score (%) and the Financial Analysis Score (%).

The Overall Assessment Score combines the outcomes from the qualitative analysis, risk assessment and financial analysis. The calculation assumes that both qualitative/risk considerations and financial considerations are equally important in the decision making process.

The Overall Assessment Scores indicate that the **New Build** option is the preferred alternative for the delivery of the OPL Main Library Facility Project. This option represents the closest alignment to OPL’s strategic objectives and is expected to be relatively low risk as compared to the other options under consideration. Additionally, this is also the option that has the lowest estimated net present cost for Project delivery, taking into account the realization of proceeds from the sale of the City’s ownership interests in the existing facility and the surplus development rights on the preferred City-owned site, the expected residual value of the asset at the end of the

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analytical term (i.e. Year 2050) and the lower future capital investments required to keep the Main Library Facility operational over the medium to long term. All above considerations are reflected in the New Build option's Overall Assessment Score of 50.91%, which is significantly higher than the Redevelopment option's Overall Assessment Score of 18.80% and the Renovation option's Overall Assessment Score of 17.92%.

Although aligning with most of the OPL's strategic objectives, the **Redevelopment** option presents a higher risk as compared to the New Build option. The redevelopment of the existing facility would be constrained by the current conditions of the building and site, as well as the potential issues concerning the air rights above the existing building which could restrict the ability to increase the functional space of the Main Library Facility. Furthermore, despite the significant amount of redevelopment work required by this option, it is not able to meet all of the functional program requirements of the Main Library Facility. From a financial perspective, this option has a higher estimated net present cost as compared to the New Build option, primarily driven by the higher facility operating and lifecycle costs, as well as the anticipated requirement for renovating the Sir Richard Scott office tower and the garage in order for these assets to generate the desired revenues after they are handed back to OPL and the City in 2034.

The **Renovation** option involves less upfront capital investment than the New Build option. However, due to the anticipated requirement to renovate the Sir Richard Scott office tower and the garage after the handover to OPL and the City in 2034, as well as the negligible residual asset value by 2050 because of the limited extension of the facility's useful life, the estimated net present cost of this option is greater than the New Build option. Furthermore, although the Renovation option addresses some of the OPL's strategic objectives, due to the constraints associated with the existing building layout and footprint, it is not able to fully address the functional program and design requirements. Additionally, this option is considered relatively high risk due to the potential impacts of any "unknowns" associated with the existing facility that may arise during the design and construction stages.

The **Status Quo** and **Renewal** options were eliminated from further consideration at the conclusion of the qualitative analysis before risk assessment. These options failed to meet the minimum requirement of delivering a Main Library Facility that is capable of providing modern library services and that meets the needs of the community. In addition, these options were not deemed to be fiscally prudent as they followed a "minimum maintenance" approach to addressing the facility's deficiencies. Additional capital would need to be invested in the next 10-15 years because of the limited extension of the facility's useful life that would result from the minimal current investments.

In summary, given that the **New Build** option best aligns with the strategic objectives and has the lowest net present cost as compared to the other considered options, the New Build option is the most efficient and effective option to deliver the Project.

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Assessment of City Owned Sites for a New Main Library Facility

Approach

One of the principles of the New Build option is that the new Main Library should remain in the urban core, situated so as to have convenient access to rapid transit, e.g. direct access to the Confederation Line, in order to directly serve Ottawa residents living or working downtown while supporting the services provided by community and district branches.

The OPL and City identified seven City-owned sites through an initial screening of City-owned properties that were within or near the downtown core area and in close proximity to a planned Light Rail Station of the new Confederation Line:

- Site 1 – 7 Bayview Road
- Site 2 – 557 Wellington Street
- Site 3 – 156-160 Lyon Street
- Site 4 – 110 Laurier Avenue West
- Site 5 – 70 Clarence Street
- Site 6 – 300 Coventry Road
- Site 7 – 141 Bayview Road

These sites were further evaluated in accordance with a number of site evaluation criteria to determine the most suitable City-owned site for an Option 4 – New Build analysis. For the purposes of the site assessment process, the OPL and City established 20 site selection criteria, divided into a two-stage evaluation process. The first stage was comprised of primary gateway criteria and the second stage of evaluation was comprised of general site evaluation criteria.

The two-stage site evaluation approach is detailed as follows:

Stage 1 – Gating Assessment: Each identified site option was first evaluated against a subset of seven gateway evaluation criteria elements within three evaluation categories. The gateway evaluation categories included:

- Site Physical Capacity – the ability of a site to accommodate a 130,000 square foot Main Library development with additional potential for a public private partnership opportunity;
- Light rail transit (“LRT”) and other forms of transportation and pedestrian access; and
- Downtown Central Area location.

In order for a site to be further considered, it must have obtained a minimum of 70 points in total from the gating assessment.

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Stage 2 – Development and Site Context Assessment: The site options that passed the gating assessment were further assessed by comparing the merits and detractors of each site in terms of site development issues and constraints, contextual suitability with the surrounding area and their ability to complement and contribute to other civic planning initiatives and investments.

The following grades were used to evaluate and score each identified site option against the site selection criteria:

- **100%** – the site **exceeds** the requirements
- **70%** – the site **meets but does not exceed** the requirements
- **50%** – the site is **satisfactory** with respect to the requirements
- **20%** – the site **barely meets** the requirements
- **0%** – the site **does not meet** the requirements

Conclusion of Site Assessment

The following table summarizes the outcomes of the assessment of the seven City owned sites considered for the Project:

Criteria	Max. Points	Site 1 7 Bayview	Site 2 557 Wellington	Site 3 156-160 Lyon	Site 4 110 Laurier	Site 5 70 Clarence	Site 6 300 Coventry	Site 7 141 Bayview
Gating Assessment Score	100.0	71.5	88.0	51.0	43.0	57.5	50.0	59.0
Gating Assessment Result		Pass	Pass	Fail	Fail	Fail	Fail	Fail
Further Assessment Score	100.0	68.4	80.8	N/A	N/A	N/A	N/A	N/A
Overall Assessment Score	100.0	70.0	84.4	N/A	N/A	N/A	N/A	N/A
Overall Assessment Result		2nd Ranked	1st Ranked	N/A	N/A	N/A	N/A	N/A

As the primary outcome of Stage 1 – Gating Assessment, Site 3 (156-160 Lyon Street), Site 4 (110 Laurier Avenue West), Site 5 (70 Clarence Street), Site 6 (300 Coventry Road) and Site 7 (141 Bayview Road) failed to pass the gating assessment and therefore were not given further consideration.

Site 1 (7 Bayview Road) and Site 2 (557 Wellington) were able to achieve a passing score (70 points) with respect to the primary gateway criteria. These site options were then further assessed against the selection criteria specified for Stage 2 – Further Assessment.

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As a result of Stage 2 – Further Assessment, the City owned property at 557 Wellington was selected as the preferred site for the New Build option.

As compared to Site 1 (7 Bayview), Site 2 (557 Wellington) was considered a superior location in both the Gating and Further Assessments. Site 2 is on a property located in the downtown precinct and is adjacent to commercial, residential and institutional facilities while also being close to parks and green spaces. The site is easily accessible by public transit, walking, bicycling and car. It provides sufficient area to accommodate the required functional building programs and allows for innovative and sustainable design. It also offers excellent potential for mixed-use development. Development at this site could serve as a catalyst for, and economic driver of, proactive downtown expansion and development.

Although Site 1 (7 Bayview) also passed the Gating Assessment, it is on the western edge of the Central Area boundary and is not presently in close proximity to any commercial, residential or institutional facilities. Furthermore, this site has significant environmental and geotechnical issues that would need to be fully identified. This imposes a significant risk to completion of the Project in the near term as well as uncertainty in determining the value of any additional lands that may be offered as part of a mixed use joint development.

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Advice on the Project Implementation Plan

Potential Procurement and Delivery Models for the New Build

Traditional Arrangement

Method A – Design-Bid-Build (“DBB”) + Sale of Development Rights

The Project option analysis detailed in this business case is based on the assumption that the Project will be procured and delivered using a DBB approach. Under this approach, the City and OPL will engage an architectural/engineering design firm to develop a design and contract documents for the new library facility on the preferred City-owned site and then engage a construction contractor through a public tendering process to build the new facility in accordance with that design. Construction payments would be paid monthly by the City/OPL based on the progress of the construction (i.e. conventional progress payments).

The City’s interest in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street, as well as the remaining parcels of land on the preferred City-owned site, would be monetized through a sale to a third-party developer with the net proceeds being utilized to fund the construction of the new library facility.

Upon substantial completion, the City/OPL will take ownership of the facility and will be responsible for its long-term operation and maintenance.

Potential Partnership Arrangements

In addition to the “DBB + Sale of Development Rights” approach described above, the City and OPL could also consider a further and broader involvement of private sector parties to jointly develop, construct and potentially maintain the facility. Options for consideration include:

Method B1 – Design-Build (“DB”) + Partner Development on City Site

	Design-Build + Partner Development	Design-Build-Finance-Maintain + Partner Development
On City Site	Method B1	Method C1
On Alternative Site	Method B2	Method C2

Under this approach, the City and OPL will engage a private sector consortium, consisting of a real estate and infrastructure developer, an architectural/engineering design firm and a construction contractor, to design the new facility, adhering to the scope, functional program requirements and detailed facility output specifications identified by the City and OPL, and subsequently build the new facility on the preferred City-owned site.

In addition, the City would transfer its ownership interests in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street and the surplus development rights on the preferred City-owned site to the same consortium.

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Under this approach, the competitive procurement process will require the private sector proponents to bid on the total net cost of delivering the new library facility, taking into account not only the design and construction costs related to the library facility, but also the immediate and future revenues that the proponents expect to be generated through ownership interests in the real estate at the 191 Laurier Avenue West and 120 Metcalfe Street site and the development of surplus property rights at the preferred City-owned site.

Depending on the deal structure negotiated with the private sector consortium, construction payments could be made monthly by the City/OPL based on the progress of construction (i.e. progress payment, the most common approach), at key construction milestones (i.e. milestone payment approach) or at substantial completion of construction (i.e. deferred lump sum payment approach). Contingent on the terms of the negotiated Project agreement, certain design and construction risks could potentially be transferred to the private sector consortium.

Upon substantial completion, the City/OPL will take ownership of the facility and will be responsible for its long-term operation and maintenance.

Method B2 – DB + Partner Development on Alternative Site

Further to the “DB + Partner Development on City Site” approach detailed above, the City and OPL could also consider allowing private sector proponents to propose, during the competitive procurement process, a privately owned site, to be provided by the consortia (i.e. non-City owned site), on which the new library facility would be built. This approach could involve either building a new facility or repurposing an existing facility, as long as the delivered facility meets all of the site selection criteria, functional program requirements and facility output specifications identified by the City and OPL for the Main Library Facility. If the current owner of the Sir Richard Scott office tower chooses to participate in the procurement process it can also propose to redevelop the entire 191 Laurier Avenue West and 120 Metcalfe Street site as a potential solution for the Project.

To ensure that the alternative sites proposed by the private sector proponents fully meet all of the site selection criteria, the City and OPL could consider requiring a separate submission of the proposed alternative sites during the RFQ process, to allow the City and OPL time to assess the acceptability of a proposed site before further design and additional work is conducted.

Similar to the “DB + Partner Development on City Site” approach, the City would still transfer its ownership interests in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street and the development rights on the preferred City-owned site to the engaged private sector consortium. During the competitive procurement process, the private sector proponents would bid for the Project based on the total net cost of delivering the library facility. This net cost should take into account both the design and construction costs related to the library facility and the revenues that the proponent expects to be generated through ownership interests in

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the two sites transferred from the City, as well as any potential intangible benefits that would result from having the Main Library on the private sector consortium's site.

Method C1 – Design-Build-Finance-Maintain (“DBFM”) + Partner Development on City Site

Another potential procurement and delivery model to be considered is including a long-term partnership with the private sector in the deal. The “DBFM + Partner Development on City Site” approach involves engaging with a private sector consortium that consists of a real estate and infrastructure developer, an architectural/engineering design firm, a construction contractor, an asset and facility management company and financiers who would design, build, finance and maintain the new library facility, as well as further its interests on the 191 Laurier Avenue West and 120 Metcalfe Street site and develop surplus property rights on the preferred City-owned site.

The proponents' bid price would take into account the entire capital, maintenance and lifecycle costs related to the library facility during the term of the partnership agreement (i.e. the construction period plus 30 years of operations), and the revenues that the proponents expect to be generated through ownership interests in the real estate at the 191 Laurier Avenue West and 120 Metcalfe Street site and surplus development rights on the preferred City-owned site.

Under this procurement and delivery model, only a portion of the construction costs would be paid at key construction milestones or, alternatively, at substantial completion of construction. Depending on the terms of the negotiated Project agreement and the City's relevant policy, the construction payment(s) that will be made by the City/OPL could range from 0% to above 50% of the total capital cost. The engaged private sector consortium would be required to raise financing for the construction of the library facility and would be paid back partially through the above described construction payment(s) (i.e. short-term financing) and partially on a monthly basis during the 30-year operational period through a payment approach that is, or is similar to, the capital lease payment approach (i.e. long-term financing). The monthly payments during the operational period would be subject to a pre-determined availability based payment mechanism. Deductions would be applied to the payment for underperformance of the entire, or any portion of, the facility, to be measured based on facility output specifications and facility management key performance indicators as specified in the Project agreement.

Under this approach, significant design, construction, maintenance and lifecycle risks could be transferred to the private sector consortium. Additionally, the private sector consortium bears the risks associated with furthering its interests in the two sites transferred from the City.

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Method C2 – DBFM + Partner Development on Alternative Site

Similar to the “DB + Partner Development on Alternative Site” approach, the City and OPL could also consider a “DBFM + Partner Development on Alternative Site” approach, allowing private sector proponents to propose a privately owned site on which the new library facility would be built. The proponents could propose building a new facility or repurposing an existing facility. The current owner of the Sir Richard Scott office tower could also propose to redevelop the entire 191 Laurier Avenue West and 120 Metcalfe Street site as a potential solution for the Project.

A separate submission of the proposed alternative sites could be required during the RFQ process, to allow the City and OPL time to assess the acceptability of a proposed site before further design and additional work is conducted.

The City would transfer its ownership interests in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street and the development rights on the preferred City-owned site to the engaged private sector consortium. During the competitive procurement process, the private sector proponents would bid for the Project based on the total net cost of delivering and maintaining the library facility. This net cost should take into account the capital, maintenance and lifecycle costs related to the library facility, and the revenues that the proponents expect to be generated through its ownership interests in the 191 Laurier Avenue West and 120 Metcalfe Street site and its development of the preferred City-owned site, as well as any potential intangible benefits that would result from having the Main Library on the private sector consortium’s site.

The payment mechanism and risk transfer under this approach would be similar to the “DBFM + Partner Development on City Site” approach. Construction payment(s) that cover a portion of the capital costs would be made by the City/OPL based on the achievement of key construction milestones and/or substantial completion. Payments made during the 30-year operational period (e.g. capital lease payments) would be subject to achieving operational performance standards and meeting the maintenance requirements of the library facility.

Procurement Process

Key Procurement Stages

An effective and efficient procurement process would allow the City and OPL to obtain the library facility as desired and ultimately deliver excellent value for money. Given the size and complexity of the Project, the procurement process should include the following key stages:



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Notes:

- “RFI” refers to Request for Information process; “REOI” refers to Request for Expression of Interest process; “RFQ” refers to Request for Qualifications process; and “RFP” refers to Request for Proposals process.
- During the implementation stage, the RFI and REOI processes could be conducted simultaneously.

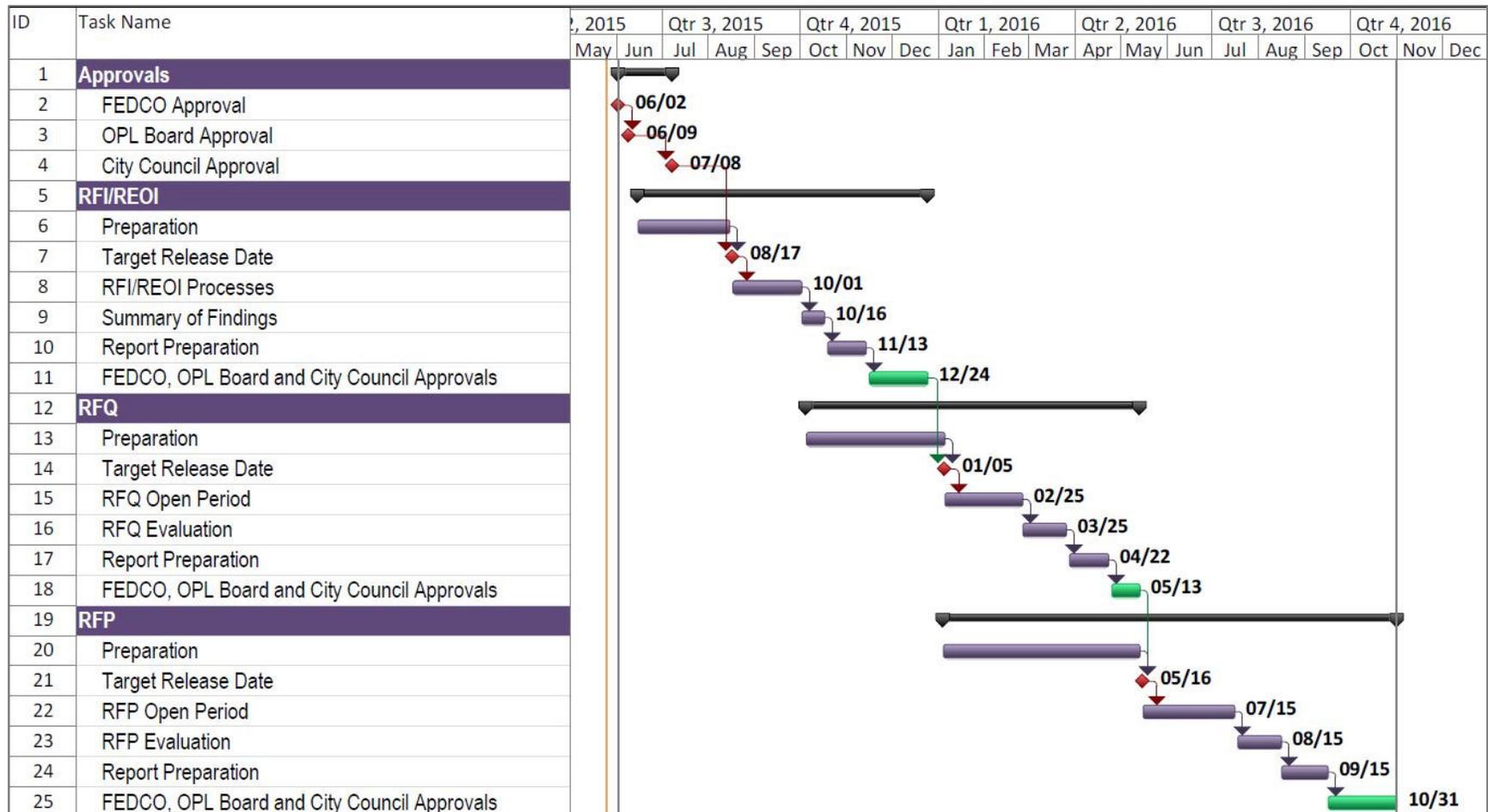
Key Objectives of Each Procurement Stage

RFI/REOI	RFQ	RFP
<ul style="list-style-type: none"> • Increase market awareness of the Project and promote the Project in the market • Start engaging private sector partners • Obtain private sector feedback/suggestions on delivery model, procurement approach and innovative solutions • Decide the procurement and delivery model for the Project • Determine the Project scope 	<ul style="list-style-type: none"> • As an outcome of the RFQ process, select a short list of prequalified proponents • During the RFQ process, review and assess the potential alternative sites proposed by the proponents through a separate submission process (detailed approach TBD) • Further refine the Project scope and deal structure • Develop output specifications and Project agreement documents 	<ul style="list-style-type: none"> • During the RFP process, assist proponents in developing compliant design solutions, through a commercially confidential design consultation process • During the RFP process, negotiate and finalize the Project agreement terms and conditions, through a commercially confidential meeting process • As an outcome of the RFP process, select a private sector consortium that offers a Project solution demonstrating the best value to the City and OPL • Achieve commercial and financial closes

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High Level Project Schedule

The following schedule illustrates a preliminary high level timeline for the procurement of the Project, which is subject to changes as a result of further planning activities after the City and OPL have made a decision on the Project option and procurement approach.



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Conclusion and Further Analysis Required

The potential procurement and delivery models described in the “Potential Procurement and Delivery Models for the New Build” section represent the procurement approaches commonly used in the Canadian infrastructure market for similar projects. All five procurement and delivery models identified have their own unique advantages and challenges. Each of them involves a different deal structure that allows for a different level of partnership between the City/OPL and the private sector and leads to a different risk allocation between the two parties. In order to make a sound decision on which procurement and delivery model is the most suitable for this Project, the City and OPL should consider conducting further analysis to assess the potential models from a Value for Money (“VFM”) perspective.

The VFM analysis would involve a comparison between a Public Sector Comparator (“PSC”) model, which is developed based on either the “DBB + Sale of Development Rights”, “DB + Partner Development on City Site” or “DB + Partner Development on Alternative Site” model, and a P3 model, which is developed based on either the “DBFM + Partner Development on City Site” or “DBFM + Partner Development on Alternative Site” model.

The financial and risk profiles of the Project under both PSC and P3 models should be assessed in detail in order to develop the total risk adjusted Project costs. Key elements of the analysis would include:

- Definition of the PSC and P3 models to be analyzed;
- Development of the Project cost and revenue estimates and cash flows under both the PSC and P3 models;
- Development of the financial assumptions for the VFM analysis;
- Assessment of the Project risks;
- Quantification of the City/OPL retained risks under both the PSC and P3 models using a Monte Carlo simulation; and
- Development of a financial model to assess the risk adjusted total Project costs under both the PSC and P3 models and the VFM (including PSC, P3 shadow bid and VFM model components).

As part of the VFM analysis, the City and OPL should consider engaging private sector market participants (i.e. developers, lenders, construction contractors, facility management companies, etc.), through a combined Request for Information (“RFI”) and Request for Expression of Interest (“REOI”) process or through a market sounding exercise in order to obtain industry feedback on the deal structure, risk allocation and procurement approach. Information obtained through this communication should be utilized to enhance the VFM analysis and to design the Project procurement approach.

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The VFM analysis would also allow the City and OPL to conduct a thorough assessment of the Project's affordability and explore alternative options for financing. Potential risk premiums and cost efficiencies associated with the involvement of a private sector partner should be taken into account when conducting the analysis. The analysis should also consider the additional financing and transaction costs associated with a P3 model.

We understand that the City has established a P3 Policy (approved by the City Council in April 2013 and implemented in September 2014), Guidelines and Procedures to provide a tool to assist in the implementation of the City's P3 projects with the intention of providing guidance, rigor and consistency in the definition, selection, analysis, delivery and monitoring of P3 projects. The above described VFM analysis approach aligns with the City's P3 Policy, Guidelines and Procedures.

As a conclusion to the VFM analysis, the City and OPL should select the Project procurement and delivery model that provides the greatest VFM and is within the City's affordability threshold for the Project.

----- End of Executive Summary -----

Business Need

Ottawa Public Library

Since its inception in 1906, the OPL has endeavoured to support reading, learning and research with the provision of high quality information resources. With its 34 branches, including a Virtual branch plus Bookmobile and Kiosk services, the OPL delivers diversified library services to a broad range of customers across the greater Ottawa area.

In recent years, the OPL has been facing the challenge of transforming its library services, driven by rapidly developing technology, increasing customer expectations and changing demographics in the greater Ottawa area. To continue delivering relevant, efficient and equitable services that meet customers' changing needs, in December 2013 the OPL Board approved a refresh of the OPL 2012-2015 Strategic Plan that would guide the operational and financial decisions of the OPL. A refreshed strategic plan, as the outcome of this initiative, is summarized below:

OPL Vision

Build community and transform lives.

OPL Mission

Inspire learning, spark curiosity, and connect people.

OPL Values

Access and Inclusion: Committed to providing basic services to every person in Ottawa, free of charge, and to providing barrier-free facilities, resources and services.

Accountability: Responsible for meeting the library service needs of the community in an efficient, effective and fiscally responsible manner.

Bilingualism: Provide a strong bilingual context in English and in French for OPL resources and services.

Dynamic Workforce: Promote a stimulating work environment that recognizes and rewards employee creativity in serving the people of Ottawa.

Informed Community: Belief that Ottawa's future economic and social prosperity depends on ensuring that all citizens are well informed and supported in their aspirations to learn throughout their lifetimes.

Innovation: Continuously review current practices, make improvements, leverage

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OPL Values

technology and create new standards of performance to drive service improvements.

Intellectual Freedom: Defend the rights of library customers to freedom of thought, belief, opinion and expression as the basis of a democratic society.

Love of Reading: Nurture the joy of reading in people of all ages.

Right to Privacy: Respect and protect the privacy of our customers.

Service Excellence: Excel in customer-driven service and provide welcoming and expert service supportive of human differences.

The Main Library

The Main Library of the OPL, with more than 16,000 visitors weekly, is the largest and busiest location in the OPL's 34-branch system.

The Ottawa Main Library opened in 1974 at 120 Metcalfe Street, a property owned by the City and OPL. The three-story building includes an underground parking garage with a capacity of 174 vehicles and connects to the Sir Richard Scott Building, a 19-story high-rise at 191 Laurier Avenue West.



The Main Library at 120 Metcalfe Street totals 90,418 gross square feet with an additional leased space of 18,240 gross square feet, used for library administration, on the 4th and 5th floors of the Sir Richard Scott Building.

Access between floors is provided by central staircases, escalators (up-only) and two elevators. In the basement of the building there is an auditorium, a meeting room, a distribution area and the Friends of the OPL Association ("FOPLA") Bookstore.

The library facility was originally designed based on a book delivery model and the outlay has not kept pace with the demands of a modern library and the array of services provided by one. The floor plans are now dated and need to be upgraded in order to support a modern and technology-based delivery model that reflects today's needs for library services.

Since its grand opening in 1974, the only significant renovation to the Main Library took place in 2004. The work performed at that time included the construction of a new ground floor entrance and the installation of a new circulation service counter and self-check-out units.

In its current state, the facility is suffering from service delivery deficiencies in the following areas:

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- Accessibility;
- Infrastructure and building systems;
- Building code deficiencies;
- Vertical lifts (escalators and elevators);
- Technology;
- Shipping and receiving access;
- Lack of windows and natural light; and
- Safety and security.

In 2013, OPL ran the Imagine Campaign, an online ideas campaign focusing on the themes of Learning, Leisure, Celebration, Creation and Community Development, which gave customers an opportunity to express their vision for their public libraries. The key outcomes from the campaign include validation that Ottawa residents view their public libraries as physical spaces first and foremost, with local and community branches seen as highly-favoured destinations for customers.

The campaign's findings align with the OPL Board's vision for the modernization of the Main Library. The Main Library should serve as both a downtown community branch and a city-wide resource which supports services that are customer-centric such as offering spaces for community gatherings, collections and creation and success through learning, literacy and innovation.

The OPL Main Library Facility Project (the "Project")

As a significant and complex City-building project, planning for the redevelopment of the Main Library Facility has been underway for several years:

- In May 2012, the OPL Board approved the Main Library to be the highest priority location for facility renewal.
- In June 2012, a survey of customers and non-customers was undertaken to gather public opinion on how the Main Library should be used and what should be included in a redeveloped facility.
- An independent building condition assessment of the Main Library was completed in July 2012 to examine expansion potential, building flexibility, end of life and the structural soundness of the existing facility.
- In November 2012, the OPL Board chose modernization as the recommended option in planning for the renewal, redesign and refresh of the existing Main Library facility. This was viewed as a mid-term solution that addressed the required life cycle maintenance and one that would result in a major renewal and comprehensive renovation of the facility with a focus on maximizing public space.

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- Following the Board's approval, the functional program requirements and preliminary conceptual designs were created with the intention of developing a facility capable of supporting the services expected of a modern Main Library.
- In July 2014, the OPL Board received an information report titled "Main Library Facility Planning", which presented the results of a study that considered three options (i.e. renewal, renovation and redevelopment) for modernizing the existing Main Library facility. The report concluded that the functional program space requirement for a modern Main Library would be 130,000 square feet.

Upon receiving the report, the OPL Board noted that:

- None of the three modernization options fully addresses the deficiencies of the current space;
- There are significant "unknowns" and risks associated with modernizing an existing building;
- All three options considered for the current facility require a significant investment from the City; and
- The scope of the report did not include an analysis of the relative pros and cons for the Library Board and City Council, and ultimately for taxpayers, of proceeding with one of these three options versus building a new Main Library facility, or an analysis of the possibility of seeking public-private partnership opportunities.

Based on the above noted conclusions, the OPL Board approved a motion to develop further analysis on an additional option - to build a new facility on a new site that would be able to accommodate the 130,000 square foot functional program requirement for the Main Library. This analysis would also include the identification of a potential procurement process that would have the flexibility to allow for the private sector to respond with alternative non-City owned site options for the Main Library.

In response to the Board's motion, this business case was developed to help facilitate the Board's decision making process with respect to the redevelopment of the Main Library facility. Five Project options were considered in the development of the business case, namely:

- Option 0 – Status Quo
- Option 1 – Renewal
- Option 2 – Renovation
- Option 3 – Redevelopment
- Option 4 – New Build

The business case assessed and compared the merits and risks associated with each of these options, from both a qualitative and quantitative perspective. The analysis approaches and outcomes are detailed in the sections to follow.

Strategic Alignment

Public libraries are icons of the cities in which they are located. They can transform communities and bring cultural pedigree to a city, elevating it on the world stage. More importantly, they can be used to build up communities and transform the lives of the people who live there by inspiring learning, sparking curiosity and connecting populations. In that respect the public library is more than just a building, it is a central hub fostering civic engagement and innovation. Therefore, when conducting the business case analysis it was important to look beyond the financial figures and assess whether a redeveloped or newly built Main Library Facility would be capable of meeting the strategic objectives of the City and OPL and how that would align with the vision of what the public library can be for the City of Ottawa.

As discussed in the previous section, the OPL has mission, vision and value statements to which it adheres and to which it strives to remain true when delivering services to customers while living up to its role in the Ottawa community. In July 2014 the OPL board approved a Strategic Plan Refresh that included the creation of a vision statement, a revised mission statement and the identification of new strategic directions. With the appointment of the new Board of Trustees for 2015-2018 the Board confirmed new strategic directions (based on the 2014 exercise) as the 2015-2018 Priorities to ensure that OPL remains customer focused and responsive to community needs.

Three strategic priorities were identified by the OPL which align with the vision, mission and value statements and each of which are supported by several measurable outcomes:

Strategic Priorities

Strategic Priority 1 – Services that are customer-centric

Outcomes:

- Act as a catalyst for exploration and discovery;
- Provide physical and digital collections that are responsive to customer demands and community needs; and
- Enhance the customer experience by leveraging best practices and technology.

Strategic Priority 2 – Spaces for community, collections and creation

Outcomes:

- Develop an inclusive, dynamic Central Library enabling creation and learning;
- Sustain collaborative and flexible physical spaces across the community; and

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Strategic Priorities

- Create virtual spaces that offer opportunities for creation and content sharing.

Strategic Priority 3 – Success through learning, literacy and innovation

Outcomes:

- Strengthen and promote the library's reach and value;
- Foster community partnerships; and
- Align library services in support of community needs.

Throughout the development of this business case, the above stated strategic priorities have been considered to be of paramount importance. When analyzing the various Project options for the Main Library Facility, we have ensured to determine whether each aligns with the strategic priorities and whether they are in the spirit of the mission, vision and values of the OPL.

As an extension of the strategic priorities, we have also assessed the ability of the facility to provide modern library services to the general public, the strategic importance of the Main Library in the downtown core, how well a new or redeveloped library coincides with the long term development plans of the City and the role of Main Library in the community.

The role of the modern library is changing. The general public expects their libraries to be more than just storage facilities for books. This was reaffirmed by the OPL's Imagine Campaign which highlighted the community's desire for meeting spaces, creative spaces, community hubs, innovation centres etc., all of which can be delivered by the OPL if the resources and the facilities are present to do so. An excellent example, albeit on a much smaller scale, is the Beaverbrook branch expansion which has been lauded for its layout, design and spaces, all of which represent what a modern community library can, and arguably should be. A way for the Main Library to meet its strategic objectives and the needs of the public is to model it based on Beaverbrook, extrapolated for the size of the downtown community it serves and its importance as the Main Library Facility of the OPL. Throughout the development of this business case, we have examined which of the Project options under consideration can meet this strategic objective and if a redeveloped or brand new facility is capable of fulfilling this role.

It has become strategically important for the City to continue to develop its downtown core. A well developed and laid out downtown can reap dividends by driving economic growth and is in line with recent trends in major metropolitan centres of renewed urban growth and gentrification of urban areas. Therefore, being located in the downtown core makes the Main Library of particular strategic importance to the City for future development plans. A well designed facility that is innovative and exciting can reinvigorate the community and act as a catalyst for future growth and development as people and businesses will wish to locate near it and expand around

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it. In contrast, a rundown and worn out facility can be a blight on the neighbourhood and drive away growth to more fashionable areas. When analyzing the Project options, we have considered what each can contribute in terms of development and whether the Facility will synergise with other City initiatives to help the long term development of the downtown core.

Finally, and perhaps most importantly, we have analyzed the strategic importance of the Main Library to the community at large. A Main Library Facility that is capable of providing modern library services, is innovative and engaging and is visually appealing shows a commitment on the City's behalf to providing educational services to its population and reaffirms a belief that a city is more than just groups of people living in close proximity to one another; it is a community where engagement and the sharing of creative ideas and knowledge benefits everyone as a whole. The downtown core is one of the fastest growing population centres in the greater Ottawa area and not only serves the people who live there but the people who work there as well. As the area grows and evolves the community will demand and expect a library that grows and evolves with it. Due to its strategic importance as the Main Library, and its location in the downtown core, the Main Library Facility has the opportunity to become a showcase of what a modern library can be and, further, what the City of Ottawa can be in comparison to other cities and capitals around the world. This has also been considered while completing the business case as each Project option was analyzed to determine whether it would be able to deliver on this important strategic target.

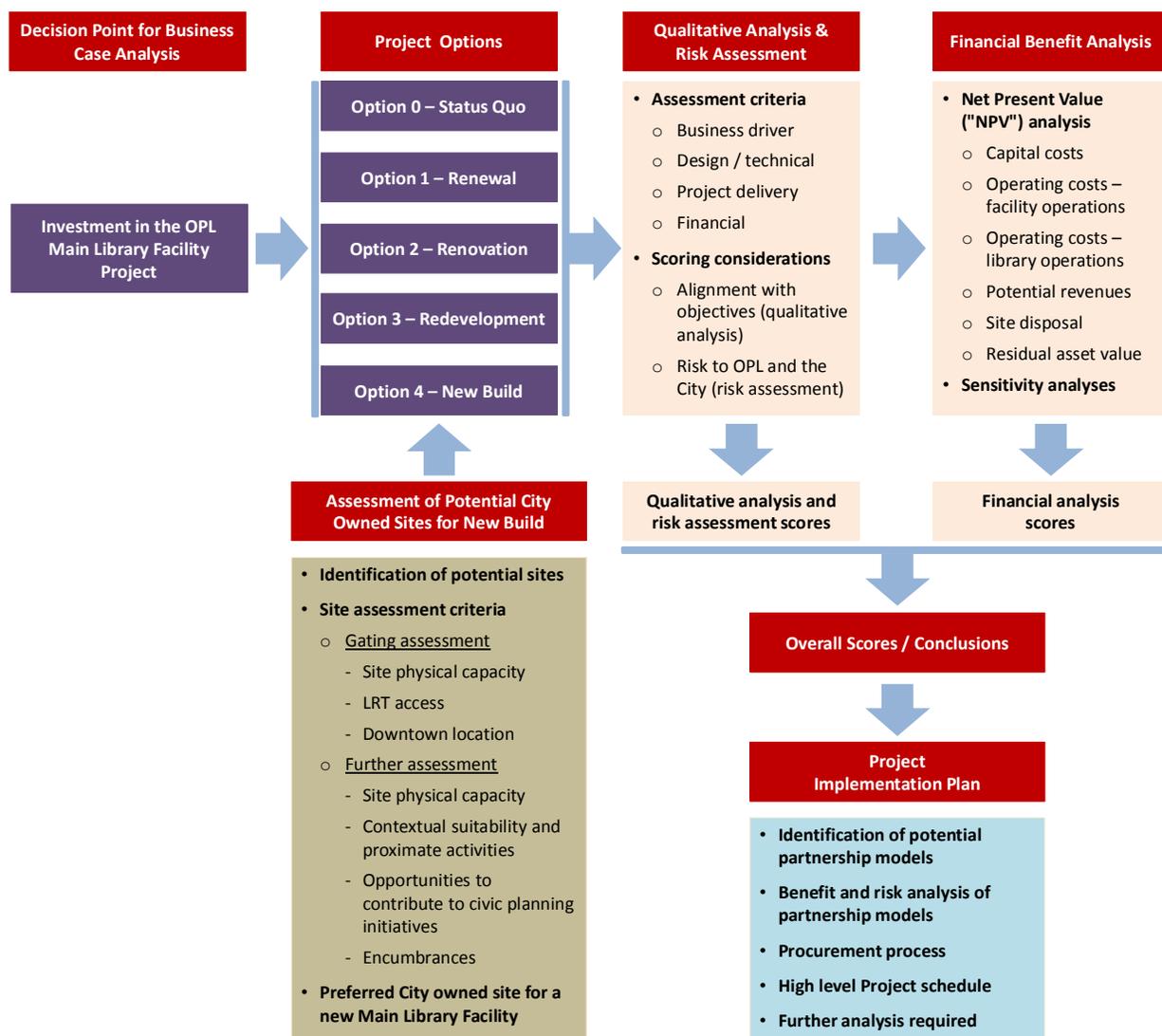
In summary, the City and OPL have a number of strategic priorities which the Main Library Facility is an important part of. In the development of this business case each identified Project option was analyzed for its alignment with the strategic priorities and whether, and how well, it could deliver on them.

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Analysis Approach

Overall Business Case Analysis Approach

In order to fully address the Board’s requirements in respect to the decision making process for the redevelopment of the Main Library Facility, the following key analysis components were included in the business case:



The analysis approach applied for each of these components is detailed in the following sections.

Options Analysis

Project Options

A business case analysis compares and evaluates potential investment alternatives for a project, therefore it is essential to establish and define the considered project options at the beginning of the analysis.

Based on the previous studies prepared for the Project and the Board's motion in July 2014, the following Project options were considered in this business case:

- **Option 0 – Status Quo:** this option proposes maintaining the status quo at the facility with the exception of essential repairs, accessibility and maintenance work.
- **Option 1 – Renewal:** this option proposes cosmetic improvements to the existing library, resulting in a renewed and refreshed facility that would have the same overall look as the current building. The building's exterior would remain essentially unchanged.
- **Option 2 – Renovation:** this option proposes updating the interior and exterior of the library. The current interior space would be expanded and significantly changed.
- **Option 3 – Redevelopment:** this option proposes maximizing and expanding the current building footprint to support a complete redevelopment of the existing facility.
- **Option 4 – New Build:** this option proposes the development of a new library facility at a new City-owned site, specifically 557 Wellington Street.

Option 0 – Status Quo

Under the Status Quo option, the Main Library would remain in its current operational state for the foreseeable future. No changes to the building's interior or exterior would be made. This option does not address any of the current facility deficiencies.

All required facility maintenance and essential repairs to the existing facility would still need to be completed as necessary and as planned, with critical issues such as accessibility addressed first and with aging equipment and building components replaced over time as required.

Option 1 – Renewal

The Renewal option results in a renewed and refreshed facility that would have the same overall look, character and feel as the current building. The building systems

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would also be updated. The building's exterior would remain essentially unchanged. In summary:

- The existing footprint is maintained;
- No major changes to the interior including; the basement auditorium, mezzanine area, escalators, main stairs and atrium or to the exterior facade;
- Renewal of critical building systems and infrastructure to be undertaken for heating, ventilation, electrical, fire and life safety systems;
- Complete replacement of all washrooms along with new finishes throughout the building;
- Program improvements: Children's area moved to 1st floor, Creative Centre included and additional meeting rooms added to Floors 1-3;
- Program requirements not met in Children's area, Teens, Adults, Technology Commons, and Community Meeting Spaces;
- Most current facility deficiencies including lack of windows and natural light, escalators and elevators are not addressed; other facility deficiencies are not improved while accessibility, technology and safety and security are satisfactorily improved; and
- Total floor space provided is approximately 21,000 square feet short of the amount required to fully address all of the identified functional program requirements.

Option 2 – Renovation

The Renovation option results in the renovation of the existing facility through the redesign, expansion and refresh of the current space. Significant changes would be made to the interior of the building to improve the delivery of modern library services. This option includes changes to the building entrance and exterior facade and also includes a minor expansion of 6,170 square feet to the building footprint. To summarize:

- Major renovations to all floors throughout the facility;
- Improved accessible design over the Renewal option; building systems and infrastructure renewed and updated, auditorium removed and replaced by several meeting rooms, escalators removed and replaced with a new interior elevator, existing south elevator relocated to better serve the public and atrium reconfigured;
- Program area target not met in Teens, Adults, Technology Commons and Community Meeting Spaces;
- Several current facility deficiencies are satisfactorily addressed (e.g. vertical lifts,

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technology), accessibility and natural light are improved and safety and security issues are significantly improved; and

- Total floor space provided is approximately 15,000 square feet short of the amount required to fully address all of the identified functional program requirements.

Option 3 – Redevelopment

The Redevelopment option offers an enhanced street presence through an expansion of the existing building footprint to its maximum possible size. The current building would be stripped down to its structural shell and then subsequently redeveloped, resulting in a new facade and an almost “like-new” building. This would include a 4th floor addition that would provide additional meeting and event space with superb street views. Much of the current brutalist-style building would be removed and replaced with a new facade featuring walls of windows, allowing a much greater amount of light into the building while offering views of the Laurier-Metcalf intersection and beyond. At the same time, the design would produce a visual ‘WOW’ factor from street level. To summarize:

- Most major renovation and maximum expansion supporting a complete redevelopment of the existing facility;
- Existing footprint expanded by 9,660 square feet, the current 4th floor roof area is developed into an additional 12,700 square feet of meeting/event space for a total expansion of 22,360 square feet;
- Supports best practices implementation of OADS (Ottawa Accessibility Design Standards), building systems and infrastructure renewed and updated, auditorium removed and replaced by several meeting rooms, escalators removed and replaced with a new interior elevator, existing south elevator relocated to better serve the public and atrium reconfigured;
- Opportunity for a new street facade on Metcalfe and on Laurier that provides a ‘WOW’ factor and greatest opportunity to allow natural light into the building;
- Service improvements: enhanced Public Entrance with street presence, prominent Exhibition space, expanded Children’s area moved to 1st floor, added Creative Centre, increased number of meeting rooms added to floors 1-4;
- Total floor space provided is approximately the same as that for the total identified functional program requirements. However, specific program requirements not met by a total of approximately 8,500 square feet for the Adults, Technology Commons and Community Meeting Spaces components due to existing building constraints and the necessity to provide identified spatial relationships amongst the key public program components; and

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- Majority of current facility deficiencies are addressed with significant improvements to accessibility, natural light and safety and security.

Option 4 – New Build

The New Build option delivers a brand new facility that would meet the full 130,000 square foot functional program requirements for the Main Library. The new library would be built on a City-owned site in close proximity to public transit.

Site Selection for New Build

Approach

One of the principles of the New Build option is that the new Main Library should remain in the urban core, situated so as to have convenient access to rapid transit, e.g. direct access to the Confederation Line, in order to directly serve Ottawa residents living or working downtown while supporting the services provided by community and district branches.

The OPL and City have identified seven City-owned sites that meet the City's desired site location criteria. These sites were further evaluated to determine their ability to accommodate the 130,000 square foot functional program requirements for the Main Library Facility. For the purposes of the site assessment process, the OPL and City established 20 site selection criteria, seven of which are considered primary gateway criteria.

The site assessment was conducted using a two-stage approach:

Stage 1 – Gating Assessment: Each identified site option was first evaluated against a subset of seven gateway evaluation criteria elements within three evaluation categories. The gateway evaluation categories included:

- Site Physical Capacity – the ability of a site to accommodate a 130,000 square foot Main Library development with additional potential for a public private partnership opportunity;
- LRT and other forms of transportation and pedestrian access; and
- Downtown Central Area location.

In order for a site to be further considered, it must have obtained a minimum of 70 points in total from the gating assessment.

Stage 2 –Development and Site Context Assessment: The site options that passed the gating assessment were further assessed by comparing the merits and detractions of each site in terms of site development issues and constraints, contextual suitability with the surrounding area and their ability to complement and contribute to other civic planning initiatives and investments.

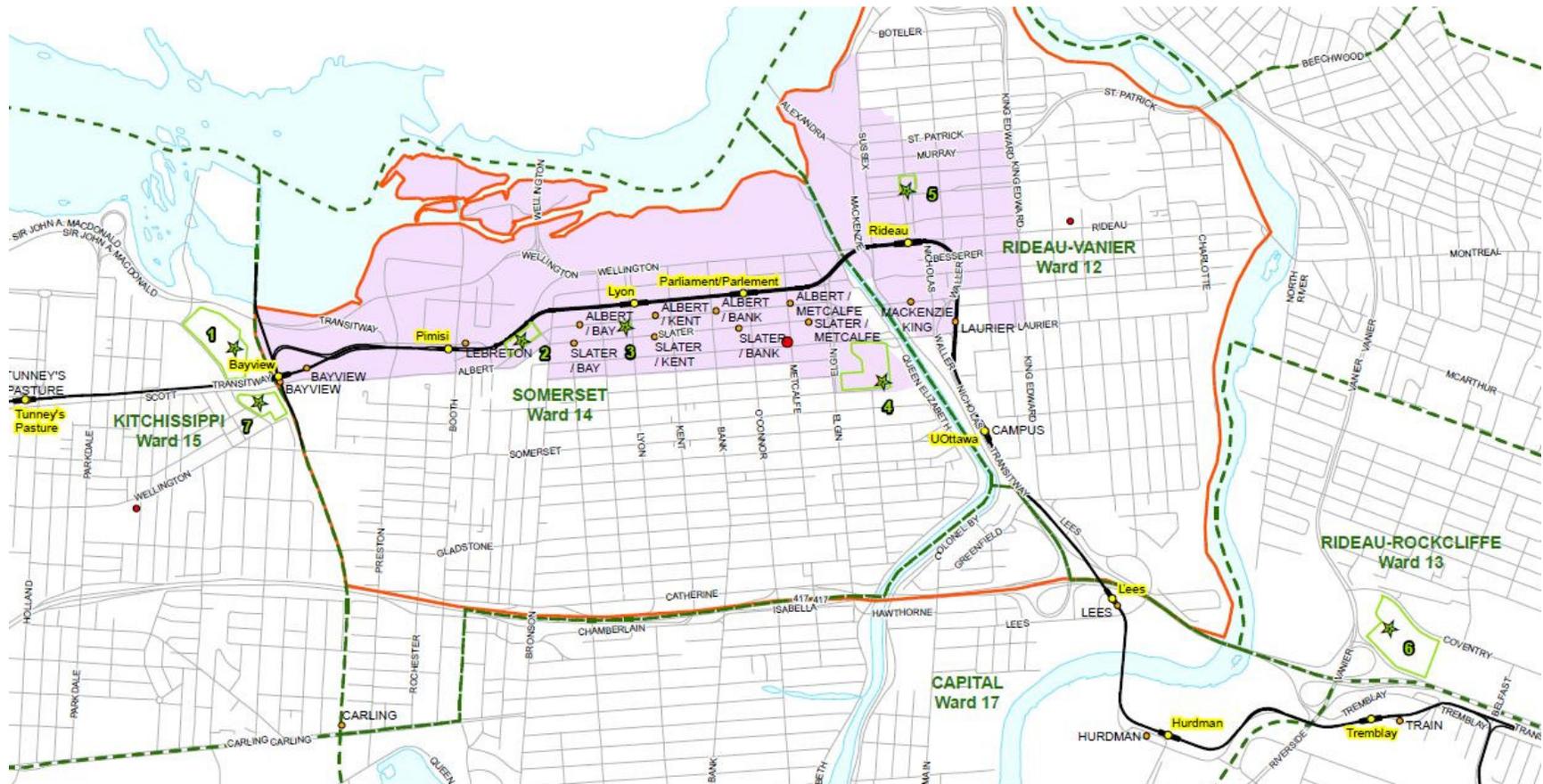
The following grades were used to evaluate and score each identified site option against the site selection criteria:

- **100%** – the site **exceeds** the requirements
- **70%** – the site **meets but does not exceed** the requirements
- **50%** – the site is **satisfactory** with respect to the requirements
- **20%** – the site **barely meets** the requirements
- **0%** – the site **does not meet** the requirements

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Presentation of the Sites

The OPL and City have identified seven City-owned sites that meet the City's desired site location criteria, including: **Site 1** – 7 Bayview Road, **Site 2** – 557 Wellington Street, **Site 3** – 156-160 Lyon Street, **Site 4** – 110 Laurier Avenue West, **Site 5** – 70 Clarence Street, **Site 6** – 300 Coventry Road and **Site 7** – 141 Bayview Road. The following map illustrates the approximate locations of these candidate sites. The Central Area is defined in pink.



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Gating Assessment

Gating assessment criteria and assessment results are summarized in the matrix and commentary below.

Criteria	Max. Points	Site 1 7 Bayview	Site 2 557 Wellington	Site 3 156-160 Lyon	Site 4 110 Laurier	Site 5 70 Clarence	Site 6 300 Coventry	Site 7 141 Bayview
A. Site Physical Capacity								
Sufficient site area to accommodate functional building program, without significant compromises to accommodate a minimum footprint of 30,000 square feet and minimum 3,000 square feet of plaza space	20.0	20.0 (100%)	20.0 (100%)	0.0 (0%)	4.0 (20%)	14.0 (70%)	20.0 (100%)	20.0 (100%)
The site does, or will be able to, accommodate additional mixed-use development on the site providing opportunity for a partner to purchase excess development rights without compromising the image of the library	15.0	15.0 (100%)	15.0 (100%)	3.0 (20%)	0.0 (0%)	0.0 (0%)	3.0 (20%)	7.5 (50%)
Site is sufficient to allow for an innovative architectural statement.	10.0	7.0 (70%)	10.0 (100%)	2.0 (20%)	7.0 (70%)	7.0 (70%)	7.0 (70%)	7.0 (70%)
Site is visible from as many approaches as possible	5.0	2.5 (50%)	5.0 (100%)	1.0 (20%)	1.0 (20%)	3.5 (70%)	5.0 (100%)	3.5 (70%)
B. Light Rail Transit Access								
Within 400 meters of a Confederation Line Station	20.0	20.0 (100%)	14.0 (70%)	20.0 (100%)	4.0 (20%)	14.0 (70%)	10.0 (50%)	14.0 (70%)
Proximity to planned sidewalks, pedestrian paths, bicycle paths, parking access, lay by	10.0	7.0 (70%)	10.0 (100%)	5.0 (50%)	7.0 (70%)	5.0 (50%)	5.0 (50%)	7.0 (70%)

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Criteria	Max. Points	Site 1 7 Bayview	Site 2 557 Wellington	Site 3 156-160 Lyon	Site 4 110 Laurier	Site 5 70 Clarence	Site 6 300 Coventry	Site 7 141 Bayview
and drop off and proximity to major arterial roads								
C. Downtown Location								
Urban site within a downtown precinct that falls within Area "A" set out in Schedule 1 of Zoning By-law 2008-250 and is proximate to the cultural and administrative centre of the City	20.0	0.0 (0%)	14.0 (70%)	20.0 (100%)	20.0 (100%)	14.0 (70%)	0.0 (0%)	0.0 (0%)
Gating Assessment Score	100.0	71.5	88.0	51.0	43.0	57.5	50.0	59.0
Gating Assessment Result		Pass	Pass	Fail	Fail	Fail	Fail	Fail

Commentary on Gating Assessment

A. Site Physical Capacity

1. Sufficient site area to accommodate functional building program, without significant compromises to accommodate a minimum footprint of 30,000 square feet and minimum 3,000 square feet of plaza space

- Site 1 covers 13.5 acres which exceeds the minimum footprint and the minimum plaza space requirements. (100%)
- Site 2 covers 3.56 acres which exceeds the minimum footprint and the minimum plaza space requirements. (100%)
- Site 3 covers 10,000 square feet (0.23 acres) which does not meet the minimum footprint requirement. (0%)
- Site 4 covers a total of 50,000 square feet, but only a total of 24,000 square feet is developable due to heritage and zoning constraints. The Project could potentially be feasible through a 5 or 6-storey building. Site 4 therefore barely meets the requirements. (20%)
- Site 5 covers 46,000 square feet and technically has sufficient space to accommodate the minimum footprint and plaza space requirements. However, according to the recent ByWard Market planning process, a plaza

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that would consume half of the area (20,000 square feet) is expected on the site. This challenge would need to be addressed should the site be selected for the Project. Therefore, Site 5 meets but does not exceed the minimum footprint and plaza space requirements. (70%)

- Site 6 covers 16.4 acres which exceeds the minimum footprint and the minimum plaza space requirements. (100%)
- Site 7 covers 4.0 acres which exceeds the minimum footprint and the minimum plaza space requirements. (100%)

2. The site does, or will be able to, accommodate additional mixed-use development on the site providing opportunity for a partner to purchase excess development rights without compromising the image of the library

- Site 1 has a mixed-use centre official plan designation and zoning and will allow a partner to purchase development rights without compromising the image of the library. Site 1 therefore exceeds the requirement. (100%)
- Site 2 would be able to accommodate mixed-use development with official plan and zoning amendments which should be acceptable by the City. Site 2 therefore exceeds the requirement. (100%)
- Site 3 would only be able to accommodate a mixed-use development on top of the library due to the site's minimal footprint, but this would compromise the image of the library. Site 3 therefore barely meets the requirement. (20%)
- Site 4 would not be able to accommodate a mixed-use development due to the area's height limit (3-5 storeys) and therefore does not meet the requirement. (0%)
- Site 5 would not be able to accommodate additional mixed-used development due to its constrained physical capacity as well as the area's height limit (11.4 meters). Therefore, the site does not meet the requirement. (0%)
- Site 6 presents the ability to accommodate mixed-use development due to its large area (16.4 acres). However, given other site factors such as its height limit (11 meters), its general urban area official plan designation and that it is zoned for major leisure, it would be difficult, but not impossible, to accommodate a library and additional mixed-use development. Therefore Site 6, despite its sufficient area, barely meets the requirement. (20%)
- Site 7 could accommodate mixed-used development by its mixed-use centre official plan designation but it is constrained by the area's height limit (11 meters) which could be addressed through rezoning. Site 7 is therefore considered satisfactory with respect to the requirement. (50%)

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3. Site is sufficient to allow for an innovative architectural statement

- Site 1 will create certain architectural challenges given that, from a street perspective, the bottom floors of the facility would be blocked by an overpass. This site therefore meets but not exceeds the requirement. (70%)
- Site 2 is located in an area surrounded with green space, large boulevards and large space for a plaza which allows for an innovative architectural statement. This site therefore exceeds the requirement. (100%)
- Site 3 will allow for minimal innovative architectural statement due to its limited size and footprint and therefore barely meets the requirement. (20%)
- Site 4 will allow for an innovative architectural statement. However, it will be subject to certain challenges such as respecting City Hall's existing architecture and the site's limited developable area. Site 4 therefore meets but does not exceed the requirement. (70%)
- Site 5 will allow for an innovative architectural statement. However, it must be complementary to the designated heritage conservation district in which it is located which will minimize innovation. Site 5 therefore meets but does not exceed the requirement. (70%)
- Site 6 will allow for an innovative architectural statement. However, it will be subject to unimpressive surroundings and the location which is between a hotel and a stadium. Site 6 therefore meets but does not exceed the requirement. (70%)
- Site 7 will allow for an innovative architectural statement that meets, but does not exceed, expectations. The low scale nature of the surrounding area will provide a difficult contextual backdrop and high density construction could overshadow the neighbourhood. (70%)

4. Site is visible from as many approaches as possible

- Site 1 presents a number of visibility limitations and is considered satisfactory with respect to the requirement. (50%)
- Site 2 presents good visibility from all approaches (North, South, West and East) despite the escarpment above it. The site therefore exceeds the requirement. (100%)
- Site 3 is surrounded by high-rise buildings and therefore presents minimal visibility. (20%)
- Site 4 is located behind City Hall with difficult access points and therefore presents minimal visibility. (20%)
- Site 5 is surrounded by low-scale buildings and therefore meets but does not exceed the visibility requirement. (70%)

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- Site 6 presents good visibility from all approaches and exceeds the requirement. (100%)
- Site 7 presents a number of visibility limitations but is considered more visible than Site 1 given that it is in a corner location and is elevated. Site 7 therefore meets but does not exceed the visibility requirement. (70%)

B. Site Physical Capacity

5. Within 400 meters of a Confederation Line Station

- Site 1 is adjacent to Bayview Rapid Transit Station and therefore exceeds the requirement. (100%)
- Site 2 is located 250 meters from Pimisi Rapid Transit Station and therefore meets but does not exceed the requirement. (70%)
- Site 3 is located directly across, 30 meters, from Lyon Station and therefore exceeds the requirement. (100%)
- Site 4 is located 530 meters from the University of Ottawa Transit Station and 630 meters from Rideau Transit Station. Although both stations are greater than 400 meters away, consideration was given to its proximity to multiple Confederation Line stations. Therefore, the site was considered to have barely met the requirement. (20%)
- Site 5 is located 240 meters from Rideau Transit Station and therefore meets but does not exceed the requirement. (70%)
- Site 6 is located 400 meters from Tremblay Light Rail Rapid Transit Station and is considered satisfactory with respect to the requirement. (50%)
- Site 7 is located 80 meters from Bayview Rapid Transit Station, but it is across an intersection. It meets but does not exceed the requirement due to the intersection that must be crossed in order to access the facility. (70%)

6. Proximity to planned sidewalks, pedestrian paths, bicycle paths, parking access, lay by and drop off and proximity to major arterial roads

- Site 1 presents close proximity to sidewalks, pedestrian and bicycle paths, parking access and arterial access. However, the site is located in a very busy area (at the intersection of Albert and Bayview). Therefore, it meets but does not exceed the requirement. (70%)
- Site 2 presents close proximity to sidewalks, pedestrian and bicycle paths, parking access and arterial access and therefore exceeds the requirement. (100%)
- Site 3 presents close proximity to sidewalks but not to bicycle paths or parking access and is therefore considered satisfactory. (50%)

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- Site 4 presents close proximity to sidewalks, pedestrian paths and bicycle paths but has no direct access to major arterial roads. As such, it meets but does not exceed the requirement. (70%)
- Site 5 presents close proximity to major arterial roads. However, it is located in a very busy commercial area, which does not have a bicycle path and presents difficulties for lay by and drop off. This site is therefore considered satisfactory. (50%)
- Site 6 presents poor proximity to pedestrian paths. It is however considered satisfactory due to its parking access and accessible lay by and drop off areas. (50%)
- Site 7 presents close proximity to existing bicycle paths but is located on a busy intersection (Albert and Bayview). This site therefore meets but does not exceed the requirement. (70%)

C. Downtown Location

7. Urban site within a downtown precinct that falls within Area "A" set out in Schedule 1 of Zoning By-law 2008-250 and is proximate to the cultural and administrative centre of the City

- Site 1 is located on the border of the Central Area and does not meet the requirement. (0%)
- Site 2 is located on the West end of the Central Area on the lower escarpment. It meets but does not exceed the requirement. (70%)
- Site 3 is located in the Central Area and therefore exceeds the requirement. (100%)
- Site 4 is located in the Central Area and therefore exceeds the requirement. (100%)
- Site 5 is on the North end of the Central Area. It meets but does not exceed the requirement. (70%)
- Site 6 is not located in the Central Area. Therefore, it does not meet the requirement. (0%)
- Site 7 is located on the border of the Central Area and does not meet the requirement. (0%)

Gating Assessment Result:

As the primary outcome of Stage 1 – Gating Assessment, only Site 1 (7 Bayview Road) and Site 2 (557 Wellington) were able to achieve a passing score (70 points) with respect to the primary gateway criteria. These site options were then further assessed against the selection criteria specified in Stage 2 – Further Assessment.

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Site 3 (156-160 Lyon Street), Site 4 (110 Laurier Avenue West), Site 5 (70 Clarence Street), Site 6 (300 Coventry Road) and Site 7 (141 Bayview Road) failed to pass the gating assessment and therefore were not given further consideration.

Further Assessment

Further assessment criteria and assessment results are summarized in the matrix and commentary below.

Criteria	Possible Points	Site 1 7 Bayview	Site 2 557 Wellington
A. Site Physical Capacity			
1. The site is suitable for obtaining Zoning and Official Plan Amendments to support a Library and can be supported by City Planning.	10	10.0 (100%)	7.0 (70%)
2. The site is suitable for obtaining Zoning and Official Plan Amendments to support mixed-use development and can be supported by City Planning.	10	10.0 (100%)	7.0 (70%)
3. There are opportunities to use sustainable architecture and minimize environmental impact.	10	10.0 (100%)	10.0 (100%)
B. Contextual Suitability and Proximate Activities			
4. Proximity to planned parks and green spaces.	4	4.0 (100%)	4.0 (100%)
5. Planned future development in the surrounding area will be complementary in terms of character and image.	8	5.6 (70%)	8.0 (100%)
6. There are proximate commercial, residential and institutional facilities that are complementary in terms of function and use.	8	1.6 (20%)	5.6 (70%)
C. Opportunities to Contribute to Civic Planning Initiatives			
7. Development at this site would serve as a catalyst and economic driver for proactive downtown development.	10	5.0 (50%)	10.0 (100%)
8. Development at this site contributes to City of Ottawa development policies, secondary plans and transit oriented growth and intensification.	10	10.0 (100%)	7.0 (70%)
9. Site contributes to the establishment of a new civic focal point and civic identity.	10	7.0 (70%)	10.0 (100%)

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Criteria	Possible Points	Site 1 7 Bayview	Site 2 557 Wellington
D. Encumbrances			
10. There are no significant physical encumbrances that will put the Project at risk of not meeting Project schedule timelines and/or add to Project costs.	7	1.4 (20%)	4.9 (70%)
11. There are no significant servicing encumbrances that will put the Project at risk of not meeting Project timelines or add to Project costs.	4	2.0 (50%)	2.8 (70%)
12. There are no significant environmental encumbrances that will place the Project at risk of not meeting Project timelines and/or add to Project costs.	4	0.8 (20%)	2.0 (50%)
13. There are no significant legal encumbrances that will put the Project at significant risk of not meeting Project timelines and/or add to Project costs.	5	1.0 (20%)	2.5 (50%)
Further Assessment Score	100	68.4	80.8

Commentary on Further Assessment

A. Site Physical Capacity

- 1. The site is suitable for obtaining Zoning and Official Plan Amendments to support a Library and can be supported by City Planning**
 - Site 1 is located in a mixed-use centre zone that permits a library and therefore exceeds the requirement. (100%)
 - Site 2 will require a zoning amendment to permit a library, which should be achievable, and therefore meets but does not exceed the requirement. (70%)
- 2. The site is suitable for obtaining Zoning and Official Plan Amendments to support mixed-use development and can be supported by City Planning**
 - Site 1 has a mixed-use centre official plan designation and is located in a mixed-use centre zone. This site therefore exceeds the requirement. (100%)
 - Site 2 will require a zoning amendment to permit mixed-use development, which should be achievable, and therefore meets but does not exceed the requirement. (70%)
- 3. There are opportunities to use sustainable architecture and minimize environmental impact**
 - Both Site 1 and Site 2 provide excellent opportunities for sustainable design and allow for minimal environmental impact. Therefore both of them exceed

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the requirement. (100%, 100%)

B. Contextual Suitability and Proximate Activities

4. Proximity to planned parks and green spaces

- Both Site 1 and Site 2 provide close proximity to planned parks and green space. Therefore both of them exceed the requirement. (100%, 100%)

5. Planned future development in the surrounding area will be complementary in terms of character and image

- Future development is expected for areas surrounding Site 1 but there is significant uncertainty (the nature of the future development is unknown at this stage). This site therefore meets but does not exceed the requirement. (70%)
- The area surrounding Site 2 has excellent potential for future development that will be complementary to the library in terms of character and image. (100%)

6. There are proximate commercial, residential and institutional facilities that are complementary in terms of function and use

- Site 1 is currently not close to any commercial, residential or institutional facilities. However, an Innovation Center is being developed on another parcel of land on the site. This site therefore minimally meets the requirement. (20%)
- Site 2 is close to residential and institutional facilities but is somewhat far from the commercial area. This site therefore meets but does not exceed the requirement. (70%)

C. Opportunities to Contribute to Civic Planning Initiatives

7. Development at this site would serve as a catalyst and economic driver for proactive downtown development

- Site 1 is not located in the downtown core but rather on the border. Due to its location, the site is expected to serve as a limited economic driver of downtown development in the near future. It is therefore considered satisfactory with respect to this requirement. (50%)
- Site 2, given its strategic location, is expected to serve as a catalyst and economic driver for proactive downtown development. (100%)

8. Development at this site contributes to City of Ottawa development policies, secondary plans and transit oriented growth and intensification

- The potential development on Site 1 will contribute to the City's development policies, secondary plans and transit oriented growth. This site therefore

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exceeds the requirement. (100%)

- The potential development on Site 2 will contribute to the City's development policies, secondary plans and transit oriented growth however amendments to zoning will be required before this is achievable. This site therefore meets but does not exceed the requirement. (70%)

9. Site contributes to the establishment of a new civic focal point and civic identity

- Site 1 is located outside the downtown core therefore it meets but does not exceed the requirement. (70%)
- Site 2, given its strategic location, is expected to contribute to the establishment of a new civic focal point and civic identity. (100%)

D. Encumbrances

10. There are no significant physical encumbrances that will put the Project at risk of not meeting Project schedule timelines and/or add to Project costs

- Site 1 has significant physical encumbrances including geo-technical issues and issues related to the high water table, which impose extra risks on Project implementation. Therefore, this site barely meets the requirement. (20%)
- Site 2 has fewer physical encumbrances than Site 1. Potential issues may exist with the utilities underneath the site as well as with the temporary structures that support the construction of the LRT. Therefore, it meets but does not exceed the requirement. (70%)

11. There are no significant servicing encumbrances that will put the Project at risk of not meeting Project timelines or add to Project costs

- Site 1 will require certain servicing upgrades which impose extra risks on Project implementation. The site is considered satisfactory with respect to the requirement. (50%)
- Site 2 has certain servicing encumbrances such as the need to relocate the Enbridge gas line and the Brickhill water main. Therefore, it meets but does not exceed the requirement. (70%)

12. There are no significant environmental encumbrances that will place the Project at risk of not meeting Project timelines and/or add to Project costs

- Site 1 has contamination issues, which imposes significant risk to the Project. The site barely meets the requirement. (20%)
- Whether Site 2 is contaminated was unknown at the time of this assessment, however the issues (if any) will certainly be significantly less than Site 1. This site is therefore considered satisfactory with respect to the requirement.

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(50%)

13. There are no significant legal encumbrances that will put the Project at significant risk of not meeting Project timelines and/or add to Project costs

- Site 1 will require a number of conditions to be met before the City can lift the holding zone. Studies will be required in order to meet these conditions. This puts the Project at risk and therefore Site 1 barely meets the requirement. (20%)
- Site 2 has certain legal encumbrances with respect to the need to vacate the site and transfer the site to the City, which could potentially put the Project at risk. Site 2 is therefore considered satisfactory with respect to this requirement. (50%)

Conclusion of Site Assessment

Criteria	Possible Points	Site 1 7 Bayview	Site 2 557 Wellington
Gating Assessment Score	100	71.5	88.0
Further Assessment Score	100	68.4	80.8
Overall Assessment Score	100	70.0	84.4
Overall Assessment Result		2nd Ranked	1st Ranked

As a result of this analysis, the City owned property at 557 Wellington was selected as the preferred site for the New Build option.

As compared to Site 1 (7 Bayview), Site 2 (557 Wellington) was considered a superior location in both the Gating and Further Assessments. Site 2 is on a property located in the downtown precinct and is adjacent to commercial, residential and institutional facilities while also being close to parks and green spaces. The site is easily accessible by public transit, walking, bicycling and car. It provides sufficient area to accommodate the required functional building programs and allows for innovative and sustainable design. It also offers excellent potential for mixed-use development. Development at this site could serve as a catalyst for, and economic driver of, proactive downtown expansion and development.

Although Site 1 (7 Bayview) also passed the Gating Assessment, it is on the western edge of the Central Area boundary and is not presently in close proximity to any commercial, residential or institutional facilities. Furthermore, this site has significant environmental and geotechnical issues that would need to be fully identified. This imposes a significant risk to completion of the Project in the near term as well as uncertainty in determining the value of any additional lands that may be offered as part of a mixed use joint development.

Qualitative / Non-Financial Analysis

Approach

The qualitative analysis attempts to evaluate the impact of the measures that may not be direct costs incurred but are nonetheless highly impactful in the assessment of a particular Project option. These are matters such as the achievement of policy and Project objectives, risks, customer experience, technological considerations and impact on the library's operations and service delivery.

To enable the analysis of the qualitative (non-financial) benefits and constraints of the five Project options, 17 assessment criteria, which reflect the strategic aims of the City and OPL as well as the specific objectives and principles of the Project, were developed (see the qualitative analysis matrix below for the details of each criterion). Additionally, in order to reflect the relative importance of an assessment criterion to the Project, each criterion was assigned a weighting, represented as a percentage, which together with the remainder of the criteria sums to 100%.

Two interactive workshops were held with representatives from the City and OPL to assess each Project option against each qualitative assessment criteria. The options were assessed against two major considerations:

- Alignment with objectives; and
- Risk to the City and OPL.

This "Qualitative / Non-Financial Analysis" section of the business case is focused on the assessment of the alignment of each Project option with the objectives that are reflected in the assessment criteria. The risk assessment is detailed in the "Risk Analysis" section.

For alignment with the objectives, each option was assessed and scored on a scale of 1 to 5, representing weakest to strongest alignment respectively. The scores were then multiplied by the applicable weighting to calculate the overall qualitative analysis score for each of the Project options.

Project options that achieved a total score that was less than 50% of the maximum possible weighted qualitative score (before any risk considerations) were not considered further in the risk assessment or financial analysis processes.

The qualitative scores were achieved on a consensus basis, utilizing the City's and OPL's internal expertise and additional industry insights provided by the GT team. The inputs and rationales discussed were recorded in detail during the workshops and then documented in the qualitative analysis matrix below.

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Qualitative Analysis Matrix

Assessment Element	Weighting	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
1. Business Driver	40%					
1.1. Achieving OPL's vision for the Main Library facility	7%	1	2	3	4	5
1.2. Convenient access for customers	5%	2	2	3	3	4
1.3. Meeting the functional program requirements, responding to the service delivery requirements and improving customer experience	18%	1	2	3	4	5
1.4. Contributing to the City's civic planning and meeting changing community needs	10%	1	1	3	4	5
2. Design / Technical	35%					
2.1. Meeting the design requirements and achieving an innovative design for the facility	7%	1	1	2	4	5
2.2. Utilizing state-of-the-art technology, especially related to the use of IT and innovation	7%	1	2	3	4	5
2.3. Impact on future lifecycle program and ease of facility maintenance	4%	1	1	3	5	5
2.4. Achieving the AODA and relevant City standards	4%	2	2	4	5	5
2.5. Ability to satisfy modern building code requirements	4%	1	3	3	4	5
2.6. Sustainability and efficiency of the facility	4%	1	1	2	4	5

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Assessment Element	Weighting	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
(achieving the LEED Silver certification and beyond)						
2.7. Extensibility and flexibility of the facility	5%	1	1	2	3	5
3. Project Delivery	15%					
3.1. Managing the design and construction risks and on-schedule delivery of the facility	6%	3	2	2	2	4
3.2. Maintaining ongoing library operations during construction	5%	3	2	1	1	5
3.3. Ensuring the quality of the facility	4%	1	1	2	4	5
4. Financial	10%					
4.1. On-budget delivery of the facility	4%	3	2	2	3	4
4.2. Attracting alternative funding sources	3%	1	1	1	3	5
4.3. Maintaining the long-term value of the facility asset	3%	1	1	1	2	5
Weighted Qualitative Score without Risk Assessment * 10		13.90	16.40	25.20	35.80	48.50
Maximum Possible Weighted Qualitative Score without Risk Assessment * 10		50.00	50.00	50.00	50.00	50.00
Total Qualitative Score without Risk Assessment (%)		27.80%	32.80%	50.40%	71.60%	97.00%

Commentary on Qualitative Scores

1. Business Drivers

1.1. Achieving OPL’s vision for the Main Library facility: *the level by which each option meets the OPL’s vision to provide a library that serves as both a downtown community branch and a city-wide resource supporting services that are customer-centric, provides spaces for community, collections and creation, and allows success through learning, literacy and innovation.*

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The existing building (Status Quo), even after essential repairs and maintenance are performed, is not capable of achieving OPL's vision for the Main Library and therefore scored 1 out of 5 for alignment with the objective.

The Renewal option is not expected to be able to achieve the vision. However, it is still an improvement on the Status Quo and as a result is ranked slightly higher, 2 out of 5, for alignment with the objective.

The Renovation and Redevelopment options improve the facility to a certain extent. However, neither of them fully achieves OPL's vision for the Main Library as they do not meet all of the functional program requirements. As such, Renovation scored 3 out of 5 and Redevelopment scored 4 out of 5 for alignment with the objective, the difference deriving from the fact that the Redevelopment Option does provide more programming space than the Renewal Option.

The New Build option, if managed well, is expected to be the solution that has the greatest potential to fully achieve the Project vision and scored 5 out of 5 for alignment with the objective.

1.2. Convenient access for customers: *the level by which each option provides convenient access for customers (close to rapid transit services, safe access by walking and bicycling, etc.).*

All options considered offer reasonably convenient access for customers, however none receives a perfect score as perfect alignment would entail a library located downtown, near a rapid transit line and with reserved lanes for bicycles (i.e. not directly on the street). The current location of the Main Library Facility allows for access by public (bus) transit, walking and bicycling. However, it is not on the rapid transit line.

The current location and entrance of the Main Facility will remain unchanged under the Status Quo option and the Renewal option includes only modest changes to the public entrance. Under both options, the facility entrance remains distant from rapid transit services and is uninviting with poor access at street level. Both options scored 2 out of 5 for alignment with the objective.

The Renovation and Redevelopment options will replace the two current entrances with a new one situated slightly farther north on Metcalfe Street. The entrance should become more central and more inviting allowing for better access for customers under both options. As such, both options scored 3 out of 5 for alignment with the objective.

The New Building should be designed in a way that offers more convenient access for customers. The preferred site location (557 Wellington) for the New Build option is located 250 meters from the Pimisi Rapid Transit Station. However, given that the site is not yet confirmed, there may be potential issues that could impact access to the facility. Therefore, this option scored 4 out of 5 for alignment with the objective.

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1.3. Meeting the functional program requirements, responding to the service delivery requirements and improving customer experience: *the level by which each option allows the OPL to deliver a library that meets all of the functional program requirements, effectively responds to the service delivery requirements and improves customer experience and satisfaction.*

The Status Quo option does not meet the functional program requirements and scored 1 out of 5 for alignment with the objective.

The Renewal option also does not meet the functional program requirements; however it represents a slight improvement over the Status Quo option. As such, it scored 2 out of 5 for alignment with the objective.

The Renovation and Redevelopment options upgrade the facility to a certain extent. It is expected that an upgraded facility will improve the customer experience. However, neither of these options fully meets the functional program requirements nor addresses all of the service delivery requirements. As a result, the Renovation option scored 3 out of 5 and the Redevelopment scored 4 out of 5 for alignment with the objective.

The New Build option, if managed well, is expected to be the solution to most likely meet the full functional program requirements and therefore scored 5 out of 5 for alignment with the objective.

1.4. Contributing to the City's civic planning and meeting changing community needs: *the extent to which each option allows OPL to provide a library that will support the City's civic priorities and initiatives, such as integration with emerging transit plans, respond to patterns of future urban growth and contribute to civic identity and economic development thereby meeting changing community needs over time.*

The Status Quo and Renewal options are not expected to significantly contribute to the City's civic planning or meet changing community needs in the future and as such both scored 1 out of 5 for alignment with the objective.

The Renovation option contributes to downtown development to a greater extent than the Status Quo and Renewal Options but still faces a challenge in that it is not able to significantly support or contribute to major civic initiatives such as emerging transit plans, civic identity or emerging patterns of downtown urban growth. As a result, it scored 3 out of 5 for alignment with the objective.

The Redevelopment option offers more community spaces and should be more flexible than the Renovation option. Overall, it should be able to contribute to a significant number of the City's civic planning objectives as well as be responsive to external community needs. However, the building's layout remains restricted by the current architectural structure and provides minimal opportunity for expansion which limits the building's ability to be responsive to changing needs and priorities. As such, it scored 4 out of 5 for alignment with the objective.

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The New Build option is expected to best address the City's civic planning initiatives and be best able to respond to changing community needs over time due to the flexibility that is a result of being able to design and build a new facility that can fulfil this function. As such, this option scored 5 out of 5 for alignment with the objective.

2. Design / Technical

2.1. Meeting the design requirements and achieving an innovative design for the facility: *the level by which each option allows OPL to design and deliver a facility that meets all design requirements (e.g. functionality requirements, anticipated customer expectations, requirement for being a landmark/signature building within the City Urban Core area, etc.) while achieving a high level of innovation that inspires library staff and customers.*

The Status Quo and Renewal options do not meet the design requirements and do not allow for the flexibility to achieve an innovative facility design and as such both scored 1 out of 5 for alignment with the objective.

The Renovation option is expected to meet some of the design requirements but not all. Additionally, it most likely will not allow for sufficient space for innovative design. It scored slightly stronger than the Status Quo and Renewal options, 2 out of 5 for alignment with the objective.

Depending on the plans for the redevelopment of the existing building, the Redevelopment option could potentially meet all of the design requirements. However, design innovations may be limited due to the existing building structure and the site. This is reflected in its strong, yet not perfect, score of 4 out of 5 for alignment with the objective.

The New Build option, if managed well, is expected to be the solution that will most likely meet the design requirements and achieve an innovative design. As such, it scored 5 out of 5 for alignment with the objective.

2.2. Utilizing state-of-the-art technology, especially related to the use of IT and innovation: *the level by which each option allows OPL to incorporate state-of-the art technology into facility design and use advanced IT technology to support customer services and library operations.*

The Status Quo option does not allow for the use of advanced new technology and scored 1 out of 5 for alignment with the objective.

The Renewal option will not allow for the use of advanced new technology, but will meet the minimum technology requirements, which the Status Quo option does not. For these reasons, the Renewal option is slightly more aligned with the objective than the Status Quo option and has scored 2 out of 5.

For this objective to be met, the technology needs to be innovative, which goes beyond merely adding equipment to the building and extends to how services are

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delivered and how well the site is set up for future innovation. The building under the Renovation and Redevelopment options will likely allow for only limited innovation.

The Renovation option is expected to allow for the use of new technology, but within the constraints of the existing building and therefore scored 3 out of 5 for alignment with the objective.

The Redevelopment option is expected to bring a greater ability to utilize new technology than the Renovation option, considering that the existing building will be stripped down to its structural shell. However, there may still be certain constraints imposed by the existing site and therefore the option scored 4 out of 5 for alignment with the objective.

The New Build option is expected to be the option most able to utilize new technology, based on the ability to design requirements into the construction of the base building, e.g. raised floor, and as such scored 5 out of 5 for alignment with the objective.

2.3. Impact on future lifecycle program and ease of facility maintenance: *the impact of each option on the ease and efficiency of future life-cycling and the maintenance of the facility.*

The Status Quo and Renewal options could result in significant lifecycle and maintenance needs in the near future. This includes the renewal of the vertical lifts (i.e. escalators and elevators) as they currently do not meet the needs of the library and are not scheduled for improvement under these two options. Additionally, neither of these options extends the useful life of the building and will result in significant costs to keep the facility operational. As such, both options scored 1 out of 5 for alignment with the objective.

The Renovation option addresses, to a certain extent, the lifecycle and maintenance issues, and has scored 3 out of 5 for alignment with the objective.

The Redevelopment and New Build options are expected to best address the lifecycle and maintenance issues as they will consist of a like-new and a completely new building respectively. Both options scored 5 out of 5 for alignment with the objective.

2.4. Achieving the AODA and relevant City standards: *the level to which each option allows OPL to design and deliver a facility that will provide free access for disabled customers and employees.*

The Status Quo and Renewal options meet the minimum accessibility requirements and some of the AODA standards. The Renewal option is deemed to be equivalent to the Status Quo as neither involves fixing the elevators, escalators or mezzanine to make them more accessible. As such, both options scored 2 out of 5 for alignment with the objective.

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The Renovation option is expected to address the accessibility requirements to a greater degree than the above two options and includes the renewal of the escalators and elevators. As such, this option scored 4 out of 5 for alignment with the objective.

The Redevelopment and New Build options are both expected to fully address the accessibility requirements and scored 5 out of 5 for alignment with the objective.

2.5. Ability to satisfy modern building code requirements: *the extent to which each option allows the facility to meet the building code requirements.*

The Status Quo option does not meet all modern building code requirements as the existing building will remain in a state similar to original construction, which is reflected by its low score of 1 out of 5 for alignment with the objective.

The Renewal and Renovation options are similarly aligned as both are expected to address some of the modern building code requirements as part of construction but not all, due to the constraints of the existing building and the level of work to be performed. Both options scored 3 out of 5 for alignment with the objective.

The Redevelopment option creates a like-new building which should address most, but not all, of the relevant modern building code requirements. This is reflected in its high, yet not perfect, score of 4 out of 5 for alignment with the objective.

The New Build option is expected to fully address this objective and be compliant with the most up to date building code requirements and as such scored 5 out of 5 for alignment with the objective.

2.6. Sustainability and efficiency of the facility (achieving the minimum LEED Silver certification or higher): *the extent to which each option allows the facility to achieve the requirements for a LEED Silver certification, which is required by the City for all new City owned buildings.*

Because of the lack of major improvements to the existing building, the Status Quo and Renewal options do not address the sustainability and efficiency of the facility and will not meet the criteria for LEED certification. This is reflected by their low scores of 1 out of 5 for alignment with the objective.

The Renovation option will face significant constraints to improving the facility's overall sustainability and efficiency however some building components will be improved. This option may achieve LEED Commercial Interiors certification however it will not achieve LEED Silver certification. The option therefore scored 2 out of 5 for alignment with the objective.

The Redevelopment option allows for much greater flexibility to improve the sustainability and efficiency of the facility. This option should be able to achieve

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the LEED Silver certification, but constraints related to the existing layout will likely inhibit OPL from achieving higher levels of sustainability and efficiency. This is reflected by its strong, yet not perfect, score of 4 out of 5 for alignment with the objective.

The New Build option is expected to fully achieve the LEED Silver requirements and may reach Gold level requirements. As such, it scored 5 out of 5 for alignment with the objective.

2.7. Extensibility and flexibility of the facility: *the extent to which each option allows the facility to be flexible and extendable in order to address growing and changing needs in the future.*

Because of the lack of major improvements to the existing building, the Status Quo and Renewal options do not improve the extensibility and flexibility of the facility and as a result both scored 1 out of 5 for alignment with the objective.

The Renovation and Redevelopment options are expected to improve the extensibility and flexibility of the facility to a certain extent. However, there will be significant constraints associated with the building structure and the site which restricts the extensibility of both. The Renovation option allows for even less flexibility and as such scored 2 out of 5 for alignment with the objective. The Redevelopment option scored 3 out of 5 for alignment with the objective as the major overhaul does allow for greater flexibility and extensibility than the Renovation option.

The New Build option allows for the greatest extensibility and flexibility of the facility and as such has scored 5 out of 5 for alignment with the objective. OPL's site possesses the desired flexibility and extensibility.

3. Project Delivery

3.1. Managing the design and construction risks and on-schedule delivery of the facility: *the extent to which each option allows OPL to effectively and efficiently manage the design and construction risks associated with the Project and to deliver the facility within the timetable requirements.*

The Status Quo option should involve less construction work than the other options and is expected to be easier to manage and therefore scored 3 out of 5 for alignment with the objective.

Compared to building from scratch, renovating an existing building usually poses significantly greater implementation risks during construction. It would be difficult for OPL to effectively manage design and construction risks and the Project schedule under the Renewal, Renovation and Redevelopment options due to the challenges that are a natural part of building renovations. Additionally, the Renovation and Redevelopment options involve a number of "unknowns" (such as the air rights) which could affect design and construction. As such, all three

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options scored 2 out of 5 for alignment with the objective.

The New Build option is able to better manage design and construction risks and the Project schedule. However, risk is not fully avoidable given the large size and complexity of the construction work and the risk of any “unknowns” that may arise at the preferred site. Still, the New Build should lead to fewer “unknowns” than the Renovation and Redevelopment options as it is a fully integrated and coordinated construction approach. This is the cause of its higher score of 4 out of 5 for alignment with the objective.

3.2. Maintaining ongoing library operations during construction: *the extent to which each option allows OPL to minimize the interference of construction activities on ongoing library operations.*

The Status Quo option should not impact operations; however some work will need to be performed during operating hours and in public areas. The limited repair work, and its impact, is reflected in this option’s score of 3 out of 5 for alignment with the objective.

The Renewal option should be similar but will present greater inconveniences than the Status Quo option due to the greater amount of work being performed, and therefore scored 2 out of 5 for alignment with the objective.

The Renovation and Redevelopment options are expected to result in significant interference with ongoing library operations. Both options will require a building closure and a move to a temporary service location which will provide reduced services to the downtown catchment area. As such, both options scored 1 out of 5 for alignment with the objective.

The New Build option will have the least impact on library operations as the work will be done on a new facility and site while operations continue at the existing facility and site. This is reflected in its score of 5 out of 5 for alignment with the objective.

3.3. Ensuring the quality of the facility: *the extent to which each option allows OPL to properly assess and manage the quality of the new/renovated building and minimize the potential for building deficiencies and latent defects.*

The Status Quo and Renewal options do not assure the quality of the facility and both scored 1 out of 5 for alignment with the objective.

The Renovation option is expected to allow for better management of building quality than the previous two options, but with significant constraints when compared to the Redevelopment and New Build options. As such, this option scored 2 out of 5 for alignment with the objective.

The Redevelopment option is expected to allow for better management of building quality, given the relatively “cleaner” construction approach as compared to the Renovation option and scored 4 out of 5 for alignment with the objective.

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The New Build option allows for the best management of building quality given that the facility will be built according to specified quality requirements, and as such scoring 5 out of 5 for alignment with the objective.

4. Financial

4.1. On-budget delivery of the facility: *the level by which each option allows OPL to effectively manage Project costs and minimize the potential for cost overruns.*

The Status Quo option will not involve significant construction work (e.g. “opening walls”) and is expected to allow for adequate control over Project costs. As such, this option scored 3 out of 5 for alignment with the objective.

The Renewal and Renovation options are both expected to allow for little control over the Project costs because of the high risk of “unknowns” associated with the construction and therefore both scored 2 out of 5 for alignment with the objective.

The Redevelopment option is expected to allow for better control over the Project costs, versus the Renewal and Renovation options, given the relatively “cleaner” construction approach, and as such scored 3 out of 5 for alignment with the objective.

The New Build option allows for the greatest control over the Project costs and provides the greatest likelihood of being on-budget. However, there may still be cost overruns considering the large size and complexity of the facility and the “unknowns” associated with the site. This is reflected by its strong, yet not perfect, score of 4 out of 5 for alignment with the objective.

4.2. Attracting alternative funding sources: *the extent to which each option allows OPL to attract and obtain alternative funding for the Project. (e.g. naming rights, donations, partnerships, etc.)*

The Status Quo and Renewal options are likely to be 100% funded by City sources. The Renovation option may attract some capital campaign fundraising however it is not expected to be significant. As such, all three options scored 1 out of 5 for alignment with the objective.

The Redevelopment option presents an opportunity to attract alternative funding as it should be viewed as superior to the existing library in the role of a multi-use facility and community hub. This option should result in a like-new building. The facility will not be as attractive to funders as a New Build would be, however it will be more attractive than the Status Quo, Renewal or Renovation options. The Redevelopment option therefore scored 3 out of 5 for alignment with the objective.

The New Build option should offer various opportunities for alternative funding through various public partnering and/or development options, and therefore scored 5 out of 5 for alignment with the objective.

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4.3. Maintaining the long-term value of the facility asset: *the extent to which each option allows OPL to maintain the long-term value of the facility asset.*

The Status Quo, Renewal and Renovation options all result in a building without any significant value added, if any at all, that remains on the same site and is attached to an aging office tower and parking garage. When the lease on the site ends in June 2034, the ownership of the entire property will revert to the OPL and City. It is unlikely, as a result of the lack of investment, that this asset will retain any long-term value for OPL. For these reasons, all three options scored 1 out of 5 for alignment with the objective.

The Redevelopment option results in a building that, although stripped down to its bare structure and renovated, is still conjoined with an aging office tower and parking garage. When the lease ends in June 2034, ownership of the property reverts to OPL and the City and those two structures will likely reduce the value of the asset, even with the significant investment in the library property that would occur under this option. As such, this option has scored slightly higher at 2 out of 5 for alignment with the objective.

The New Build option is expected to best maintain the long-term value of the facility, as a brand new asset is being constructed and its value maximized. It therefore scored 5 out of 5 for alignment with the objective.

Conclusion of the Qualitative Analysis

Assessment Element	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
Weighted Qualitative Score without Risk Assessment * 10	13.90	16.40	25.20	35.80	48.50
Maximum Possible Weighted Qualitative Score without Risk Assessment * 10	50.00	50.00	50.00	50.00	50.00
Total Qualitative Score without Risk Assessment (%)	27.80%	32.80%	50.40%	71.60%	97.00%
Proceed to the risk assessment?	No	No	Yes	Yes	Yes

Based on the results of the qualitative analysis, without taking into account the risks associated with each Project option, the **New Build** option represents the closest alignment with OPL's and the Project's strategic objectives. This option allows the OPL to effectively achieve its vision for the Main Library. It meets all of the functional program requirements for the Main Library Facility and provides excellent potential for innovative design and facility management.

Although the **Redevelopment** option also aligns well with OPL's and the Project's

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objectives, it is restricted by the fact that it is not capable of meeting all of the functional program requirements. Additionally, this option is expected to have a significant negative impact on the daily operations of the Main Library during the construction period.

The **Renovation** option is expected to result in significant improvements to the existing facility through the redesign, expansion and refresh of the current functional spaces. However, due to the constraints associated with the existing building layout and footprint, this option is not able to fully address the functional program and design requirements, which makes it a less preferable option when compared to the New Build and Redevelopment options.

The **Status Quo** and **Renewal** options scored the lowest among the Project options considered. These options take a “minimum maintenance” approach to addressing the current facility deficiencies and are not able to meet the minimum target of delivering a Main Library Facility that allows for the provision of modern library services and meets changing community needs. Both options would fail to enhance, and may even deter, the operations and future growth of the library and are expected to extend the useful life of the facility by only approximately 10 – 15 years. Although these options appear to require less upfront capital investment as compared to the other Project options, the City and OPL may end up spending significantly more in 10 – 15 years to redevelop the facility again due to the limited extension in useful life that would result from the current investment under these options.

The combination of these considerations leads to the conclusion that the Status Quo and Renewal options are truly a deferral of the necessary investment and do not provide a viable solution to meet the OPL’s vision and functional program requirements. As such, both options did not meet 50% of the maximum possible weighted qualitative score (before risk assessment) and were not further considered in the risk assessment and financial analysis processes.

The Renovation, Redevelopment and New Build options are further analyzed in the “Risk Analysis” section of the business case.

Further Analysis

As described earlier, the assessment of the Project options includes two major considerations:

- Alignment with objectives; and
- Risk to the City and OPL.

The assessment of the risks associated with the Renovation, Redevelopment and New Build options in achieving the overall objectives is detailed in the “Risk Analysis” section that follows.

Risk Analysis

Approach

All major capital investments have inherent project risks. For the purposes of this business case, these inherent risks are defined as the potential adverse events that may have an impact on the City and OPL when undertaking a project, which need to be carefully assessed and taken into account during the decision making process.

Each Project option embodies a unique risk profile. Following the qualitative analysis, which assessed the alignment of each Project option with the objectives (see the previous “Qualitative / Non-Financial Analysis” section), the risk analysis detailed in this section is focused on assessing the risks associated with each Project option to achieving the objectives identified.

The risk assessment was conducted concurrently with the assessment of the alignment with objectives, through the consensus based interactive workshops held with the representatives from the City and OPL. Each Project option was scored and assessed on a three point scale to consider the risk presented against the criteria, denoted as low risk (L), medium risk (M) or high risk (H).

During the analysis, the alignment and risk factors were considered initially in isolation. For example, a Project option may score 5 as being highly aligned with an objective, however, it may present a high degree of risk attached to achieving that objective, in which case the option would be accordingly scored as high risk for that criteria.

The above mentioned considerations (i.e. alignment with objectives and risk to the City and OPL) were then combined to produce a risk weighted, multiplicative score (the “risk adjusted qualitative score”) for each Project option for each assessment criterion. Weightings for risk were applied as follows:

- High risk (H) = 0.5
- Medium (M) = 1.0
- Low risk (L) = 1.5

The sum of the individual risk adjusted qualitative scores for all assessed criteria resulted in the total risk adjusted qualitative score for each of the Project options.

The “Risk Adjusted Qualitative Analysis Matrix” on the following page summarizes the combined considerations of the alignment of the Project options with the identified objectives and the associated level of risk to the City and OPL.

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Risk Adjusted Qualitative Analysis Matrix

Assessment Element	Weighting	Opt. 2 Renovation		Opt. 3 Redevelopment		Opt. 4 New Build	
		Align.	Risk	Align.	Risk	Align.	Risk
1. Business Driver	40%						
1.1. Achieving OPL's vision for the Main Library facility	7%	3	H	4	H	5	L
1.2. Convenient access for customers	5%	3	L	3	L	4	M
1.3. Meeting the functional program requirements, responding to the service delivery requirements and improving customer experience	18%	3	M	4	H	5	L
1.4. Contributing to the City's civic planning and meeting changing community needs	10%	3	H	4	M	5	L
2. Design / Technical	35%						
2.1. Meeting the design requirements and achieving an innovative design for the facility	7%	2	H	4	H	5	M
2.2. Utilizing state-of-the-art technology, especially related to the use of IT and innovation	7%	3	M	4	M	5	L
2.3. Impact on future lifecycle program and ease of facility maintenance	4%	3	H	5	M	5	L
2.4. Achieving the AODA and relevant City standards	4%	4	M	5	L	5	L
2.5. Ability to satisfy modern building code requirements	4%	3	M	4	M	5	L
2.6. Sustainability and efficiency of the facility (achieving the LEED Silver certification and beyond)	4%	2	H	4	M	5	L
2.7. Extensibility and flexibility of the facility	5%	2	H	3	H	5	M
3. Project Delivery	15%						
3.1. Managing the design and construction risks and on-schedule delivery of the facility	6%	2	H	2	H	4	M
3.2. Maintaining ongoing library operations during construction	5%	1	H	1	H	5	L

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Assessment Element	Weighting	Opt. 2 Renovation		Opt. 3 Redevelopment		Opt. 4 New Build	
		Align.	Risk	Align.	Risk	Align.	Risk
3.3. Ensuring the quality of the facility	4%	2	H	4	M	5	M
4. Financial	10%						
4.1. On-budget delivery of the facility	4%	2	H	3	H	4	M
4.2. Attracting alternative funding sources	3%	1	H	3	H	5	M
4.3. Maintaining the long-term value of the facility asset	3%	1	H	2	H	5	L
Weighted Qualitative Score without Risk Assessment * 10		25.20		35.80		48.50	
Maximum Possible Weighted Qualitative Score without Risk Assessment * 10		50.00		50.00		50.00	
Total Qualitative Score without Risk Assessment (%)		50.40%		71.60%		97.00%	
Risk Adjusted Qualitative Score * 10		19.25		28.20		65.00	
Maximum Possible Risk Adjusted Qualitative Score * 10		75.00		75.00		75.00	
Total Risk Adjusted Qualitative Score (%)		25.67%		37.60%		86.67%	

Commentary on Risk Analysis Scores

1. Business Drivers

1.1. Achieving OPL’s vision for the Main Library facility: *the level by which each option meets the OPL’s vision to provide a library that serves as both a downtown community branch and a city-wide resource supporting services that are customer-centric, provides spaces for community, collections and creation, and allows success through learning, literacy and innovation.*

Both the Renovation and Redevelopment options impose a certain level of risk of not achieving the vision, due to the current and potential constraints of the existing building and site.

There is high risk associated with the Renovation option as, per the existing lease, the OPL currently does not have the rights to expand the existing building as required.

The Redevelopment option is considered high risk due to the constraints of the existing building and site, which includes the need to negotiate access to the air rights above the building.

The New Build option is expected to have the lowest risk and therefore the greatest ability to achieve the vision. As such, this option has been deemed low risk.

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1.2. Convenient access for customers: *the level to which each option provides convenient access for customers (close to rapid transit services, safe access by walking and bicycling, etc.).*

The Renovation and Redevelopment options will replace the two current entrances with a new one, which will be situated slightly further north on Metcalfe Street. Because of the work being done to create a new entrance there is a low risk that this objective will not be met for both options.

The New Build facility should be designed to offer the most convenient access to customers. The preferred site (557 Wellington) is located 250 meters from the Pimisi Rapid Transit Station which would meet the objective. However, given that the site is not yet confirmed, there is still some risk that the preferred site will not be chosen and the objective not met. As such, this option has ranked as medium risk due to the “unknowns” surrounding the future location.

1.3. Meeting the functional program requirements, responding to the service delivery requirements and improving customer experience: *the level by which each option allows the OPL to deliver a library that meets all of the functional program requirements, effectively responds to the service delivery requirements and improves customer experience and satisfaction.*

The Renovation option imposes a certain level of risk of not meeting the requirements, due to the marginal space that will be gained and the potential constraints associated with renovating the existing building and the site as the building will need to be expanded to more fully align with the objective. As such, this option ranked as medium risk.

The Redevelopment option was deemed to be high risk because of the height constraints of the building and the rights that will need to be obtained in order to expand the building which is required in order to fully align with the objective.

The New Build option is expected to have the lowest risk of not meeting the functional program requirements, addressing the service delivery requirements or improving the customer experience and as such has been ranked as low risk.

1.4. Contributing to the City’s civic planning and meeting changing community needs: *the extent to which each option allows OPL to provide a library that will support the City’s civic priorities and initiatives, such as integration with emerging transit plans, respond to patterns of future urban growth and contribute to civic identity and economic development thereby meeting changing community needs over time.*

The Renovation option contributes somewhat to the downtown environment but there is still a high risk that it will not be able to contribute to or support major civic initiatives in any meaningful way. As such, it also presents a high risk of not meeting the objective.

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Although the Redevelopment option poses less risk than the Renovation option as the significant work performed, such as the construction of additional community spaces, means there is a greater likelihood of success in meeting the objectives, the building layout remains restricted by the current architectural structure and provides minimal opportunity for expansion increasing the risk associated with this option. As such, this option ranked as medium risk due to certain constraints relative to the site and existing building structure.

The New Build option is expected to best address the City's priority of civic planning and changing community needs over time and is ranked as low risk.

2. Design / Technical

2.1. Meeting the design requirements and achieving an innovative design for the facility: *the level by which each option allows OPL to design and deliver a facility that meets all design requirements (i.e. functionality requirements, anticipated customer expectations, requirement for being a landmark/signature building within the City Urban Core area, etc.) while achieving a high level of innovation that inspires library staff and customers.*

The Renovation option poses a significant risk of not being able to meet the design requirements or achieve design innovations due to the limited scope of improvements and potential constraints of the existing building and site. As such, this option was ranked as high risk.

Although the Redevelopment option has the potential for design innovation there is high risk as a result of the restrictions of the existing building structure and the fully occupied office tower above. As such, this option has also ranked as high risk.

The New Build option poses the least risk of not meeting the design requirements or achieving design innovations, because the building can be designed in an innovative manner from the ground up. However, any project of this size and complexity has some risk and as such this option has been rated as medium risk.

2.2. Utilizing state-of-the-art technology, especially related to the use of IT and innovation: *the level by which each option allows OPL to incorporate state-of-the art technology into facility design and use advanced IT technology to support customer services and library operations.*

The Renovation option is expected to allow for the use of new technology, but within the constraints of the existing building which presents a risk to the objective. The Redevelopment option is expected to present a lower impediment to the ability to utilize new technology than the Renovation option, considering that the existing building will be stripped down to its structural shell. However, there may still be certain constraints. As such, both options ranked as medium risk of not being able to utilize new technology.

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The New Build option is expected to have the highest ability to utilize new technology based on the ability to plan requirements into the base building and ranked as low risk.

2.3. Impact on future lifecycle program and ease of facility maintenance: *the impact of each option on the ease and efficiency of future life-cycling and the maintenance of the facility.*

The Renovation option addresses, to a certain extent, the lifecycle and maintenance issues, but there is still a high risk of not achieving efficient lifecycle and maintenance of the facility for the long-term because of the minimal amount of work that is being done to the building's structure.

The Redevelopment option is ranked as medium risk because of the "unknowns" associated with the building structure and because the library will remain conjoined with the adjacent office tower and the aging garage, which increases the risk of negative impacts to the lifecycle and maintenance of the facility in the future.

The New Build option ranked as low risk considering that it provides a completely new building which should substantially reduce the risk of any lifecycle or maintenance issues.

2.4. Achieving the AODA and relevant City standards: *the level to which each option allows OPL to design and deliver a facility that will provide free access for disabled customers and employees.*

While all three options will be AODA compliant, some design solutions may not represent ideal or best practice options.

Compared to the Redevelopment and New Build options, the Renovation option is expected to have a higher risk of not being able to provide an effective and integrated solution that addresses the current accessibility issues. The Renovation option therefore ranked as medium risk.

The Redevelopment and New Build options ranked as low risk and should represent best practices for accessibility solutions.

2.5. Ability to satisfy modern building code requirements: *the extent to which each option allows the facility to meet the building code requirements.*

Under the Renovation and Redevelopment options, although major building components will be upgraded, others will remain as they are which still presents some risk of not meeting modern code requirements. As such, both options ranked as medium risk

The New Build option is considered to have the lowest risk of not meeting the building code requirements as a brand new facility should be constructed to modern building code requirements, and therefore ranked as low risk.

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2.6. Sustainability and efficiency of the facility (achieving the minimum LEED Silver certification or higher): *the extent to which each option allows the facility to achieve the requirements for a LEED Silver certification, which is required by the City for all new City owned buildings.*

The Renovation option will face significant constraints to improving the facility's sustainability and efficiency because the majority of the work performed is only at a superficial level and as such is high risk.

The Redevelopment option is expected to present a lower risk of not meeting the sustainability and efficiency requirements than the previous three. However, there are still certain risks imposed by the constraints of the current facility and therefore this option ranks as medium risk.

The New Build option is expected to best address the LEED Silver requirements and there is a low risk of not meeting the sustainability and efficiency requirements.

2.7. Extensibility and flexibility of the facility: *the extent to which each option allows the facility to be flexible and extendable in order to address growing and changing needs in the future.*

Under the Renovation and Redevelopment options, there will be significant constraints associated with the building structure and the site which poses a high risk to these Project options. As a result, both options ranked as high risk.

Although the New Build option presents the least risk among the three options under consideration, there is still some risk due to the "unknowns" associated with the site and as such has been ranked as medium risk.

3. Project Delivery

3.1. Managing the design and construction risks and on-schedule delivery of the facility: *the extent to which each option allows OPL to effectively and efficiently manage the design and construction risks associated with the Project and deliver the facility within the timetable requirements.*

The Renovation and Redevelopment options both ranked as high risk of not being able to effectively manage the design and construction risks and Project schedule because of the scope of the work to be undertaken and the "unknowns" associated with the work to be performed, which increases the risk of not meeting the objective.

The New Build option is considered to be medium risk considering the large size and complexity of the building and the development "unknowns" associated with the preferred site. However, there are fewer "unknowns" than the Renovation and Redevelopment options as it is a fully integrated and coordinated construction approach. This option ranked as medium risk.

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3.2. Maintaining ongoing library operations during construction: *the extent to which each option allows OPL to minimize the interference of construction activities on ongoing library operations.*

There is a high risk that the Renovation and Redevelopment options will result in significant interference with ongoing library operations as both options require a building closure and move out. As such, both options have been ranked as high risk.

The New Build option ranked as low risk given that the work will be conducted on a new and different site and there shouldn't be any interference with the ongoing operations of the current facility.

3.3. Ensuring the quality of the facility: *the extent to which each option allows OPL to properly assess and manage the quality of the new/renovated building and minimize the potential for building deficiencies and latent defects.*

The Renovation option does consist of some fundamental changes to the existing building. However, there are significant "unknowns" related to the renovation and their potential impact on the quality of the work and the Renovation will not deal with any deficiencies in the building structure. As such, this option presents a high risk of not meeting the quality standards of the facility.

The Redevelopment option does undertake a significant amount of work to improve the quality of the facility however it presents medium risk because of the "unknowns" associated with modifying an existing building structure.

The New Build option presents medium risk considering that deficiencies and latent defects may still exist due to the large size and complexity of the facility and the "unknowns" associated with the site and Project delivery method.

4. Financial

4.1. On-budget delivery of the facility: *the level by which each option allows OPL to effectively manage Project costs and minimize the potential for cost overruns.*

The Renovation and Redevelopment options both present a high risk of cost overruns because of the broad scope of retrofit work required and the significant risk of unforeseen issues arising during construction.

The New Build option presents less risk than the Renovation and Redevelopment options as there is a reduced likelihood of "unknowns" arising since the Project will be built from the ground up to a set design and scope. However, there is risk associated with any project of this size and complexity and any scope changes or "unknowns" associated with the site could cause cost overruns. As such, this option has been ranked as medium risk.

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4.2. Attracting alternative funding sources: *the extent to which each option allows OPL to attract and obtain alternative funding for the Project. (i.e. naming rights, donations, partnerships, etc.)*

The Renovation option is likely to not receive significant, or any, alternative funding because the minimal amount of work to be performed will not likely be attractive to alternative funders. Therefore, this option presents a high risk of not obtaining alternative funding.

The Redevelopment option should result in a like-new building which should garner some interest from alternative funders who will want to be associated with the like-new facility. However, as it is still a redevelopment and not a new building there is still a high risk that forms of alternative funding will not be attracted to the Project if funders wish to funnel their money to more prestigious or profitable projects.

The New Build option will offer a variety of possible alternative funding sources and uses the value of existing assets to offset construction costs. The new building should also be attractive to alternative funders as it presents the opportunity to be associated with a brand new asset. However, given the complexity of the Project, it may be challenging to fully realize the alternative financing opportunities. As such, this option ranks as medium risk.

4.3. Maintaining the long-term value of the facility asset: *the extent to which each option allows OPL to maintain the long-term value of the facility asset.*

There is a high risk that the Renovation option will result in a building without any significant value added due to the lack of significant work to be performed. Additionally, the building remains on the same site and is attached to an aging office tower and parking garage which greatly increases the risk of an erosion in the long term value of the asset. It is unlikely, as a result of the lack of investment, that this asset will maintain long-term value for OPL. As such, this option ranked as high risk.

The Redevelopment option offers a building that, although stripped down to the bare structure and renovated, is still conjoined with an aging office tower and an aging parking garage which presents a high risk of reducing the value of the asset even with the significant investment in the library property that would occur under this option. For these reasons this option ranked as high risk.

The New Build option is expected to best maintain the long-term value of the facility, as a brand new asset is being constructed and its value maximized, and therefore presents a low risk to the asset's long-term value.

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Conclusion of the Risk-Adjusted Qualitative Analysis

Assessment Element	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
Weighted Qualitative Score without Risk Assessment * 10	13.90	16.40	25.20	35.80	48.50
Maximum Possible Weighted Qualitative Score without Risk Assessment * 10	50.00	50.00	50.00	50.00	50.00
Total Qualitative Score without Risk Assessment (%)	27.80%	32.80%	50.40%	71.60%	97.00%
Proceed to the risk assessment?	No	No	Yes	Yes	Yes
Risk Adjusted Qualitative Score * 10	N/A	N/A	19.25	28.20	65.00
Maximum Possible Risk Adjusted Qualitative Score * 10	N/A	N/A	75.00	75.00	75.00
Total Risk Adjusted Qualitative Score (%)	N/A	N/A	25.67%	37.60%	86.67%
Proceed to the financial analysis?	No	No	Yes	Yes	Yes

Based on the above qualitative analysis and risk assessment, the **New Build** option is the preferred alternative for the delivery of the Project from a qualitative perspective. This option represents the closest alignment to the OPL’s and the Project’s strategic objectives and is expected to be relatively low risk as compared to the other Project options under consideration. The New Build option allows OPL to effectively achieve its vision for the Main Library and is able to provide the modern library services that the community expects. When compared to the other options, the New Build option best meets the functional program requirements and provides for the highest likelihood of addressing the social, economic and cultural policy objectives of the Main Library while supporting the City’s public transportation network and other civic initiatives. Furthermore, under this option the new library facility is expected to have a useful life of approximately 60 years, effectively ensuring that the value of the library asset is well maintained.

The **Redevelopment** option addresses most of the building’s current deficiencies by undertaking a complete retrofit of the existing facility. This option would provide additional functional space and allows for greater flexibility in addressing the library’s evolving needs. Overall, this option strongly aligns with the OPL’s and the Project’s objectives. However, it still falls short in that it is not able to meet all of the functional program requirements. Furthermore, this option has a higher risk associated with it as compared to the New Build option. The redevelopment of the existing facility would be constrained by the current conditions of the building and site, as well as the

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potential issue concerning the air rights above the existing building which could restrict the ability to increase the functional space of the Main Library Facility. Similar to the New Build option, a complete redevelopment of the existing facility would significantly extend the useful life of the building. Although the redeveloped facility would be based on the existing 40 year old building shell, it is still expected to have a useful life of approximately 45 years. The investment in the redevelopment would effectively restore the value of the facility asset.

The **Renovation** option is expected to create significant improvements to the existing facility through the redesign, expansion and refresh of the current functional spaces. Renovation would include material changes to the interior of the building, as well as to the building's entrance and exterior facade. However, due to the constraints associated with the existing building layout and footprint, this option is not able to fully address the functional program and design requirements. Furthermore, this option is considered relatively high risk due to the potential impact of any "unknowns" associated with the existing facility that may arise during the design and construction stages. The Renovation option is expected to extend the useful life of the facility by approximately 25 – 35 years. Although the Renovation option is not as favourable as the New Build and Redevelopment options when considering asset value, it still ensures that there would be a reasonable return on the investment made.

The **Renewal** option would maintain the overall exterior and interior architectural appearance of the building. With a Renewal critical building systems such as heating, ventilation, electrical, fire and life safety systems, as well as the washrooms and the finishes throughout the building, would be upgraded to a minimum acceptable standard. Although the Renewal option would improve some of the existing functional program spaces, it does not address many of the building's current deficiencies such as the lack of windows, natural light, escalators and elevators. Furthermore, this option does not effectively address the necessary functional program requirements, which jeopardizes the OPL's ability to achieve its vision. The Renewal option is expected to extend the useful life of the facility by approximately 15 years, which is much shorter than the New Build, Redevelopment and Renovation options described above. Although the upfront costs of the Renewal option would appear to be less than the other three options, the capital investment committed would only add limited value to the facility asset. At the time when the useful life of the facility expires, a similar decision to the one being considered now would have to be made regarding whether to make a significant investment to "renew" the building once again or to dispose of the outdated building at a diminished value and invest in a new facility in order for library services to continue.

The **Status Quo** option maintains the current facility as is – i.e. an aging piece of infrastructure that does not allow for the delivery of modern library services. Under this option, only critical repairs and maintenance work would be performed, which is insufficient to address the building's current deficiencies or meet the functional program requirements. Continuing with the status quo makes it difficult for the OPL to achieve its mission and vision or to deliver on the values for which it stands. In

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addition, the disparaged state of the existing facility inherently creates high risk for the City and OPL, which results in this being an even less attractive alternative. The Status Quo option, with its minimum repairs and maintenance, is expected to extend the useful life of the facility by only approximately 10 years. Similar to the Renewal option, the City would have to make another major investment decision in the near term when the useful life of the facility expires.

In summary, the Status Quo and Renewal options appear to be the options that provide the least value to the City and OPL. These options take a “minimum maintenance” approach to addressing the facility’s deficiencies and fail to meet the minimum target of delivering a Main Library Facility that allows for the provision of modern library services and meets changing community needs. Both options would fail to enhance, and may even deter, the operations and future growth of the library. Financially, although these options appear to require less upfront capital investment as compared to the other Project options, the City and OPL may end up spending significantly more in 10 – 15 years to redevelop the facility again due to the limited extension in useful life that would result from the current investment.

The combination of these considerations leads to the conclusion that the Status Quo and Renewal options are short-term “band-aid” alternatives for the Project that do not meet the minimum strategic requirements and would require a new investment in 10-15 years. Given that a major renovation would still be required within the foreseeable future, these options are truly a deferral and do not provide a viable solution to meet the OPL’s vision and functional program requirements. As such, both options did not meet 50% of the maximum possible weighted qualitative score (before risk assessment) and were not considered further in the risk assessment or financial analysis processes.

The Renovation, Redevelopment and New Build options are further analyzed in the “Financial Benefits” section of the business case.

Other Considerations

It is worth noting that since the Sir Richard Scott Building at 191 Laurier Avenue West is fully connected to the existing library facility, the interrelation between the two building structures could have a significant impact on the costs, timeline and ultimately even the feasibility of the Project if either the Renovation or Redevelopment options are undertaken. Under both of these options there is the potential for the following additional issues:

- The Renovation/Redevelopment of the library facility could potentially trigger a code requirement to upgrade the connected building tower and parking garage to current building code standards at the time the library facility renovation/redevelopment is undertaken.
- The Renovation/Redevelopment of the library facility could potentially have a significant adverse impact on the right of the tenants of the office tower to

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enjoy a quiet environment during and after the construction work is performed on the library facility.

Given the above noted concerns, a City initiated Renovation/Redevelopment of the library facility without the cooperation of the current owner of the Sir Richard Scott office tower could present significant risk. A potential solution to help mitigate this risk would be to coordinate with the current owner of the Sir Richard Scott office tower to jointly renovate or redevelop the library facility, the office tower and the parking garage concurrently. However, at this time, without any detailed investigation or preliminary communication with the current owner, it is premature to assess as to what level the City and OPL and the current owner could practically cooperate.

As discussed in detail within Potential Partnership Arrangements – Options B2 and C2 in the “Implementation Plan” section of the business case, allowing the current owner of the Sir Richard Scott office tower to redevelop the entire 191 Laurier Street West and 120 Metcalfe site is considered as a potential solution for the Project, depending on the outcome of the competitive procurement process.

Financial Benefits

Approach

Based on the outcome of the qualitative analysis and risk assessment, the Renovation, Redevelopment and New Build options were further considered for financial analysis in order to assess their costs and benefits from a quantitative perspective.

The financial analysis involves a comparative assessment of the net financial costs attached to each Project option. A holistic approach to the cost assessment was employed to ensure that all costs, both capital and operating, as well as the forecasted revenues, were fully taken into account.

In order to compare the Project options at the same point in time, the concept of NPV was used. This forms the basis of the financial analysis. The NPV for each Project option was calculated using a discounted cash flow model. Capital and operating cash flows over the 36-year analytical term (2015 – 2050) were discounted to January 1, 2015 using a discount rate of 5%, the City's discount rate for planning and forecasting. Furthermore, the fiscal year for the City ends on December 31st and as such all cost and revenue cash flows have been presented consistent with the fiscal year ending on that date.

Assumptions

In order to carry out the financial analysis a number of costing and financial assumptions were made. These assumptions were developed through deliberation with the OPL and City professionals from a wide range of departments and divisions who have expertise in the subject areas under analysis. This included representatives from the OPL and City departments/agencies including:

- Ottawa Public Library;
- Finance Department;
- Supply Branch;
- Infrastructure Services Department;
- Public Works Department; and
- Real Estate Partnership and Development Office.

Through discussion and review with the City and OPL team a comprehensive set of cost and revenue assumptions was developed for the financial analysis. These cash flow assumptions were categorized into three groups, as described below, based upon the nature of the item. The process utilized to develop the assumptions for each category is outlined below.

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Capital Costs Assumptions

As a part of the OPL Main Library Facility planning process, detailed construction budgets were developed by the City for each of the Project options under consideration reflecting the complexity and scope of work associated with each option. The construction budgets were developed by Turner & Townsend, Quantity Surveyors, in conjunction with the Infrastructure Services Department (“ISD”), the division of the City responsible for managing the City’s facilities development and renewal. These budgets form the basis of the construction assumptions used for the financial analysis. The budgets contain detailed line items outlining the specific costs for each of the Project options considered and are subdivided into the following classifications:

- Base construction costs;
- Contingency/escalation assumption;
- Consultant fees;
- Project costs and fees;
- Furniture purchases;
- Equipment purchases;
- Swing space & moving costs;
- Project delivery fees for external project managers; and
- Taxes.

The estimated capital costs were presented in nominal dollars including inflation of either 2% or 3%, depending on the nature of the item.

Lifecycle Costs Assumptions

The lifecycle costs utilized for the financial analysis were developed based on the capital maintenance and renewal requirements for the various elements of the Main Library Facility. A separate estimate was developed for the differing Project options as there would be a significant variance in the lifecycle profiles among each. These estimates were built by the City staff, based on the current long term capital budget for the facility. Included in these estimates are the individual costs that would be required over the life of the Project, categorized into the main building elements of the Main Library Facility, including:

- Building Lifecycle Costs
 - Exterior/site works costs;
 - Structural repairs;
 - Building envelope replacements;

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- Building interior replacements and finishes;
- Electrical replacements and upgrades;
- Mechanical replacements;
- Life-safety device replacements;
- Elevating device replacement; and
- Accessibility upgrades.
- OPL Lifecycle Costs
 - Furniture;
 - Equipment;
 - Sorter replacement; and
 - Other equipment replacement.

The annual lifecycle costs were presented in real terms and were generally inflated at a rate of 2% or 3% as appropriate, depending on the nature of the item.

Operating Costs & Revenues Assumptions

The net operating costs utilized for the financial analysis were developed by extrapolating the data from the 2015 budget for the Main Library Facility over the life of the Project, with adjustments made to account for variances in the revenue potential and the expected costs to be incurred under each Project option. This was required in order to estimate the net cost of each option as the operational needs (i.e. staffing levels, routine maintenance), as well as the opportunities for generating revenues, will differ depending on the option assessed. The operating cost estimates used for the financial analysis includes a detailed listing of the expense and revenues items by account. These accounts were grouped into the following categories:

- Library Operations Expenses
 - Compensation, benefits and overtime;
 - Purchased services;
 - Materials and supplies;
 - Financial charges; and
 - Activity allocations.
- Revenues
 - Advertising;
 - Sundry;

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- Fines (excluding parking);
- Other short term rentals;
- Non-resident fees;
- Photocopy fees;
- Replacement charges; and
- Tenant rent.
- Facility Operations & Maintenance
 - Purchased services;
 - Materials and supplies;
 - Utilities; and
 - Labour.

The annual operating costs and facility operation and maintenance costs were presented in real terms and were inflated at the appropriate rate depending on the nature of the item. The revenue assumptions were presented in nominal dollars, including inflation, and adjustments were made as necessary depending on the facility activities to be held therein.

Site Disposal Revenue and Opportunity Cost

Based on the property valuation conducted by the City and the discussions with the City team, assumptions have been made with respect to the disposal of the City's interest in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street and the opportunity cost/revenue associated with the preferred City owned site at 557 Wellington Street.

- Based on the City's analysis, the City's interest in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street would be worth a different amount if the property interest is sold in 2021 or in 2016 (i.e. a sale and leaseback approach). The sale and lease back approach was further assessed as a sensitivity analysis scenario.
- The net value of the City's interest in the remaining parcels of land on the 557 Wellington Street site was estimated taking into account the development potential and the costs of site contamination remediation and site service development.

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Residual Value of the Building Assets

Based on the City’s assessment, the Renovation option is expected to extend the useful life of the facility by approximately 25 – 35 years. It has been assumed that by 2050 the residual asset value of the facility would be minimal.

Under the Redevelopment option, the useful life of the facility is expected to be extended by approximately 45 years, given its existing 40 year old building shell. The residual asset value of the facility in 2050 was estimated based on the expected remaining life of 15 years at that time.

Under the New Build option, the useful life of the new facility is expected to be approximately 60 years. The residual asset value of the facility in 2050 was estimated based on the expected remaining life of 30 years at that time.

Financial Analysis Results (Base Case Scenario)

The financial analysis indicates that the net cost of the New Build option is approximately \$28M less than that of the Redevelopment option and approximately \$9M less than that of the Renovation option in present value terms.

Financial Analysis	Project Options		
	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
NPV of Costs and Revenues	\$165.15M	\$183.84M	\$155.99M
Cost Savings (relative to the option that has the highest NPV of Costs and Revenues)	\$18.69M	-	\$27.85M
Financial Analysis Score (%)	10.17%	-	15.15%

Sensitivity Analyses

Further to the base case scenario described above, sensitivity analyses have been performed to assist in understanding the impact of changes in certain key variables on the financial analysis outcome. The key variables sensitized were:

- Discount Rate;
- Risk of construction cost overruns under the New Build option;
- Risk of construction cost overruns under the Redevelopment option; and
- Sale and leaseback of the City’s interest in the existing library property under the New Build option.

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Changes in the discount rate assumptions

The following chart illustrates how the NPV of costs and revenues could vary as a result of changing the discount rate assumption:

NPV Outcomes

Discount Rate Scenario	Project Net Cost (in NPV terms)		
	Renovation	Redevelopment	New Build
3.00%	\$212.30M	\$231.36M	\$199.98M
5.00%	\$165.15M	\$183.84M	\$155.99M
7.00%	\$133.30M	\$150.88M	\$126.55M
9.00%	\$110.96M	\$127.24M	\$106.08M

Overall Assessment Score Outcomes

Discount Rate Scenario	Overall Assessment Score		
	Renovation	Redevelopment	New Build
3.00%	16.95%	18.80%	50.12%
5.00%	17.92%	18.80%	50.91%
7.00%	18.66%	18.80%	51.40%
9.00%	19.23%	18.80%	51.65%

The sensitivity chart illustrates that the differences in the net cost and score between the three options increases as the discount rate decreases, and decreases as the discount rate increases. At no point was the net cost of the New Build option greater, or its overall assessment score lower, than the Renovation or Redevelopment options in the performance of this analysis.

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Changes in the risk of construction cost overruns of the New Build option

The following chart illustrates how the net costs could change due to construction cost overruns under the New Build option. The cost adjustment represents percentage cost overruns on the total construction cost estimate:

NPV Outcomes

New Build Cost Overrun Scenario	Project Net Cost (in NPV terms)		
	Renovation	Redevelopment	New Build
0.00%	\$165.15M	\$183.84M	\$155.99M
5.00%	\$165.15M	\$183.84M	\$159.56M
10.00%	\$165.15M	\$183.84M	\$163.13M
15.00%	\$165.15M	\$183.84M	\$166.70M
30.00%	\$165.15M	\$183.84M	\$177.40M
39.03%	\$165.15M	\$183.84M	\$183.84M
50.00%	\$165.15M	\$183.84M	\$191.67M

Overall Assessment Score Outcomes

New Build Cost Overrun Scenario	Overall Assessment Score		
	Renovation	Redevelopment	New Build
0.00%	17.92%	18.80%	50.91%
5.00%	17.92%	18.80%	49.94%
10.00%	17.92%	18.80%	48.97%
15.00%	17.92%	18.80%	48.00%
30.00%	17.92%	18.80%	45.09%
39.03%	17.92%	18.80%	43.33%
50.00%	19.75%	20.84%	43.33%

The sensitivity chart illustrates that the attractiveness of the New Build option, as compared to the Renovation and Redevelopment options, decreases as the risk of construction cost overruns increases. Per the sensitivity analysis when the risk of construction cost overruns for the New Build option is greater than 39.03%, all else being constant, the net cost of the New Build option is equivalent to that of the Redevelopment option. At no point was the overall assessment score of the New Build option less than that of the Renovation or Redevelopment options during the performance of this analysis.

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**Changes in the risk of construction cost overruns under the
Redevelopment Option**

The following chart illustrates how the net costs could change due to construction cost overruns under the Redevelopment option. The cost adjustment represents percentage cost overruns on the total construction cost estimate:

NPV Outcomes

Redevelopment Cost Overrun Scenario	Project Net Cost (in NPV terms)		
	Renovation	Redevelopment	New Build
0.00%	\$165.15M	\$183.84M	\$155.99M
5.00%	\$165.15M	\$187.38M	\$155.99M
10.00%	\$165.15M	\$190.93M	\$155.99M
15.00%	\$165.15M	\$194.47M	\$155.99M
30.00%	\$165.15M	\$205.10M	\$155.99M
50.00%	\$165.15M	\$219.28M	\$155.99M

Overall Assessment Score Outcomes

Redevelopment Cost Overrun Scenario	Overall Assessment Score		
	Renovation	Redevelopment	New Build
0.00%	17.92%	18.80%	50.91%
5.00%	18.77%	18.80%	51.71%
10.00%	19.59%	18.80%	52.48%
15.00%	20.37%	18.80%	53.23%
30.00%	22.57%	18.80%	55.31%
50.00%	25.18%	18.80%	57.76%

The sensitivity chart illustrates that the New Build and Renovation options both become more attractive when, all else being held constant, the risk of construction cost overruns for the Redevelopment option increases. At no point during the performance of this analysis did the New Build option appear to be the least attractive option.

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Changes in the timing of the sale of the City’s interest in the existing library property under the New Build option

The following chart illustrates how the net costs could change by changing the assumption of when the City’s interest in the existing library property will be sold under the New Build option. The sensitivity analysis compares the base case scenario, where the property interest will be sold in 2021, to an alternative scenario where the property interest will be sold in 2016 and the facility will be leased back until 2021:

NPV Outcomes

Property Sale Scenario	Project Net Cost (in NPV terms)		
	Renovation	Redevelopment	New Build
Sold in 2016	\$165.15M	\$183.84M	\$159.73M
Sold in 2021	\$165.15M	\$183.84M	\$155.99M

Overall Assessment Score Outcomes

Property Sale Scenario	Overall Assessment Score		
	Renovation	Redevelopment	New Build
Sold in 2016	17.92%	18.80%	49.89%
Sold in 2021	17.92%	18.80%	50.91%

The sensitivity chart illustrates that for the New Build option, selling the City’s interest in the existing library property in 2016 and then leasing the facility back until 2021, all else being held constant, imposes a higher net cost than selling the property interest in 2021. However, the timing of the sale of the existing library property (i.e. in 2016 or 2021) does not have an impact on the analysis result that the New Build option is the preferred option for the Project.

Summary

The above noted sensitivity analyses indicate that the New Build option remains the preferred option for the Project under all scenarios tested as part of this business case.

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Recommendations

Conclusion of the Option Analysis

The following table summarizes the outcomes of the risk-adjusted qualitative and financial assessments of the five Project options:

Assessment	Project Options				
	Opt. 0 Status Quo	Opt. 1 Renewal	Opt. 2 Renovation	Opt. 3 Redevelopment	Opt. 4 New Build
Weighted Qualitative Score without Risk Assessment * 10	13.90	16.40	25.20	35.80	48.50
Maximum Possible Weighted Qualitative Score without Risk Assessment * 10	50.00	50.00	50.00	50.00	50.00
Total Qualitative Score without Risk Assessment (%)	27.80%	32.80%	50.40%	71.60%	97.00%
Proceed to the risk assessment?	No	No	Yes	Yes	Yes
Risk Adjusted Qualitative Score * 10	N/A	N/A	19.25	28.20	65.00
Maximum Possible Risk Adjusted Qualitative Score * 10	N/A	N/A	75.00	75.00	75.00
Total Risk Adjusted Qualitative Score (%)	N/A	N/A	25.67%	37.60%	86.67%
Proceed to the financial analyses?	No	No	Yes	Yes	Yes
NPV of Costs and Revenues	N/A	N/A	\$165.15M	\$183.84M	\$155.99M
Cost Savings (relative to the option that has the highest NPV of Costs and Revenues)	N/A	N/A	\$18.69M	-	\$27.85M
Financial Analysis Score (%)	N/A	N/A	10.17%	-	15.15%
Overall Assessment Score (%)	N/A	N/A	17.92%	18.80%	50.91%

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Notes:

- The Total Qualitative Score without Risk Assessment (%) was calculated by dividing the Weighted Qualitative Score without Risk Assessment by the Maximum Possible Weighted Qualitative Score without Risk Assessment;
- The Total Risk Adjusted Qualitative Score (%) was calculated by dividing the Risk Adjusted Qualitative Score by the Maximum Possible Risk Adjusted Qualitative Score;
- The Cost Savings was calculated as the difference between the highest NPV of Costs and Revenues among all three analyzed Project options and a specific option's NPV;
- The Financial Analysis Score (%) was calculated by dividing a specific Project option's Cost Savings by the highest NPV of Costs and Revenues; and
- The Overall Assessment Score (%) was calculated as an average of the Total Risk Adjusted Qualitative Score (%) and the Financial Analysis Score (%).

The Overall Assessment Score combines the outcomes from the qualitative analysis, risk assessment and financial analysis. The calculation assumes that both qualitative/risk considerations and financial considerations are equally important in the decision making process.

The Overall Assessment Scores indicate that the **New Build** option is the preferred alternative for the delivery of the OPL Main Library Facility Project. This option represents the closest alignment to OPL's strategic objectives and is expected to be relatively low risk as compared to the other options under consideration. Additionally, this is also the option that has the lowest estimated net present cost for Project delivery, taking into account the realization of proceeds from the sale of the City's ownership interests in the existing facility and the surplus development rights on the preferred City-owned site, the expected residual value of the asset at the end of the analytical term (i.e. Year 2050) and the lower future capital investments required to keep the Main Library Facility operational over the medium to long term. All above considerations are reflected in the New Build option's Overall Assessment Score of 50.91%, which is significantly higher than the Redevelopment option's Overall Assessment Score of 18.80% and the Renovation option's Overall Assessment Score of 17.92%.

Although aligning with most of the OPL's strategic objectives, the **Redevelopment** option presents a higher risk as compared to the New Build option. The redevelopment of the existing facility would be constrained by the current conditions of the building and site, as well as the potential issues concerning the air rights above the existing building, which could restrict the ability to increase the functional space of the Main Library Facility. Furthermore, despite the significant amount of redevelopment work required by this option, it is not able to meet all of the functional program requirements of the Main Library Facility. From a financial perspective, this

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option has a higher estimated net present cost as compared to the New Build option, primarily driven by the higher facility operating and lifecycle costs, as well as the anticipated requirement for renovating the Sir Richard Scott office tower and the garage in order for these assets to generate the desired revenues after they are handed back to OPL and the City in 2034.

The **Renovation** option involves less upfront capital investment than the New Build option. However, due to the anticipated requirement to renovate the Sir Richard Scott office tower and the garage after the handover to OPL and the City in 2034, as well as the negligible residual asset value by 2050 because of the limited extension of the facility's useful life, the estimated net present cost of this option is greater than the New Build option. Furthermore, although the Renovation option addresses some of the OPL's strategic objectives, due to the constraints associated with the existing building layout and footprint, it is not able to fully address the functional program and design requirements. Additionally, this option is considered relatively high risk due to the potential impacts of any "unknowns" associated with the existing facility that may arise during the design and construction stages.

The **Status Quo** and **Renewal** options were eliminated from further consideration at the conclusion of the qualitative analysis before risk assessment. These options failed to meet the minimum requirement of delivering a Main Library Facility that is capable of providing modern library services and that meets the needs of the community. In addition, these options were not deemed to be fiscally prudent as they followed a "minimum maintenance" approach to addressing the facility's deficiencies. Additional capital would need to be invested in the next 10-15 years because of the limited extension of the facility's useful life that would result from the minimal current investments.

In summary, given that the **New Build** option best aligns with the strategic objectives and has the lowest net present cost as compared to the other considered options, the New Build option is the most efficient and effective option to deliver the Project.

Implementation Plan

Potential Procurement and Delivery Models for the New Build

Traditional Arrangement

Method A – Design-Bid-Build (“DBB”) + Sale of Development Rights

The Project option analysis detailed in the previous sections is based on the assumption that the Project will be procured and delivered using a DBB approach. Under this approach, the City and OPL will engage an architectural/engineering design firm to develop a design and contract documents for the new library facility on the preferred City-owned site and then engage a construction contractor through a public tendering process to build the new facility in accordance with that design. Construction payments would be paid monthly by the City/OPL based on the progress of the construction (i.e. conventional progress payments).

The City’s interest in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street, as well as the remaining parcels of land on the preferred City-owned site, would be monetized through a sale to a third-party developer with the net proceeds being utilized to fund the construction of the new library facility.

Upon substantial completion, the City/OPL will take ownership of the facility and will be responsible for its long-term operation and maintenance.

Potential Partnership Arrangements

In addition to the “DBB + Sale of Development Rights” approach described above, the City and OPL could also consider a further and broader involvement of private sector parties to jointly develop, construct and potentially maintain the facility. Options for consideration include:

Method B1 – Design-Build (“DB”) + Partner Development on City Site

Under this approach, the City and OPL will engage a private sector consortium, consisting of a real estate and infrastructure developer, an architectural/engineering design firm and a construction contractor, to design the new facility, adhering to the scope, functional program requirements and detailed facility output specifications identified by the City and OPL, and subsequently build the new facility on the preferred City-owned site.

	Design-Build + Partner Development	Design-Build-Finance-Maintain + Partner Development
On City Site	Method B1	Method C1
On Alternative Site	Method B2	Method C2

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In addition, the City would transfer its ownership interests in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street and the surplus development rights on the preferred City-owned site to the same consortium.

Under this approach, the competitive procurement process will require the private sector proponents to bid on the total net cost of delivering the new library facility, taking into account not only the design and construction costs related to the library facility, but also the immediate and future revenues that the proponents expect to be generated through ownership interests in the real estate at the 191 Laurier Avenue West and 120 Metcalfe Street site and the development of surplus property rights at the preferred City-owned site.

Depending on the deal structure negotiated with the private sector consortium, construction payments could be made monthly by the City/OPL based on the progress of construction (i.e. progress payment, the most common approach), at key construction milestones (i.e. milestone payment approach) or at substantial completion of construction (i.e. deferred lump sum payment approach). Contingent on the terms of the negotiated Project agreement, certain design and construction risks could potentially be transferred to the private sector consortium.

Upon substantial completion, the City/OPL will take ownership of the facility and will be responsible for its long-term operation and maintenance.

Method B2 – DB + Partner Development on Alternative Site

Further to the “DB + Partner Development on City Site” approach detailed above, the City and OPL could also consider allowing private sector proponents to propose, during the competitive procurement process, a privately owned site, to be provided by the consortia (i.e. non-City owned site), on which the new library facility would be built. This approach could involve either building a new facility or repurposing an existing facility, as long as the delivered facility meets all of the site selection criteria, functional program requirements and facility output specifications identified by the City and OPL for the Main Library Facility. If the current owner of the Sir Richard Scott office tower chooses to participate in the procurement process it can also propose to redevelop the entire 191 Laurier Avenue West and 120 Metcalfe Street site as a potential solution for the Project.

To ensure that the alternative sites proposed by the private sector proponents fully meet all of the site selection criteria, the City and OPL could consider requiring a separate submission of the proposed alternative sites during the RFQ process, to allow the City and OPL time to assess the acceptability of a proposed site before further design and additional work is conducted.

Similar to the “DB + Partner Development on City Site” approach, the City would still transfer its ownership interests in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street and the development rights on the preferred City-owned site to the engaged private sector consortium. During the competitive

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procurement process, the private sector proponents would bid for the Project based on the total net cost of delivering the library facility. This net cost should take into account both the design and construction costs related to the library facility and the revenues that the proponent expects to be generated through ownership interests in the two sites transferred from the City, as well as any potential intangible benefits that would result from having the Main Library on the private sector consortium's site.

Method C1 – Design-Build-Finance-Maintain (“DBFM”) + Partner Development on City Site

Another potential procurement and delivery model to be considered is including a long-term partnership with the private sector in the deal. The “DBFM + Partner Development on City Site” approach involves engaging with a private sector consortium that consists of a real estate and infrastructure developer, an architectural/engineering design firm, a construction contractor, an asset and facility management company and financiers who would design, build, finance and maintain the new library facility, as well as further its interests on the 191 Laurier Avenue West and 120 Metcalfe Street site and develop surplus property rights on the preferred City-owned site.

The proponents' bid price would take into account the entire capital, maintenance and lifecycle costs related to the library facility during the term of the partnership agreement (i.e. the construction period plus 30 years of operations), and the revenues that the proponents expect to be generated through ownership interests in the real estate at the 191 Laurier Avenue West and 120 Metcalfe Street site and surplus development rights on the preferred City-owned site.

Under this procurement and delivery model, only a portion of the construction costs would be paid at key construction milestones or, alternatively, at substantial completion of construction. Depending on the terms of the negotiated Project agreement and the City's relevant policy, the construction payment(s) that will be made by the City/OPL could range from 0% to above 50% of the total capital cost. The engaged private sector consortium would be required to raise financing for the construction of the library facility and would be paid back partially through the above described construction payment(s) (i.e. short-term financing) and partially on a monthly basis during the 30-year operational period through a payment approach that is, or is similar to, the capital lease payment approach (i.e. long-term financing). The monthly payments during the operational period would be subject to a pre-determined availability based payment mechanism. Deductions would be applied to the payment for underperformance of the entire, or any portion of, the facility, to be measured based on facility output specifications and facility management key performance indicators as specified in the Project agreement.

Under this approach, significant design, construction, maintenance and lifecycle risks could be transferred to the private sector consortium. Additionally, the private sector consortium bears the risks associated with furthering its interests in the two sites transferred from the City.

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Method C2 – DBFM + Partner Development on Alternative Site

Similar to the “DB + Partner Development on Alternative Site” approach, the City and OPL could also consider a “DBFM + Partner Development on Alternative Site” approach, allowing private sector proponents to propose a privately owned site on which the new library facility would be built. The proponents could propose building a new facility or repurposing an existing facility. The current owner of the Sir Richard Scott office tower could also propose to redevelop the entire 191 Laurier Avenue West and 120 Metcalfe Street site as a potential solution for the Project.

A separate submission of the proposed alternative sites could be required during the RFQ process, to allow the City and OPL time to assess the acceptability of a proposed site before further design and additional work is conducted.

The City would transfer its ownership interests in the existing library property at 191 Laurier Avenue West and 120 Metcalfe Street and the development rights on the preferred City-owned site to the engaged private sector consortium. During the competitive procurement process, the private sector proponents would bid for the Project based on the total net cost of delivering and maintaining the library facility. This net cost should take into account the capital, maintenance and lifecycle costs related to the library facility, and the revenues that the proponents expect to be generated through its ownership interests in the 191 Laurier Avenue West and 120 Metcalfe Street site and its development of the preferred City-owned site, as well as any potential intangible benefits that would result from having the Main Library on the private sector consortium’s site.

The payment mechanism and risk transfer under this approach would be similar to the “DBFM + Partner Development on City Site” approach. Construction payment(s) that cover a portion of the capital costs would be made by the City/OPL based on the achievement of key construction milestones and/or substantial completion. Payments made during the 30-year operational period (e.g. capital lease payments) would be subject to achieving operational performance standards and meeting the maintenance requirements of the library facility.

Key Benefits and Risks Associated with the Partnership Approaches

Key Benefits

As compared to the traditional approach (i.e. Method A), the partnership arrangements (i.e. Methods B1, B2, C1 and C2) provide the City and OPL with varying levels of benefits:

- **Leveraging private sector real estate expertise** – all four partnership approaches involve large scale real estate developments, which are expected to generate significant proceeds that will partially offset the capital costs of the new library facility. The private sector proponents, in order to submit a competitively priced bid for the Project, will make substantial efforts to promote the real estate assets developed and explore the potential for cost savings

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and revenue generation. A material portion of these benefits should be passed along to the City and OPL through the competitive procurement process.

- **Improved value for money** – through the appropriate allocation of risks, rewards and responsibilities between the City/OPL and the private sector consortium, the two “DBFM + Partner Development” approaches, regardless of whether on the City site or alternative site, could potentially deliver improved value for money to taxpayers over the life of the Project as compared to traditional infrastructure procurement and delivery models such as the “DBB + Sale of Development Rights” approach.
- **Reduced whole life costs** – under the two “DBFM + Partner Development” approaches, the responsibility for the long-term maintenance and lifecycle costs of the library facility is allocated to the private sector consortium. By combining these with the design, construction and financing responsibilities, the “DBFM + Partner Development” approaches provide the private sector consortium with a strong incentive to consider the whole lifecycle of the Project, and consequently to design and build a library facility that will minimize the whole life costs over the entire term of the Project.
- **Access to cutting-edge technology and innovations** – the two “DBFM + Partner Development” approaches encourage the private sector consortium to utilize the best industry practices and cutting-edge technology in order to improve the economic efficiency of the Project. This should have a positive impact on not only the design and construction of the library facility, but also on facility management and library operations.
- **Enhanced project management and service standards** – under the two “DBFM + Partner Development” approaches, the pre-determined payments to be received by the private sector consortium are linked to the availability and long-term performance of the library facility. This provides a strong incentive along with strict penalties for the private sector consortium to ensure that the construction of the new library facility is completed on time and on budget. Additionally, the introduction of private sector equity and debt financing is invariably accompanied by the financiers’ rigorous due diligence generally leading to a more efficiently executed project. Properly implemented, the “DBFM + Partner Development” approaches help to ensure that the new facility will be completed on time and on budget, that desired service standards are met and that the library facility is well maintained throughout the Project life.
- **Enhanced scope control** – the partnership approaches require a certainty over Project scope and the risk allocation profile, which imposes discipline on the City and OPL to make Project decisions early and stick to them. Changes to the Project scope during the implementation stage will be subject to thorough due diligence by both the City and OPL and the private sector

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consortium. An enhanced change management process could effectively reduce the likelihood of scope creep, which is a common cause of delay and cost overruns.

- **Ability to leverage existing Public Private Partnership best practices and template documents** – the City has successfully procured several major infrastructure projects using public private partnership procurement models. The methodology and template documentation developed for these precedent projects can be leveraged to help facilitate the procurement and delivery of this Project, should a “DBFM + Partner Development” approach be selected.
- **Broader market participation** – the broader business opportunity offered by including a real estate component in the deal, when combined with the open, standard and transparent procurement approach of public private partnerships, is expected to attract a larger number of key national and international market participants to bid on the Project. Greater market participation enhances competitive tension, compels the private sector to leverage deeper industry expertise and innovation and leads to improved value for money.

Key Risks

- **Longer procurement process** – by using a partnership approach, especially a “DBFM + Partner Development” approach, the procurement process could potentially be longer and more complex, when compared to a traditional procurement approach, primarily as a result of the additional due diligence required. This may result in increased transaction costs for both the City and OPL and the private sector proponents. Incremental transaction costs need to be reflected in the total estimated project cost when assessing the affordability and value for money, should a partnership approach be selected.
- **Less flexibility for change** – as previously mentioned the partnership approaches require a higher level of certainty in terms of Project scope and the risk allocation profile. This reduces the flexibility for the City and OPL to make changes during the implementation stage that could potentially bring additional benefits to the Project. A well-articulated change management process can mitigate this risk to a certain extent.
- **Less public sector control over design details** – the partnership approaches require the private sector proponents to design the library facility based on the scope, functional program requirements and detailed facility output specifications identified by the City and OPL. This could, on the one hand, potentially reduce the City’s/OPL’s control over the design details, however on the other hand should provide the private sector consortium greater flexibility to apply design innovations.

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- **Higher financing costs** – a key component of the “DBFM + Partner Development” approaches is the use of private sector financing, which is the underlying basis for the benefits obtained through risk transfer and increased lenders’ due diligence. Assuming unlimited access to public financing, the cost of financing would be higher for a private sector consortium than for the City. This financing cost premium should be taken into account when assessing the Project’s value for money and affordability.
- **Availability of qualified private sector proponents** – the two “DBFM + Partner Development” approaches require private sector proponents to establish integrated teams that possess diverse experience and expertise in the areas of real estate development, library design and construction, real estate and infrastructure facility management, project finance and public private partnership methodology. Given the complexity of the deal structure and the additional risks associated with the real estate component of the Project, there may not be a sufficient number of qualified proponents available in the market to participate in the Project. Active and open communication with the potential market participants through a combined RFI and REOI process or through a market sounding exercise in the early planning stages would help the City and OPL to obtain industry feedback on the deal structure and procurement approach, promote the Project to the market and attract potential private sector proponents.
- **Fairness and transparency** – the procurement process applied by the partnership approaches includes an active bilateral consultation process (commercial confidential meetings) with the private sector proponents during the RFP process. It is important that the City and OPL utilize the commercial confidential meetings to emphasize those issues that are of paramount importance to the City and OPL and to obtain proponents’ feedback on key Project issues. The proponent meetings need to be well managed to ensure consistency and transparency in the information that is communicated.
- **Tax implications and development charges** – under the partnership arrangements, the Project could potentially be subject to higher tax and/or development related charges, depending on the specific deal structure and ownership of the facility. These issues, and their impacts on the Project implementation and affordability, should be reviewed in detail during the value for money analysis and fully addressed during the development of the Project agreement.

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Procurement Process

Key Procurement Stages

An effective and efficient procurement process would allow the City and OPL to obtain the library facility as desired and ultimately deliver excellent value for money. Given the size and complexity of the Project, the procurement process should include the following key stages:



Notes:

- “RFI” refers to Request for Information process; “REOI” refers to Request for Expression of Interest process; “RFQ” refers to Request for Qualifications process; and “RFP” refers to Request for Proposals process.
- During the implementation stage, the RFI and REOI processes could be conducted simultaneously.

Key Objectives of Each Procurement Stage

RFI/REOI	RFQ	RFP
<ul style="list-style-type: none"> • Increase market awareness of the Project and promote the Project in the market • Start engaging private sector partners • Obtain private sector feedback/suggestions on delivery model, procurement approach and innovative solutions • Decide the procurement and delivery model for the Project • Determine the Project scope 	<ul style="list-style-type: none"> • As an outcome of the RFQ process, select a short list of prequalified proponents • During the RFQ process, review and assess the potential alternative sites proposed by the proponents through a separate submission process (detailed approach TBD) • Further refine the Project scope and deal structure • Develop output specifications and 	<ul style="list-style-type: none"> • During the RFP process, assist proponents in developing compliant design solutions, through a commercially confidential design consultation process • During the RFP process, negotiate and finalize the Project agreement terms and conditions, through a commercially confidential meeting process • As an outcome of the RFP process, select a private sector

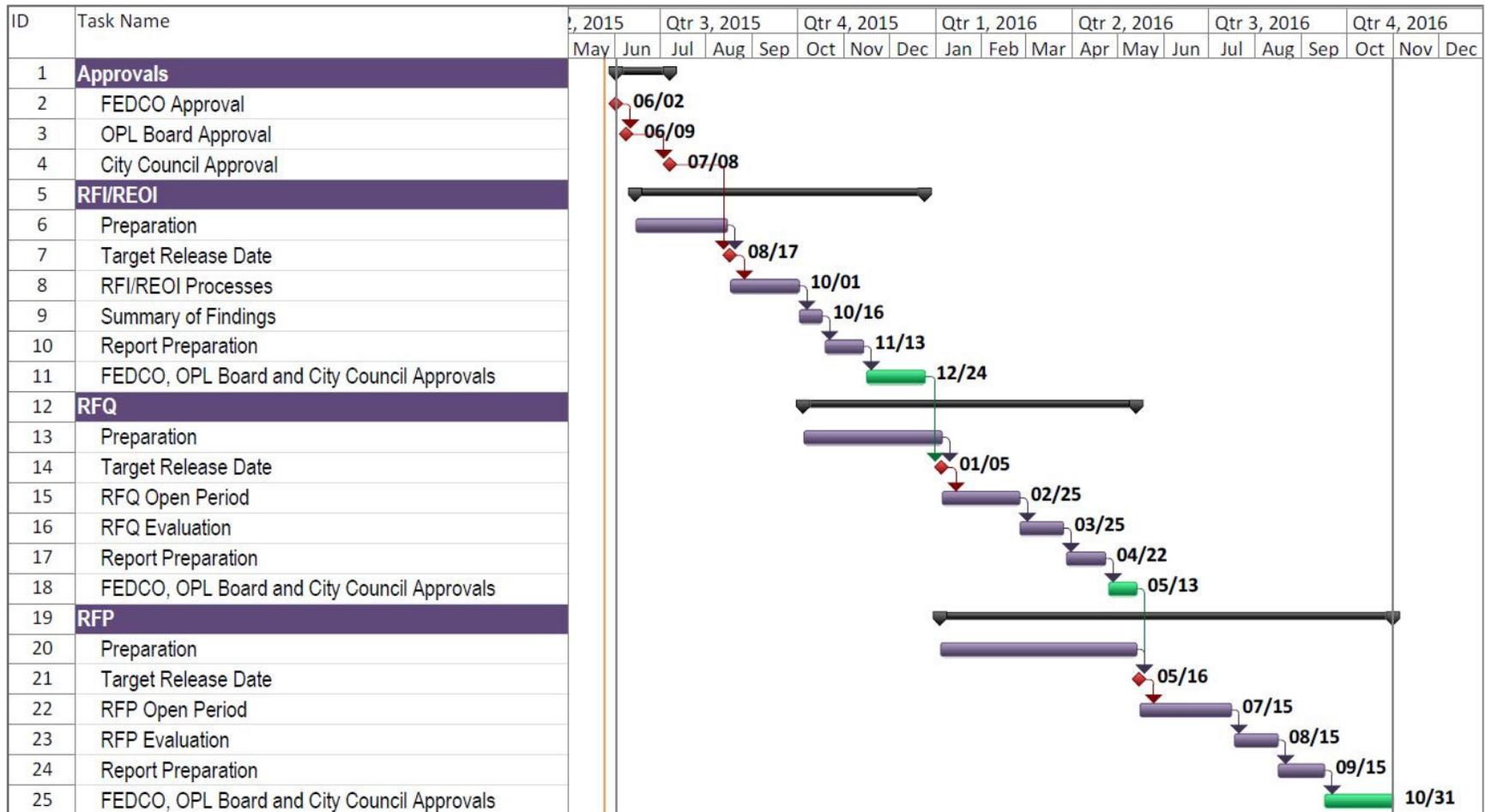
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RFI/REOI	RFQ	RFP
	Project agreement documents	consortium that offers a Project solution demonstrating the best value to the City and OPL <ul style="list-style-type: none">• Achieve commercial and financial closes

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High Level Project Schedule

The following schedule illustrates a preliminary high level timeline for the procurement of the Project, which is subject to changes as a result of further planning activities after the City and OPL have made a decision on the Project option and procurement approach.



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Conclusion and Further Analysis Required

The potential procurement and delivery models described in the “Potential Procurement and Delivery Models for the New Build” section represent the procurement approaches commonly used in the Canadian infrastructure market for similar projects. All five procurement and delivery models identified have their own unique advantages and challenges. Each of them involves a different deal structure that allows for a different level of partnership between the City/OPL and the private sector and leads to a different risk allocation between the two parties. In order to make a sound decision on which procurement and delivery model is the most suitable for this Project, the City and OPL should consider conducting further analysis to assess the potential models from a Value for Money (“VFM”) perspective.

The VFM analysis would involve a comparison between a Public Sector Comparator (“PSC”) model, which is developed based on either the “DBB + Sale of Development Rights”, “DB + Partner Development on City Site” or “DB + Partner Development on Alternative Site” model, and a P3 model, which is developed based on either the “DBFM + Partner Development on City Site” or “DBFM + Partner Development on Alternative Site” model.

The financial and risk profiles of the Project under both PSC and P3 models should be assessed in detail in order to develop the total risk adjusted Project costs. Key elements of the analysis would include:

- Definition of the PSC and P3 models to be analyzed;
- Development of the Project cost and revenue estimates and cash flows under both the PSC and P3 models;
- Development of the financial assumptions for the VFM analysis;
- Assessment of the Project risks;
- Quantification of the City/OPL retained risks under both the PSC and P3 models using a Monte Carlo simulation; and
- Development of a financial model to assess the risk adjusted total Project costs under both the PSC and P3 models and the VFM (including PSC, P3 shadow bid and VFM model components).

As part of the VFM analysis, the City and OPL should consider engaging private sector market participants (i.e. developers, lenders, construction contractors, facility management companies, etc.), through a combined RFI and REOI process or through a market sounding exercise in order to obtain industry feedback on the deal structure, risk allocation and procurement approach. Information obtained through this communication should be utilized to enhance the VFM analysis and to design the Project procurement approach.

The VFM analysis would also allow the City and OPL to conduct a thorough

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assessment of the Project's affordability and explore alternative options for financing. Potential risk premiums and cost efficiencies associated with the involvement of a private sector partner should be taken into account when conducting the analysis. The analysis should also consider the additional financing and transaction costs associated with a P3 model.

We understand that the City has established a P3 Policy (approved by the City Council in April 2013 and implemented in September 2014), Guidelines and Procedures to provide a tool to assist in the implementation of the City's P3 projects with the intention of providing guidance, rigor and consistency in the definition, selection, analysis, delivery and monitoring of P3 projects. The above described VFM analysis approach aligns with the City's P3 Policy, Guidelines and Procedures.

As a conclusion to the VFM analysis, the City and OPL should select the Project procurement and delivery model that provides the greatest VFM and is within the City's affordability threshold for the Project.

Documentation

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This business case and any other material provided by GT are not intended for general circulation or publication nor are they to be reproduced or used for any other purpose other than that outlined in the service agreement with the Ottawa Public Library and City of Ottawa without our prior written consent in each specific instance. We will not assume any responsibility or liability for losses occasioned to the Ottawa Public Library and/or City of Ottawa or to any third party as a result of the circulation, publication, reproduction or use of any of our reports or materials contrary to the provisions of this paragraph.

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GT has not audited or verified the information provided. In many instances, we relied on information provided to us by the Ottawa Public Library, City of Ottawa and relevant third parties.

The analysis presented in this business case includes best estimates of future values of costs to the Ottawa Public Library and/or City of Ottawa. Therefore, best estimates have been utilized and these estimates are of a subjective nature. Based upon these considerations, users should be aware that actual results may vary materially from the estimates contained herein.

Documentation

The following documents were provided to assist in the preparation of this business case:

- Report to OPL Board, Main Library Facility Planning (July 7, 2014)
- Report to OPL Board, Strategic Plan Refresh (July 7, 2014)
- OPL Main Library Functional Building Program Report (June 25, 2014)
- Building Condition Audit and Structural Assessment, Main Library 120 Metcalfe Street (July 24, 2012)
- Project Delivery Review and Cost Estimating, Planning and Infrastructure Portfolio, Infrastructure Service Department, City of Ottawa (July 2013)

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- Central Library Whole Life Costing (February 25, 2015)
- Main Library 2012 Actuals and Plan; Cost Elements
- Main Library 2013 Actuals and Plan; Cost Elements
- Main Library 2014 Actuals and Plan; Cost Elements
- Turner & Townsend Cost Estimate Word Report – Ottawa PL (May 8, 2014)
- Main Library Option 2A Cost Estimate Form (May 9, 2014)
- Main Library Option 3 Cost Estimate Form (May 9, 2014)
- Main Library Floors 4 and 5 Fit Up (Updated May 27, 2014)
- Main Library Option 1 Cost Estimate Form (May 9, 2014)
- Project Cost Estimates – Options 1, 2, 3 (June 2, 2014)
- Central Library Option Comparison Framework (February 25, 2015)
- Project Delivery Review and Cost Estimating (July 2013)
- Attachment 2 Capital Cost Estimate Classification System (July 2013)
- Attachment 3 Capital Cost Estimate Components (July 2013)
- Final Central Library Whole Costing (March 23, 2015)
- Report to Ottawa Public Library Board. 2015-2018 Ottawa Public Library Board Strategic Priorities and Work Plans (April 14, 2015)
- Whole Life Costing Assumptions (April 8, 2015)
- Central Library Project Valuation Summaries (April 9, 2015)
- Whole Life Costing Assumptions (April 9, 2015)
- Final Central Library Whole Costing (April 10, 2015)
- Summary Description – Preferred City Site Option for new OPL Main Library 2
- 557 Wellington Sketch Plan
- Schedule A Plan 303f
- OPL Whole Life Costing Assumptions Email
- Central Library Construction Costing (April 16, 2015)
- Turner & Townsend Ottawa Public Library Feasibility Study Analysis Executive Summary (April 15, 2015)
- Comments on the site assessment, qualitative, risk and financial analyses, Project implementation plan and business case

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- Halifax Library Costs
- New Main Library Preliminary Indication of Cost
- Program Framework Comparison Options 2-4 (April 28, 2015)
- Potential RFP Process for OPL Central Library
- Central Library Program Framework Summary (May 2015)
- Central Library – Revision to Construction Worksheet (Email)
- OPL Main Library Facility – Implementation Plan – Timing for Procurement Process (Email)



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