



MORRISON HERSHFIELD

Final Report

Sustainable Development Implementation Measures Report

Presented to:

City of Richmond Hill

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Canada

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1. ACKNOWLEDGMENTS

Morrison Hershfield Ltd. (MH) was retained to complete an update to the Sustainability Metrics (the “Project”). The Project was undertaken in two parts, Part 1 was to update the inter-municipal Sustainability Metrics in response to changes in Provincial planning policy and legislation and was done in collaboration with municipal partners the City of Vaughan, the City of Brampton, and the City of Markham. Part 2 (this report) investigates potential incentives and other implementation measures to encourage developments to achieve their sustainability metrics goals, including the use of a Green Roof By-law for the City of Richmond Hill.

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2. INTRODUCTION

Morrison Hershfield Ltd. (MH) was retained to complete both major parts of this Project. Part 1 was to update the inter-municipal Sustainability Metrics in response to changes in Provincial planning policy and legislation and was done in collaboration with municipal partners the City of Vaughan, the City of Brampton, and the City of Markham. Part 2 (this report), builds on the findings and recommendations of Part 1 and investigates potential incentives and measures to encourage development to adopt the metrics leading to more sustainable development. Note that the metrics and suggested incentive measures are initiated at the Draft Plan of Subdivision and Site Plan application stages.

The current Sustainability Metrics program was launched in 2014 and will be updated as per Part 1 of this project. These sustainability metrics are intended to lead to more sustainable development in the City, but the metrics alone are expected to have limited adoption beyond the minimum points required to receive servicing allocation unless incentives and/or other implementation measures are adopted. This report presents a review of current incentive programs in North America, a discussion on the applicability of these programs for Richmond Hill, and a recommendation on how to proceed.

3. APPLICANT INCENTIVES TO ACHIEVE METRICS

3.1 Jurisdictional Scan of Implementation Measures

The metrics discussed in the Sustainability Metrics Update report are intended to lead to more sustainable development in the City. However, it is our understanding that the City cannot simply mandate the majority of these metrics due to legislation that does not allow municipalities to require developers to exceed Ontario Building Code [OBC], O Reg.332/12 2017, requirements, and due to a lack of legislative authority to mandate or impose certain requirements listed in the metrics. As such, in order to continue to encourage new development to maximize opportunities for sustainable development within their projects, it is important to explore plausible incentives and adopt implementation measures beyond the Sustainability Assessment Tool.

The Municipal Act, S.O. 2001, enables municipalities broad powers to pass by-laws and to govern within their jurisdiction. It also outlines requirements for municipalities to establish practice and procedures that is necessary and/or desirable for the public. Section 97.1 of the Municipal Act, 2001 states:

(2) Despite section 35 of the Building Code Act, 1992, if there is a conflict between that Act or the building code under that Act and a by-law to which this section applies, that Act or the building code prevails. 2017, c. 10, Sched. 1, s. 5.

We interpret this to mean that where a by-law is developed and passed that contradicts with the building code, the provisions of the building code prevail. Accordingly, in our opinion it is not effective for a municipality to develop a by-law that requires a development to exceed building code requirements.

It is important to note that the Planning and Conservation Land Statute Law Amendment Act, 2006 (Bill 51) provides municipalities with the authority to consider matters relating to exterior design, including without limitation the character, scale, appearance and design features of buildings, and their sustainable design, but only to the extent that it is a matter of exterior design. Such matters are prescribed under Section 41.4.2 of the Planning Act, R.S.O. 1990. Certain metrics used to determine applicant scores under the Sustainability Metrics Tool directly relate to common urban design items routinely incorporated into development projects.

With respect to the provision of green roofs, there is authority under the Municipal Act to require the provision of green roofs. This authorization was enabled through the provisions of the Modernizing Ontario's Municipal Legislation Act [Bill 68], 2017. Bill 68 amends the Municipal Act, 2001 and among other changes, introduced Section 97.1 to the Municipal Act, which provides permissive authority for by-laws respecting the protection or conservation of the environment that require buildings to be constructed in accordance with prescribed provisions of the OBC. Specifically, the amendments to the Municipal Act under Section 97.1 give local municipalities the power to authorize the passing of by-laws requiring the construction of green roofs or of alternative roof surfaces that achieve similar levels of performance to green roofs. The Municipal Act defines "Green Roofs" as *"a roof surface that supports the growth of vegetation over a substantial portion of its area for the purposes of water conservation or energy conservation."* Accordingly, this report explores the provision of a Green Roof By-law.

3.2 Existing Municipal Sustainability Measures in North America

To explore implementation measures that could be available, we gathered background information on municipalities related to sustainability such as greenhouse gas (GHG) reduction, carbon accounting, equity, resilience, and climate protection. The purpose of this research was to gain a broad understanding of sustainability initiatives in play at the time of writing in order to understand the type and basis of the implementation measures being utilized. It was not intended for the research to explore every existing implementation measure, but rather to gain a representative sample to understand trends. It is also important to note that this research is focused on municipal programs, and does not include federal, provincial / state, or private programs.

Our methodology to this end involved:

- General web searches regarding municipal programs
- Internal discussions with our sustainability staff across the continent; and
- Focused web searches on the larger municipalities in North America

In total we reviewed over 60 different programs. A summary of the results of our research is located within the table appended to this report as Appendix A.

In general, we found that the types of municipal programs can be broadly categorized as follows:

1. **Financial - Property tax or development charge reduction:**

Fourteen programs offered reduced property taxes or reduced development charges as incentives. This included the City of Brampton. In many cases, the property tax

subsidies changed over time. A notable example is Montreal's Sustainable Industrial Buildings program which subsidizes developers by providing a subsidy of 100% of the property tax increase for the first 3 years followed by 80% and 60% for the 4th and 5th years.

This type of incentive can result in a significant reason for developers to pursue the metrics (if the incentive is large), but will reduce municipal revenue.

2. Financial - Monetary grants:

Twelve programs offered cash incentives that were often based on expected increases in capital cost to adopt sustainability attributes.

This type of incentive can result in a significant reason for developers to pursue the metrics (if the incentive is large) and has the further benefit of not being tied to tax rates or development fees, but will reduce municipal revenue.

3. Financial - Loans or Loan Guarantees:

Three programs were noted where the incentive consisted of a loan or loan guarantee to resolve perceived risk resulting from using unfamiliar or emerging materials, systems, or processes.

This type of incentive can reduce some risk for developers and potentially resolve some financial issues for struggling developers, but there is financial risk borne by the municipality should the developer default on the loan.

4. Mandatory requirements:

Thirteen programs simply mandated sustainability requirements through policy or regulatory means for new buildings or rezoning applications, although only two of these, Vancouver and Toronto, were Canadian. While the City could update policy in the Official Plan to be more directive regarding the implementation of sustainable development measures, there is limited means through municipal by-laws to require development to exceed OBC requirements and other provisions established through Provincial policy and/or regulations. As noted above, the Municipal Act authorizes municipalities to pass by-laws requiring the provision of Green Roofs (Toronto Municipal Code Chapter 492, Green Roofs, 2017). Presently, the City of Toronto is the only municipality in Ontario to adopt a by-law to mandate the construction of green roofs for new development, or additions that are greater than 2,000 m² in gross floor area¹.

While we would expect it would result in very significant uptake of the metrics, it is our understanding that the current implementation approach of the Sustainability Metrics is not to mandate strict adherence to specific metric requirements, but rather to provide development proponents with options to determine a suite of metrics that work best for each project.

5. Exemptions:

Five programs related to incentives associated with allowing applicants to break

¹ Source: City of Toronto. <https://www.toronto.ca/city-government/planning-development/official-plan-guidelines/green-roofs/green-roof-bylaw/>

selected rules such as allowing increased density, reduced parking, or taller buildings. All of these examples were American.

This option would provide strong developer benefits but it is our understanding that it may be limited in its application across the City, and changes to the Planning Act may further limit opportunities to provide incentives such as building height and/or density in exchange for the implementation of sustainable development measures within a development project.

6. Special treatment or services:

Five incentive programs offered special treatment such as prioritizing permit reviews, providing education, or providing feasibility studies for specific elements such as solar arrays. These programs offer the advantage of lower cost to the applicant and potentially removing select barriers to more sustainable design, but may not be of sufficient benefit to the developer to achieve significant results.

These incentives may be of low or no cost to the Municipality. Accordingly, this type of incentive could be considered in addition to other incentives.

7. Recognition:

Two incentive programs offered awards and recognition for achieving requirements. These programs would promote applicants and may be a selling feature for their project; but may not be of sufficient benefit to the developer to achieve significant results.

This type of incentive may be of low cost to the Municipality relative to other types of incentives and has the advantage of also serving as marketing for the Municipality and the development project. It could be considered in addition to other incentives.

8. Mandatory requirements for City owned buildings:

Municipalities have more capability to control the design and construction of city owned facilities. Through our research we found five examples where this occurs, but we expect there are many more examples of this, as our research did not focus on finding this type of “incentive”.

While not technically an incentive, this option would have the advantage of demonstrating to development proponents the implementation and benefits of utilizing sustainable design measures. It would also demonstrate leadership by example and could, in many cases, result in long term financial benefits for the municipality.

3.3 Basis for application of Implementation Measures

The basis on which the implementation measures are applied can be categorized as follows:

a) Third party certifications:

Eighteen programs relied on external codes, standards or assessment systems to define the requirements to achieve incentives. Examples include, but are not limited to, LEED, Canada Green Building Councils' [CaGBC] Zero Carbon Building Certification or the International Green Construction Code [IGCC]. Note that external

certifications were often an optional method to replace or contribute to custom based point systems, although these cases are counted in the Custom Point based system discussion. Advantages of this approach include reduced market confusion through the use of a recognized external system, reduced municipal costs to develop, maintain and apply incentive, and inherent marketing benefits, if recognized systems are required. Disadvantages are that externally defined systems will not perfectly match unique municipal goals and that certifications are typically achieved at the end of construction resulting in difficulties in providing the incentive earlier.

b) Custom point-based systems:

Twenty-three incentive programs utilized short or long lists of specific requirements, often relying on a point-based sum that leads to incentives based on the degree of developer adoption. This is similar to the system in place for the City of Richmond Hill. The City's metrics program adopts a points-based threshold scoring system where, at a minimum, applicants are required to achieve a baseline "Good" score in order for their applications to be approved. Subsequent threshold tiers of "Very Good" and "Excellent," which denote enhanced levels of sustainability beyond that of the baseline are available and applicants are encouraged, but not required, to achieve a score in these tiers. This approach has the advantage of customization to match unique municipal requirements but has the disadvantage of additional municipal effort to develop, maintain, and operate and could create market confusion as it is yet another sustainability assessment system.

c) Singular requirement or measure:

Twenty municipalities focused on one singular sustainability element, such as a green roof or solar installation or meeting thresholds related to carbon intensity. This approach would result in a clear and focused benefit but would be focused on only one aspect of sustainability. Within Appendix A, in collaboration with Richmond Hill staff, we have identified where certain program types could be aligned with specific metrics.

3.4 Market Based Incentives/Disincentives to Achieve Sustainability Goals

The Sustainability Alignment Manual² provides a comprehensive list and discussion of market based incentives/disincentives to achieve sustainability goals. We found this document to be very helpful in the exploration of possible incentives and revenue streams to support the incentive. We encourage readers to review this document.

Key disincentives and potential revenue streams that we believe could be considered for this project are presented briefly below:

- Anti-idling development charges: Surcharges for development or infrastructure that support idling, such as drive thru services.

²"Sustainability Alignment Manual: Using Market-Based Instruments to Accelerate Sustainability Progress at the Local Level", Authors: Stephanie Cairns, Amelia Clarke, Ying Zhou, and Vincent Thivierge. Published by The University of Waterloo, <https://institute.smartprosperity.ca/sites/default/files/publications/files/SAM.pdf>

- Anti-idling pay-per use charges: User-fees for infrastructure that support idling. For example, user-fees or charges for drive-thru.
- Bag tag program: A solid waste collection program where garbage bag tags are required for every container or bag of waste
- Density-based property tax: Reduce tax rates on properties with high density and/or increase tax rates on properties that are low density.
- Parking pricing: Fees imposed on parking at various locations within the community.
- Phosphorous or Nitrogen levy: Charges imposed on phosphorous or Nitrogen emission or discharge.

The aforementioned disincentives are a means to address on-going sustainability of a development, by charging fees for counter-productive activities. The fees that are paid to the City can provide a revenue stream to fund other incentive programs that aim to improve the sustainability of development.

The Sustainability Alignment Manual also identifies partnerships as a means to implement sustainable development measures. Through an initial workshop with City staff, a number of partnership opportunities were identified related to certain metrics in the Sustainability Assessment Tool. A list of potential partnerships is identified in Appendix B, which is appended to this report. The City should consider aligning the sustainability metrics with the partnerships where feasible to leverage existing partnership opportunities.

3.5 Historical Sustainability Metric Pursuit

City staff provided data collected for the City's Environmental Scorecard and annual Sustainability Metric Monitoring Tables, which include information on overall program success and the most and least popular metrics adopted in 2016, 2017, and 2018.

When the Sustainability Metrics were adopted in 2014, the City established threshold scores (see Table 1). An applicant for site plan or draft plan is required to achieve the minimum threshold score in order to receive sewer allocation for its proposed development. Achieving threshold scores in the "very good" or "excellent" categories is voluntary. From a high-level perspective, an average of about 30% of applicants achieve a "very good" performance rating at both the draft and site plan level while success at the "excellent" performance rating varies, as shown in the Table 2 below.

Performance Level	Sustainability Score
Good	Draft Plan: 21-35 pts Site Plan: 32-45 pts
Very Good	Draft Plan: 36-55 pts Site Plan: 46-65 pts
Excellent	Draft Plan: 56+ pts Site Plan: 66+ pts

	2016	2017	2018
Draft Plan – Very Good (%)	33%	50%	10%
Draft Plan – Excellent (%)	0%	0%	0%
Site Plan – Very Good (%)	23%	33%	31%
Site Plan – Excellent (%)	15%	67%	0%

The ratings above indicate some success in the adoption of the sustainability metrics but also indicate some room for improvement. Improvements are expected in updating the metrics, and further improvement is available through the adoption of plausible incentives.

From a more detailed perspective, it is noted that under the 2014 suite of metrics the more popular metrics, from review of the 2018 KPI environmental scorecard, at the draft and site plan levels were as follows:

Site Plans	Draft Plans of Subdivision
<ul style="list-style-type: none"> • Buildings Designed and/or Certified under an Accredited “Green’ rating system • Soil Quantity and Quality • Maintain Existing Healthy Trees • Bicycle Parking (Com/Res/Inst) • Reduce Light Pollution • Solid Waste • Energy Conserving Lighting • Promote Walkable Street • Off Street Parking 	<ul style="list-style-type: none"> • Buildings Designed and/or Certified under and Accredited “Green” rating system • Soil Quantity and Quality • Maintaining Existing Healthy Trees • Reduce Light Pollution • Energy Conserving Lighting • Promote Walkable Streets • Restore Enhanced Soils • Block Perimeter/Length

The least popular metrics at the draft and site plan levels were as follows:

Site Plans	Draft Plans of Subdivision
<ul style="list-style-type: none"> • Universal Design • Parking Garage Lighting • Bird Friendly Design • Energy Management • Reduce heat island – roof (Veg+Cool) • Design for Life Cycle Housing • Rainwater Re-Use • Water Conserving Fixtures • Universal Design + Accessible Points of Entry • Recycled/Reclaimed Materials 	<ul style="list-style-type: none"> • Stormwater Quantity • Recycled/Reclaimed Materials • Energy Management • Building Energy Efficiency • Number of Universally Accessible Points of Entry • Traffic Calming (new roads) • Land for Local Food Production • Passive Solar alignment

We offer the following summary and notes regarding metrics in both the popular and unpopular categories:

- The “Promote Walkable Streets” metric has always been a popular metric among 2016 draft plan, 2017 draft plan and 2018 site plans. Providing continuous sidewalks has been incorporated in 80% of plan of subdivision applications at the minimum target and above, between 2016 and 2018. Providing pedestrian amenities is considered a “quick win” as it is implemented as a regular part of development. Between 2016 and 2018, there was a 70% uptake of this metric among site plan developments.
- The “Restore and Enhance Soils” metric was in the more popular category for 2016 draft plan but was unpopular for the 2017 draft plan.
- The metric “maintaining existing healthy trees” has received high uptake in both site plan and draft plan applications. On average, the metric received 82% uptake of the minimum target and above among draft plans, and 79% uptake of the minimum target and above among site plans.
- Both metrics regarding lighting, the “Energy Conserving Lighting” and the “Reduce Light Pollution” metrics, received high uptake for both site and draft plans, as it is supported by the City of Richmond Hill’s Chapter 1050 Light Pollution By-law.
- The metric “solid waste” has seen significant uptake for site plans. From 2016 to 2018, there has been a 33% increase in uptake of the minimum target and above, from 50% to 83% respectively. This increase in uptake is supported by the Richmond Hill’s solid waste by-law (18-19) which was adopted in 2018.
- The metric “energy management” has had low uptake over the years as district energy technology has not been implemented in Richmond Hill, however, as the development community focuses on energy conservation and efficiency, district energy is becoming a more viable option for the redevelopment of intensification sites such as the Richmond Hill Centre.



- The metric “Block Perimeter / Length” has had high uptake among draft plans. On average, there has been a 90% uptake of the minimum target and a 76% uptake of the aspirational target between 2016 and 2018. Uptake has incrementally increased year-to-year as parcels of land intensify.

The above-noted summary suggests that while the City has experienced an uptake in the adoption of certain metrics over the last several years and which vary between Draft Plan and Site Plan application types, metrics with low adoption rates might be considered more strongly for incentives than those with higher adoption rates, assuming all metrics are of equal importance to the municipality. However, the popularity of the existing metrics was taken into account via the 2020 update to the metrics tool whereby suggested changes to the metrics (per the Part 1 report) were recommended especially in terms of point allocation. Accordingly, one should review the changes alongside the past adoption rate to determine the need for focused incentives.

3.6 City of Richmond Hill Sustainable Development Priorities

The City of Richmond Hill has identified certain priorities with respect to sustainable development through a number of corporate strategies and plans. The City’s existing policies and programs that reference sustainable development, climate change and/or outline the mitigation actions that help reduce GHG emissions include the City’s Strategic Plan, Official Plan, Environment Strategy, ISO 14001 Environmental Management System, Corporate Energy Plan, Community Stewardship Program, Pedestrian and Cycling Master Plan, Electric Vehicle Charging Stations, and Fleet Strategy. These initiatives demonstrate the City’s commitment to addressing climate change and promoting sustainable development.

The City also has a few emerging priorities regarding sustainable development that are currently underway. One of them includes Richmond Hill’s “Resilient Richmond Hill” which includes a Corporate Climate Change Framework outlining municipal obligations, priorities and potential mitigation and adaptation actions within its municipal systems and also Richmond Hill’s Community Energy and Emissions Plan (CEEP) which is a comprehensive study and plan to look at its community’s energy consumption patterns, reduce GHG emissions and promote related economic opportunities and benefits. The CEEP project is expected to be completed in 2021 and will explore mitigation options that reduce emissions and save energy costs for residents and businesses and the recommendations will be used to inform climate change policies in the City’s Official Plan. Another initiative the City was involved in was the Climate Wise Business Network’s “Mayor’s Energy Challenge” which promoted energy and water reporting for large buildings in compliance with Ontario’s Energy and Water Reporting and Benchmarking (EWRB) regulation and program. Data collected by the Province is shared with building owners for comparison so that they can make informed decisions about how to achieve higher efficiency and cost savings. Furthermore, the Official Plan Update project is currently underway, and this Sustainability Metrics Update Project may identify updates to be made to land use policies to reflect climate change policies and priorities that will continue to support sustainable development.

In February 2020, Richmond Hill City Council resolved as follows:

- b) That the development of the City’s Corporate Climate Change Framework and Community Energy and Emissions Plan include an examination of the following directions*

and programs for implementation:

- i. Application of a climate change lens to the City's policies, plans and programs, where applicable, and identify through staff reports how climate change mitigation and/or adaptation has been considered.*
- ii. Undertaking a GHG inventory for Richmond Hill and identify targets and timeframes for GHG emission reductions*
- iii. Options and incentives to enable home/building energy efficiency retrofits to conserve energy use, save money and reduce GHG emissions.*
- iv. Options to promote private property resilience such as connecting homeowners to flood protection assessment programs and other resources to help safeguard homes from extreme weather events.*
- v. Options for the electrification of some of the City's fleet vehicles and tools to support the installation of electric vehicle charging stations in public and private developments to encourage low carbon transportation options.*
- vi. Enhancement of capacity in the community to implement climate change actions by developing a climate change community outreach toolkit and a climate leaders' training/recognition program.*
- vii. Provision of additional incentives through the Sustainability Metrics Program for sustainable design features that support climate change mitigation.*
- viii. Joining the Global Covenant of Mayors for Climate and Energy for the purpose of learning from cities around world to help inform our work on climate change.*
- ix. Investigation of available grant funding to implement any of the foregoing actions.*
- x. Staff strongly encourage the inclusion of e-charging infrastructure for each and every parking space in all medium and high density development applications.*

The above-noted extract highlights City Council's commitment to develop a Corporate Climate Change framework with the goal of exploring incentives that seek to address climate change mitigation.

Furthermore, as the City works to develop its Community Energy and Emissions Plan, a number of actions and targets related to buildings, land use, transportation, waste, renewable energy generation, and natural systems, are in development. To support the implementation of the CEEP, implementation measures that assist with achieving targets could also be an area of focus for this study. Actions related to buildings include: retrofitting existing buildings to reduce thermal and electrical energy demand and electrifying heating and water systems, requiring new buildings to achieve net-zero GHG emissions over time, and requiring provision of rooftop solar PV and storage.

From a land use perspective, actions include a much greater emphasis on compact urban form. In terms of transportation, the emerging direction is to promote use of electric vehicles and increase use of active transportation/transit in daily commutes. In terms of waste,

emerging direction includes reduction of water and wastewater consumption by various means included greywater re-use and an increase in the use of biogas, including methane recovery.

Actions related to renewable energy include installation of ground solar and use of district heating systems. Finally, from the perspective of natural systems, the emerging direction continues to be to promote on-going tree planting, adding green roofs to multi-family and non-residential buildings, and maintaining and improving forests and urban tree canopy.

These directions help to inform decision making regarding sustainable development implementation measures the City should investigate and develop.

3.7 Stakeholder Consultation

Stakeholder consultation was performed with internal staff from the City of Richmond Hill and partner municipalities in 2019 as part of an earlier phase of our work. Consultation with external parties was performed in October of 2020. These are discussed separately below.

3.7.1 Staff Consultation

During a workshop with staff from the City of Richmond Hill and partner municipalities in 2019, many suggestions and recommendations were made with respect to improving the implementation of the Sustainability Metrics. Attendees of the workshop varied in terms of disciplines and relationship to the implementation of the metrics. They are all considered technical experts in their fields. They provided a lot of insight with respect to City interests, emerging trends, and the benefits and challenges of the Sustainability Metrics overall.

At that time, staff recommended a five-pronged approach which included:

- (1) the mandating of certain metrics either through policy or regulatory tool (where permitted),
- (2) incentivizing certain metrics through financial means and/or fast tracking of applications,
- (3) incentivizing through awards and recognition programs,
- (4) When a lack of up-take for certain metrics may be a result of lack of knowledge about the metric, incorporate education and training tools or events,
- (5) There should be a consequence or penalty where a metric that had been committed to has not been provided.

Accordingly, some suggestions included: providing cost-benefit analysis related to certain metrics, creating demonstration diagrams that show what a project could incorporate in its development to achieve an “Excellent” score, for example, and developing a “report card” which is publicly shared to highlight how developments are faring with respect to sustainability. Furthermore, staff recommended aligning

and building on existing programs and information guides/sources to increase uptake of metrics.

Staff also identified a number of metrics they felt should be prioritized either through point allocation and/or through the administration of incentives. These include: solar power generation, facilitating electric vehicle use, energy modelling/achieving Net Zero GHG emissions, storm water management (rain barrels, blue roofs, low impact development), tree protection/preservation and increased canopy, green roofs, affordable housing, provision of jobs/mixed use development, provision of social community infrastructure, and local food.

3.7.2 External Consultation

External stakeholder consultation with Building Industry and Land Development (BILD) and local development industry professionals occurred in early October through an online survey and a virtual meeting held October 15, 2020. Consultation also occurred with York Region and Toronto and Region Conservation Authority (TRCA) in a meeting held on October 5, 2020.

The consultation with York Region and TRCA focused on synergies between the various parties and the potential to align goals and incentives. It was found there is potential for alignment in some areas, as noted below:

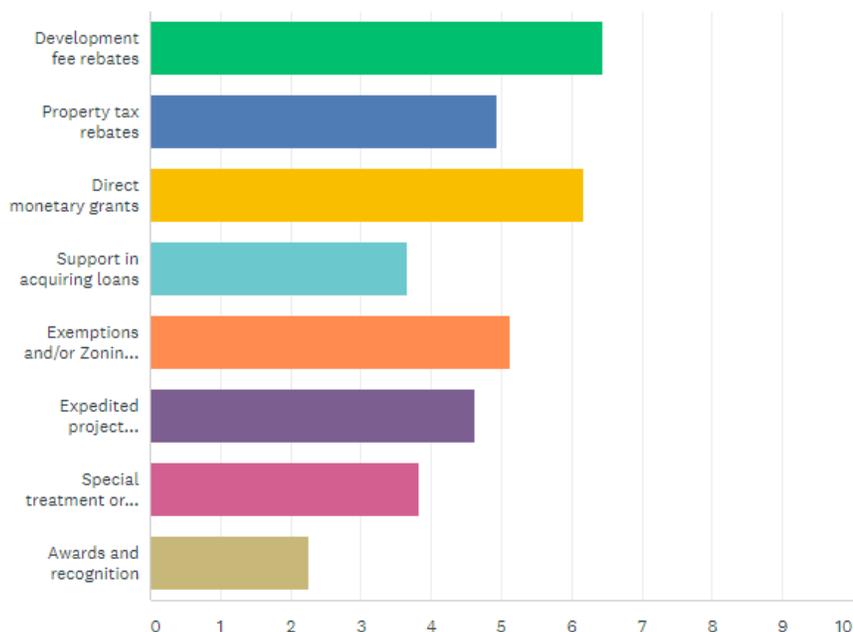
- York Region has a high-rise sustainability incentive program with an 11% participation rate that requires buildings to be certified to LEED silver. They also have a low-rise sustainability program with a 31% participation rate. They noted they lack a mid-rise program but that this is a key area for current development;
- York Region noted a key area of focus is on water conservation and high efficiency homes;
- York Region is also researching incentives and will be presenting an updated incentive framework recommendation report to York Region Council in Q1 2021. They have conducted preliminary research for incentives including:
 - Possible development charge discounts;
 - Fee reductions / rebates;
 - Expedited application approval process; and
 - Recognition and awards
- TRCA noted an opportunity to integrate TRCA Low Impact Development technologies into incentives / metrics in order to add additional benefits and opportunity for developers pursuing sustainable development;
- TRCA stated there could be an opportunity to offer technical expertise to developers from TRCA experts;

- TRCA noted they have a Living City Awards program and a Sustainable Technology Evaluation program;
- TRCA is looking to apply learnings from building its head office building to offer insight to the private sector and provide the business case for developers to pursue similar construction.

The online survey was distributed through BILD, York Region Chapter, the CaGBC Toronto Chapter, and Sustainable Buildings Canada between September 30, 2020 and October 9, 2020. Twenty-eight people from a broad range of the design and construction industry responded to the survey. Survey results (with contact information removed) are included in Appendix C which is appended to this report.

Key outcomes from this consultation are summarized as follows:

1. The responses to “*How important is more sustainable construction to your organization?*” indicate that sustainability is very important to the respondents. Sixteen of the twenty-one people responding answered this as an 8 or more out of ten.
2. The responses to “*Have you had experience in using the Sustainability Metrics tool in the City of Richmond Hill, City of Vaughan and/or City of Brampton?*” indicate that over 75% of respondents had used the programs.
3. The responses to the question on preference for incentive types indicate that awards are the least popular to respondents, and financial incentives are the most popular, but also that other incentive types may also be accepted. A graph of the results is included below:



4. Examples provided by respondents regarding good award programs that could be emulated include: Sustainable SITES by Green Business Certification Inc (GBCI), Toronto Green Standard, Guelph Water program, City of Toronto Urban Design Awards, CaGBC Award Night Gala, and BILD marketing awards.
5. Responses to the question: *“How can the municipality best recognize leaders in sustainable development in the region?”* included the following:
 - a. “Highlight their projects and emphasize the benefits from an approval’s perspective”
 - b. “Social media promotion by City”
 - c. “By having qualification exams for professional and industry standard criteria that sustainability consultant companies need to meet in order to be allowed to operate”
 - d. “Develop award certificate for Builder's promotional use”
 - e. “Annual awards”
6. The results of question 13 regarding the desirability of different types of financial incentives indicate that there is no significant difference to respondents in how a financial incentive is delivered.
7. The results of question 14 regarding financial penalties for developments that do not meet sustainability requirements that would be used to provide funding for municipal incentive programs indicate that there is no consistently strong opinion in either direction. Some respondents were strongly opposed, some strongly supportive, and some did not feel strongly either way. However, both of the developers that responded felt strongly negative about this option and 4 of 5 of the planners that responded felt strongly negative about this option.
8. Question 21 provided five examples of incentives and asked for respondents to rate them. The results are included below in order of popularity. In summary, financial incentives were more popular, mandatory requirements were neither popular nor unpopular, and an awards program and green roof policy were less popular.

Incentive	Average score out of 5
A grant equivalent to a maximum of \$50,000 to pay for 50% of costs incurred for energy modeling, solar design services, or district energy design.	4.1
A property tax reduction amounting to 50% of the property tax increase for a re-developed property for five years, payable when a developer achieves a	3.6

moderately high number of points using Richmond Hill's Sustainability Metrics program.	
Updated City policies/standards that consistently mandate building sustainability performance for buildings in like categories. For example, prior to building permit issuance, all new commercial and/or industrial buildings are required to demonstrate that they can be designed to achieve Net-Zero GHG emissions.	3.1
A system which to requires green roofs on most large buildings. In cases where they cannot be installed, the proponent would pay a fee penalty, and this penalty would be given to other projects to offset some of the costs for the voluntary installation of a green roof.	2.2
An awards program focused on sustainable developments. The award would be presented at a gala event and winners would be publicized across the GTA and through social media, and on the City's website.	2.1

9. Other comments from the survey include:

- a. Taxation and longer-term return-on-investment schemes will not incentivize any of your condo and commercial property developers,
- b. Sustainability measures must be certified by 3rd party consultants and not be restricted to proprietary programs like EnergyStar or Energuide,
- c. Need to ensure the reviewers / assessors are technically proficient and well versed in sustainability, but also are aware of the real-world implementation and execution impacts,
- d. Parallel planning and approvals department for affordable housing projects could be of benefit, as is available in Dublin, Ireland,
- e. More transparency, aligned comments, and better communication between applicant/consultants and City Staff, and
- f. Greater consumer awareness.

Following the online survey, a virtual meeting was held on October 15th, 2020 to provide an opportunity for participants to ask questions to the project team regarding incentives and to allow respondents an opportunity to expand on survey answers. It was attended by 8 people from the development and building industry, all of which had taken the survey. Some general outcomes from the meeting were as follows:

1. Developers mostly want to do a good job but will need incentives to pursue the metrics. Most metrics cost the developers money and without incentives, they are unlikely to be pursued;
2. There is general support for financial incentives, but they are also supportive of other types of incentives;

3. The amount of time it takes for development applications to move through the approvals process is of concern, and any incentives related to faster approvals would be good;
4. There is an opportunity for the municipality to partner with developers and work more closely than typical to streamline the process and better achieve municipality expectations. This might be accomplished through design charrettes or other early teaming exercises; and
5. It would be of benefit for incentives to be consistent across municipalities, and for eligibility criteria among similar programs that may be bundled together are consistent, as well. Sustainability measures and incentives are complicated, and it is further complicated when one needs to understand different requirements for different municipalities

3.8 Recommended Approach to Sustainability Implementation Measures

It is clear that incentives are required to improve the uptake of sustainable development in the City. The results of the stakeholder consultation indicate that there is general support for the administration of incentives to help augment the City's existing Sustainability Metrics tool.

There are many sustainability incentives enacted by municipalities in North America. Eight types of incentives are provided in section 3.2. Mandatory requirements are typically legislated based on Provincial legislation and regulations. The sustainability metrics do not represent statutory requirements that stem from Provincial legislation, however Section 41 of the Planning Act sets out provisions for municipalities to be able to require certain matters related to exterior design (e.g. character, scale, appearance and design features of a building and their sustainable design). In addition, the metrics do include requirements that go above and beyond legislation such as the OBC, and proponents of development are encouraged, but not mandated, to achieve these requirements if they so choose. Further, Mandatory Requirements for city owned buildings is not technically an incentive, so it can be excluded from the discussion and the three types of financial incentives can be combined as stakeholders had little preference on the different types of financial incentives. Accordingly, based on the background review and analysis of the results from the stakeholder consultation, a shorter list of possible incentive types that can be considered by City Council can be summarized as follows:

- Financial
- Special treatment or services
- Recognition
- Green Roof Program

From an eligibility basis perspective, incentives can be based on external systems (such as LEED), custom point-based systems (i.e. the City's Sustainability Assessment Tool), or specific stand-alone elements (such as a green roof).

To determine an appropriate incentive strategy, one must first consider the various factors affecting the decision and develop a balanced solution based on these factors. Key requirements or factors affecting the selection of an incentive program are as follows:

- **Reflect Municipal Goals:** The City of Richmond Hill goals, as described in section 3.6 encompass many different aspects of sustainability, including GHG reductions, energy and water use reductions, climate resiliency, active and transit transportation, ecology, and waste reduction. As they are related to development projects, these goals are reflected well in the updated sustainability metrics program.
- **Alignment:** It was noted by multiple internal and external stakeholders that there is a strong desire to align programs and incentives across multiple municipalities. This has the benefit of simplification from a developer perspective and cost sharing opportunities for a municipality.
- **Stakeholder Preference:** Stakeholders have some preference towards financial programs but are also open to other types of programs.
- **Resolving Historical Performance Issues:** In the past, some metrics were well utilized while others were not. An incentive program can be designed to focus on elements not well utilized in the past.
- **Reasonable Cost:** Every Municipality has a limited budget, and any incentive program must be either cost neutral, or at an affordable cost to the municipality.

With consideration of the above, we believe a multi-pronged approach to incentives would be reasonable. Our suggestion is to enact the following:

Green Roof Bylaw and Program: Adopt a program near identical to that for the City of Toronto. This program would only partly reflect municipal goals but could be revenue positive and contribute to other sustainability incentives below. It is also a well understood program in the region. The City could also combine the green roof program with the penalties noted in section 3.4 to increase the revenue stream to support the other incentives below.

The Green Roof by-law is a tool that is authorized by the Municipal Act. As such, the City can require green roofs on various building types. The provision of Green Roofs result in up to 6 points in the updated Sustainability Metrics program. Benefits of providing green roofs, many of which align with the City's goals, include:

- Stormwater delay and reduction
- Stormwater filtration
- Ecological diversity
- Habitat benefits for wild animals

- Heat island reduction
- Potential for urban planting
- Aesthetic

Furthermore, like the City of Toronto's program, where the proponent is unable to provide the required Green Roof, a fee can be charged which can be redirected to fund the provision of such roofs on other projects that voluntarily choose to provide a green roof to create a net environmental benefit.

Financial Incentive: Develop a financial incentive for achieving higher point-levels of the Sustainability Metrics program. The Sustainability Metrics program is understood regionally and is adopted by other municipalities so utilizing this for eligibility should be well understood. Financial incentives are important to developers, but the type of financial incentive is not, so the municipality is free to develop a type best meeting its requirements. The incentive can be funded all or partly from the green roof program noted above. It is suggested that the incentive be based on the overall metric score only, and not on individual metrics, in order to simplify the application of the incentive.

It is understood that the City's Corporate Key Performance Indicators [KPI] include a measure regarding the Sustainability Metrics Program. This KPI measures how many applications submitted within the year are demonstrating that they are able to achieve Sustainability Metric total point scores that are above the mandatory "Good" threshold established by the City. In order to increase the results of this KPI (i.e. increase the number of applications that voluntarily choose to apply measures that result in higher overall point scores than what is required), the City may want to provide financial incentives, which were identified by the stakeholders as the most desirable form of incentive. Provision of financial incentives that are paid out at the completion of a project (i.e. a grant or rebate), ensures that the applicant has indeed delivered/installed the promised measure, and the value of the incentive is commiserate with the cost of its installation. For example, similar to the City's Community Improvement Plan for Office and Downtown Revitalization, the proponent would enter into an agreement with the City wherein they would provide a cost estimate of the proposed measures, and the City would guarantee that a portion of those costs would be covered by the City once the work is complete and invoices are submitted.

Green Developer Program & Awards: Develop a program to give preferred treatment related to turnaround times and staff access for developers expected to achieve high sustainability metric scores. This gives the opportunity to partner with developers to better explain municipal goals. There would also be an opportunity to incorporate optional or mandatory education events for the green developers and to develop a related awards program. The Green Developer program could be developed in partnership with neighboring municipalities and an awards program could be easily included within an existing award from BILD, the CaGBC, or others. Ultimately, the Green Developer Program & Awards would be a low cost method to achieve better assurance that a new development is meeting the municipal sustainability requirements and could provide marketing benefits to both the developer and the municipality.

4. CONCLUSION

Incentives are required to improve the uptake and effectiveness of the City of Richmond Hill's Sustainability Metrics program. There are many incentive programs in place in the region and across the Province, Canada, and North America.

After consideration of example programs, City requirements, stakeholder concerns, and legality, we suggest a multi-pronged incentive program including a green roof bylaw, a financial incentive based on the Sustainability Metrics program, and the development of a Green Developer program and awards.

We also suggest partnering with existing municipalities and organizations whenever possible to help achieve consistent and higher quality incentive programs in the region.

APPENDIX A: List of Researched Municipalities & Incentive Program Descriptions

City Statistics

Country	City	Prov. / State	Land Area (km ²) US: 2016, CAN: 2011	Population Growth Rate	2019 Population
CA	Toronto	Ontario	630.2	4.46%	2,731,571
CA	Montreal	Quebec	365.1	3.34%	1,704,693
CA	Calgary	Alberta	825.3	12.99%	1,239,220
CA	Edmonton	Alberta	684.4	14.82%	932,545
CA	Edmonton	Alberta	684.4	14.82%	932,546
CA	Winnipeg	Manitoba	464.1	6.27%	705,224
CA	Vancouver	B.C.	115	4.64%	631,485
CA	Ottawa	Ontario	2,790.20	5.76%	934,243
CA	Brampton	Ontario	266.3	13.31%	593,638
CA	Hamilton	Ontario	1,117.20	3.26%	536,917
CA	Surrey	B.C.	316.4	10.60%	517,887
CA	Burnaby	B.C.	90.6	4.27%	232,755
CA	Gatineau	Quebec	343	4.11%	276,244
CA	Saskatoon	Saskatchewan	209.6	10.89%	246,378
CA	Kitchener	Ontario	136.8	6.42%	233,222
CA	Burnaby	B.C.	90.6	4.27%	232,755
CA	Windsor	Ontario	146.3	2.99%	217,190
CA	Regina	Saskatchewan	179.97	11.40%	215,106
CA	Burlington	Ontario	185.7	4.29%	183,314
CA	Sudbury	Ontario	3,227.40	0.78%	161,531
CA	Caledon	Ontario	688.16	11.8	66,502
U.S.	New York	New York	780.9	1.10%	8,336,817
U.S.	Los Angeles	California	1213.9	2.74%	3,979,576
U.S.	Chicago	Illinois	588.7	0.03%	2,693,976
U.S.	Houston	Texas	1651.1	5.82%	2,320,268
U.S.	Phoenix	Arizona	1340.6	9.04%	1,680,992
U.S.	Philadelphia	Pennsylvania	347.6	2.11%	1,584,064
U.S.	San Antonio	Texas	1193.99	9.20%	1,547,253
U.S.	San Diego	California	842.3	4.95%	1,423,851
U.S.	Dallas	Texas	882.9	6.76%	1,343,573
U.S.	San Jose	California	459.7	4.46%	1,021,795
U.S.	Austin	Texas	809.9	13.25%	978,908
U.S.	San Francisco	California	121.47	5.27%	881,549
U.S.	Seattle	Washington	217.04	13.24%	753,675
U.S.	Washington	D.C.	158.25	17.29%	705,749

U.S.	Boston	Massachusetts	125.1	6.74%	692,600
U.S.	Portland	Oregon	345.7	6.76%	654,741
U.S.	Minneapolis	Minnesota	139.86	6.83%	429,606

Source: Wikipedia

Program Types

Incentive Name	Incentive Type	Applicability Rating (0 – 3)*	City	Country
NYC Green Roof Tax Abatement	Tax	3	New York	U.S.
NYC Solar Property Tax Abatement	Tax	3	New York	U.S.
Sustainable Industrial Buildings: Accelerating Sustainable Investment Program	Tax	3	Montreal	CA
Chicago Sustainable Development Policy	Mandatory requirement	3	Chicago	U.S.
TIER Loan Guarantee Program (TLGP)	Loan / Financing	3	Calgary	CA
Quick Start Program	Tax	3	Houston	U.S.
Green Development Property Tax Abatements	Tax	3	Houston	U.S.
Green Roof Tax Credit	Direct financial support	3	Philadelphia	U.S.
Green Roof Density Bonus	exceptions	3	Philadelphia	U.S.
Green Buildings Policy for Rezoning	Mandatory requirement	3	Vancouver	CA
Green Building Policy	City owned buildings - mandatory	3	Ottawa	CA
The Green Building Program	Tax	3	San Diego	U.S.
DEVELOPMENT CHARGES INCENTIVE PROGRAM	Tax	3	Brampton	CA

Green Building Policy (Council Policy 6-32)	Mandatory requirement	3	San Jose	U.S.
LEED Grant Program: High Performance New Construction	Direct financial support	3	Hamilton	CA
The Downtown Density Bonus Program (DDBP)	Exceptions	3	Austin	U.S.
S.M.A.R.T. Housing	Tax	3	Austin	U.S.
Priority Green Facilitated	Special treatment	3	Seattle	U.S.
Priority Green Expedited	Special treatment	3	Seattle	U.S.
Downtown residential construction subsidy program	Tax	3	Gatineau	CA
Structural Engineering Rebate Application	Direct financial support	3	District of Columbia	Washington
RiverSmart Rooftops Green Roof Rebate Program	Tax	3	District of Columbia	Washington
City of Regina Housing Incentive Policy	Tax	3	Regina	CA
Ecoroof Incentive	Direct financial support	3	Portland	U.S.
Caledon Green Development Program	Direct financial support	3	Caledon	CA
Zoning Incentives	Exceptions	3	Seattle	U.S.
Green Roof Bylaw	Mandatory requirement	2	Toronto	CA
Subsidy program to rehabilitate contaminated land	Direct financial support	2	Montreal	CA
Los Angeles County - Green Building Program	Mandatory requirement	2	Los Angeles	U.S.

Green Building Resolution	City owned buildings - mandatory	2	Houston	U.S.
Infrastructure Acceleration Grant	Direct financial support	2	Edmonton	CA
Brownfield Redevelopment Grant	Direct financial support	2	Edmonton	CA
Build SA Green	Tax	2	San Antonio	U.S.
Greenest City Grant	Direct financial support	2	Vancouver	CA
City of Dallas - Green Building Requirements for Municipal Buildings	City owned buildings - mandatory	2	Dallas	U.S.
2015 City of Dallas Green Ordinance (effective March 1, 2017)	City owned buildings - mandatory	2	Dallas	U.S.
San Francisco Green Building Code	Mandatory requirement	2	San Francisco	U.S.
Innovation Advisory Committee	Special treatment	2	Seattle	U.S.
Living Building Pilot & 2030 Challenge Pilots	Exceptions	2	Seattle	U.S.
Environmental Building Standards By-Law	Mandatory requirement	2	Gatineau	CA
MapDwell	Special treatment	2	District of Columbia	Washington
E+ Green Building Program	Award	2	Boston	U.S.
Article 37	Mandatory requirement	2	Boston	U.S.
Small Business Investment Grant Program	Direct financial support	2	Windsor	CA
Sustainable Building and Development Guidelines	Award	2	Burlington	CA

Town Centre Community Improvement Plan	Direct financial support	2	Greater Sudbury	CA
Community Planning and Economic Development (CPED) 2% Loan Program	Loan / Financing	2	Minneapolis	U.S.
Eco-Roof Incentive Program	Direct financial support	2	Toronto	CA
New York City Energy Efficiency Corporation (NYCEEC): Green Construction Loan	Loan / Financing	1	New York	U.S.
Los Angeles County - Cool Roof Ordinance	Mandatory requirement	1	Los Angeles	U.S.
International Green Construction Code (IGCC) - Optional	Mandatory requirement	1	Phoenix	U.S.
City of Winnipeg Green Building Policy (New & major additions)	City owned buildings - mandatory	1	Winnipeg	CA
Mid-Construction Airtightness Test Rebate	Direct financial support	1	Surrey	CA
Municipal Green Building Code	City owned buildings - mandatory	1	San Francisco	U.S.
Part 3 Green Building Policy	Mandatory requirement	1	Burnaby	CA
Green Building Permit Incentives: Residential Deconstruction	Special treatment	1	Seattle	U.S.
Evergreen & Kensington Environment Incentives	Direct financial support	1	Saskatoon	CA
Green Building Construction Codes: DC 2017, DC 2013	Mandatory requirement	1	District of Columbia	Washington
Sustainable building practices	City owned buildings - mandatory	1	Kitchener	CA
Part 3 Green Building Policy	Mandatory requirement	1	Burnaby	CA

Chicago Rain Ready program	Special treatment	0	Chicago	U.S.
Chicago Watersave Program	Special treatment	0	Chicago	U.S.

*Applicability Rating System. Ratings are preliminary and may change with time or additional information.

- 0 Irrelevant program; included for reference.
- 1 Relevant program, unlikely permitted in Ontario.
- 2 Relevant program, possibly permitted in Ontario
- 3 Relevant program, likely permitted in Ontario.

Toronto, ON – CA

Program 1: Eco-Roof Incentive Program	
<p><u>Summary</u></p> <p>Green Roof Incentives: \$100 / m² installed and up to \$1,000.00 for a structural assessment. Cool Roof Incentives: \$2 to \$5 / m². Applicable to existing residential, industrial, commercial and institutional buildings, as well as new residential, industrial, commercial, and institutional buildings with a gross floor area of less than 2,000 m² and all new construction projects by Toronto School Boards and not-for-profit organizations.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Removes barrier related to perceived structural issues — Applied fairly across all new developments — Cash in lieu is directed at existing building incentives 	<ul style="list-style-type: none"> — Focused on only one aspect of sustainability
Program 2: Green Roof By-Law	
<p><u>Summary</u></p> <p>The Green Roof Bylaw sets out a graduated green roof requirement for new developments that are greater than 2,000 m² in gross floor area. The requirement ranges from 20-60% of the available roof space of a building. The Bylaw includes an option for developers to seek approval to pay \$200/m² as cash-in-lieu instead of constructing the required green roof. All funds collected as cash-in-lieu are directed to the Eco-Roof Incentive Program.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Removes barrier related to perceived structural issues — Applied fairly across all new developments — Cash in lieu is directed at existing building incentives 	<ul style="list-style-type: none"> — Focused on only one aspect of sustainability — This is a mandatory requirement with a fee penalty if not provided, may be a disincentive for new development

Montreal, QC – CA

Program 1: Subsidy Program to Rehabilitate Contaminated Land	
<p><u>Summary</u></p> <p>This subsidy program offers financial assistance to rehabilitate contaminated land for development within Montreal city limits. The program is divided into two categories: Private projects (industrial, commercial, institutional, residential) and municipal projects (municipal orgs & partners). Private projects must adhere to a by-law and municipal projects must adhere to a "Directive" to gain access to financial support. Various eligibility & exclusions apply. Financial assistance is provided in the form of subsidies equal to 15 - 70 per cent of eligible project expenses, depending on the type of decontamination technology used. The sum of the municipal, federal, and provincial subsidy must not exceed 75% of eligible project expenses.</p> <p>For Example:</p> <ul style="list-style-type: none"> — Off-site transport & disposal = 15% — On-site treatment or transport and treatment off-site = 50% — In situ treatment = 70% <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Could be part of a CIP program for sustainability. 	<ul style="list-style-type: none"> — Requires brownfield sites to be identified comprehensively to assess remediation requirements and efforts.
Program 2: Sustainable Industrial Buildings: Accelerating Sustainable Investment Program	
<p><u>Summary</u></p> <p>The Sustainable Industrial Buildings Program provides subsidies equal to the general property tax increase resulting from construction, expansion, renovation or demolition-reconstruction work to owners of buildings used for target economic activities within the Montréal urban agglomeration. Buildings must meet eligibility conditions to apply which include third party certifications (e.g. LEED, BOMA). A subsidy of 100% of the general property tax increase for the first 3yrs will be paid to the owner of the building. 80% for 4th year. 60% for 5th year. Option for 100% subsidy in 4th & 5th years if Zero Carbon Building Certification is achieved or the building is located in a key geographic sector. Annual cap of \$1 M subsidy per building.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Tax Increment Equivalency Grants (TIEG) ensure that the municipality does not need to fund the project upfront. — This could be considered a recognition award. 	<ul style="list-style-type: none"> — There may not be many industrial developments that achieve the certifications.

Calgary, AB – CA

Program 1: TIER Loan Guarantee Program (TLGP)

Summary

The TLGP is a credit enhancement program targeted towards clean technology, renewable energy and energy efficient projects. The city of Calgary shares the risk with lenders to help clean energy projects secure sufficient funding. The program allows qualified lenders to recover 50% of the principal and accrued interest on loans in the event of a default. A guarantee up to \$0.50 for every dollar borrowed to a maximum of \$50 M is available depending on eligibility. The loan guarantee is limited to a 10-year term from the date of issue.

Green Field Projects

- Small Projects: Emitting less than 10,000 tonnes of GHG per annum. Cap \$10 M.
- Medium Projects: Emitting 10,001 to 25,000 tonnes of GHG per annum. Cap \$25 M.
- Large Projects: Emitting 25,000 tonnes or greater GHG per annum. Cap. \$50 M.

Existing & Emitting Facilities, including Large Final Emitters (LFE):

- Small Emitters: Emitting less than 10,000 tonnes of GHG per annum. Cap \$10 M.
- Medium Emitters: Emitting 10,001 to 100,000 tonnes of GHG per annum. Cap \$25 M.
- Large Emitters: Emitting 100,001 tonnes or greater GHG per annum. Cap. \$50 M.

[More information here.](#)

Pros

- Provides consistency in economic uncertainty for lending to be available or sustainable development.
- Could be part of a CIP program for sustainability.

Cons

- Does not provide any financial relief.
- May require the City to invest in additional staff resources to evaluate measures.

Edmonton, AB – CA

Program 1: Infrastructure Acceleration Grant	
<p><u>Summary</u></p> <p>Projects may either reduce emissions directly through the deployment of renewable energy systems, building retrofits, energy efficiency and conservation, electrification of transportation, or work towards increasing a communities climate resilience and minimizing the exposure of people and community assets to the impacts of climate change. Maximum grant amount: \$50,000.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
— Could be part of a CIP program for sustainability.	— Broad stroke description and eligibility for the program may require significant labour investment for administration.
Program 2: Brownfield Redevelopment Grant	
<p><u>Summary</u></p> <p>The brownfield redevelopment program provides financial incentive to redevelop officially qualified brownfield sites in the form of grants. The grants are segmented into 4 phases, in which an owner may apply for phases I, II and III or IV.</p> <p>Phase I: Historical Investigation: ESA Phase I Grant Amount: Maximum of \$5,000 or 80% of the Phase I ESA, whichever is less per property</p> <p>Phase II: Testing, Delineation, Remedial/Exposure Control Planning Grant Amount: Maximum of \$80,000 or 80% of the cost of the environmental study (any combination of Phase II a, b and c) being proposed, whichever is less, per subject property.</p> <p>Phase III: Remediation Grant Amount: Assuming LEED Gold certification or higher is planned for redevelopment of the property, the maximum Grant Amount per property is the lesser of either:</p> <ul style="list-style-type: none"> - 100% of City of Edmonton (City) approved remediation costs; or - The sum of six (6) consecutive years of Municipal Tax Uplift <p>-All other approved properties (non LEED Gold Cert.) are eligible to receive up to 50% of the City approved remediation costs.</p> <p>Phase IV: Sustainable Remediation/Exposure Control/Interim Solution Grant Amount: Maximum of \$200,000 or 80% of the remediation and exposure control program being proposed, whichever is less, per title or site. The grant can also be</p>	

applied to the construction of infrastructure to support an innovative interim land use or renewable energy project while the site is undergoing longer term remediation with exposure control.

The cumulative total grant cap for phases 1, 2, and 4 is equal to \$200,000. The maximum grant payable for a Phase III Grant is up to 100% of City approved remediation costs or the sum of six (6) consecutive years of Municipal Tax Uplift, whichever is less, per property.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
— Could be part of a CIP program for sustainability.	— Requires brownfield sites to be identified comprehensively to assess remediation requirements and efforts.

Winnipeg, MB – CA

Program 1: City of Winnipeg Green Building Policy

Summary

All newly constructed City-owned buildings and major additions with a footprint greater than 500 square meters (5,400 square feet) shall:

1. Be certified by one of the following green building standards:
 - a. LEED® (Leadership in Energy and Environmental Design) Certification at the Silver level or better;
 - b. Green Globes Design™ at the 3 Globes level or better;
 - c. Other such third-party verified standards deemed to fulfill the Policy intent by the Chief Administrative Officer or designate.
2. Deliver improved energy performance and be certified by the Manitoba Hydro Power Smart New Buildings Program;
3. Utilize life-cycle costing to ensure maximum value of projected capital and operating costs & savings in financial decision-making and reporting;
4. Include in the design team an expert in green building and integrated design with a defined minimum level of project experience.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none">— Ensures sustainable development of municipal buildings.— Municipality leads sustainable development by example.— Could be part of a CIP program for sustainability.	<ul style="list-style-type: none">— Does not provide any financial relief.— May require the City to invest in additional staff resources to pursue certifications

Vancouver, BC – CA

Program 1: Green Buildings Policy for Rezoning

Summary

All rezonings must meet the following requirements of either:

A. Near Zero Emissions Buildings

- Requirements include meeting: Near-Zero Emissions Building Standard, Energy system sub-metering and reporting, Low-emitting Materials.

B. Low Emissions Green Buildings

- Requirements include: LEED Gold BD+C Cert., Performance limits, Airtightness testing, enhanced commissioning, Energy system sub-metering and reporting, Refrigerant Emissions and Embodied Emissions, Verified Direct Ventilation, Low-Emitting Materials, Indoor Air Quality Testing, Integrated Rainwater Management and Green Infrastructure, Resilient Drinking Water Access.

[More information here.](#)

Pros

- Could achieve aggressive targets
- No upfront cost to the municipality.
- This is a consistent requirement for all new development, provides a level playing field.

Cons

- No direct incentives provided in the policy.
- This can be considered a "regulatory tool" type and not an incentive program.
- May necessitate the need for a city-wide zoning amendment.
- Potential disincentive for developers.
- Ontario municipalities are not authorized to make most Building Code related requirements

Program 2: Greenest City Grant

Summary

Grants: up to \$100,000 for projects and programs by registered charities or registered BC societies, that aim to establish, test, or build on ideas or actions that support Greenest City targets. Up to 50% of your project budget, up to a maximum of \$100,000. Included in the scope of ideas are Refrigerant Emissions and Embodied Emissions, Verified Direct Ventilation, Low-Emitting Materials, Indoor Air Quality Testing, Integrated Rainwater Management and Green Infrastructure, and Resilient Drinking Water.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none">— Could be part of a CIP program for sustainability.— Ability to target specific industries within sustainability for new ideas & innovation.	<ul style="list-style-type: none">— Small scale grant which would not enable large scale development.— Focused only on registered charities— Financial burden on municipality.

Ottawa, ON – CA

Program 1: City of Ottawa Green Building Policy

Summary

This policy requires that all newly constructed City buildings with a footprint greater than 500 square metres be designed at minimum to a LEED Certified standard. The policy is recommended for building retrofits and renovations. Historic buildings are exempt.

[More information here.](#)

Pros

- Ensures sustainable development of municipal buildings.
- Municipality leads sustainable development by example.
- Could be part of a CIP program for sustainability.

Cons

- Does not provide any financial relief.
- May require the City to invest in additional staff resources to pursue certifications

Brampton, ON – CA

Program 1: Development Charges Incentive Program

Summary

The incentive program where developments are evaluated based on municipal criteria leading to an overall score which correlates to the value of development charges which the city will discount (paid by the city). Sustainability elements of developments are provided with a 5% weight in the scorecard (LEED, green roofs mentioned).

[More information here.](#)

Pros

- Integrates easily to existing sustainable development program.
- This type of incentive could easily be adapted to better emphasize sustainability.

Cons

- City is foregoing development charges.

Hamilton, ON – CA

Program 1: LEED Grant Program: High Performance New Construction

Summary

The purpose of the grant program is for the City to fund half of the incremental construction cost (City pays half of the incremental cost, owner pays half). Incremental costs may include consultation, energy modeling and certification fees with the applicant to achieve LEED certification. Grants are calculated on the basis of the rating of official certification under the LEED rating system. The incremental construction cost which is eligible to be shared with the city is as follows: LEED Certified 1%, Silver 3%, Gold 4%, Platinum 8%. LEED Silver for example translates to the owner pays 1.5% of the incremental construction cost to achieve LEED Silver, and the city pays 1.5%. E.g. \$500k project, LEED Gold, eligible incremental construction cost: \$20k, City pays: \$10K.

[More information here.](#)

Pros

- New program offers potential to glean relevant insights
- Could be part of a CIP program for sustainability.
- This could be considered a recognition award.

Cons

- 'Process to validate eligible incremental construction costs and process costs incurred could pose a significant administrative demand.

Surrey, BC – CA

Program 1: Mid-Construction Airtightness Test Rebate

Summary

Offers a limited number of \$400 rebates for building teams who voluntarily conduct a mid-construction (typically pre-drywall) blower door test on a Part 9 residential building and submit a one-page Mid-Construction Airtightness Report about the results to the City.

[More information here.](#)

Pros

- Encourages air tightness and increased testing of new construction
- Encourages energy efficiency in ground-related development.

Cons

- Small scale does not provide powerful incentive.
- This type of incentive may require a funding partner.
- Does not guarantee that remedial works will be taken to address air tightness deficiencies.

Burnaby, BC – CA

Program 1: Part 3 Green Building Policy

Summary

A minimum requirement of Step 1 of the BC Energy Step Code for all applicable Part 3 buildings. Eligibility and submission requirements vary by zoning, type of development and density.

[More information here.](#)

Pros

— Ensures sustainable development.

Cons

— May not be possible to implement in Ontario context.

Gatineau, ON – CA

Program 1: Environmental Building Standards By-Law	
<p><u>Summary</u></p> <p>Minimum loan of \$300k is available to building owners / developers up to 90% of project costs to support an array of sustainable building elements including: building enclosure, HVAC & controls, lighting, domestic hot water, demand response, energy storage</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Reduces financing costs for developer — As a loan, costs are recoverable to the City 	<ul style="list-style-type: none"> — Does not reduce cost for developer over the long term, as the loan must be repaid.
Program 2: Downtown Residential Construction Subsidy Program	
<p><u>Summary</u></p> <p>The aim of the downtown residential construction subsidy program is to revitalize the territory of Île de Hull. The program is designed for property owners and co-owners, and only applies to the residential portion of a building. The purpose of the financial assistance in the form of a municipal tax rebate is to help encourage repopulation in the downtown through new construction over parking lots and vacant lots. In addition, subsidies (rebates) are increased to encourage the development of LEED certified buildings.</p> <p>Sector 1: New construction of 3+ stories with a minimum of 4 units on a vacant lot or parking lot. The rebate is equivalent to 75% of the property taxes for a new construction, expansion or replacement, and to 90% for LEED certified buildings.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Significant subsidy for targeted development with LEED certification so it may encourage more projects to seek LEED certification. — Could be part of a CIP program for sustainability. — This could be considered a recognition award — This is an example of stacking programs to achieve more than one goal 	<ul style="list-style-type: none"> — Only available to a single community within the city. — Small additional subsidy for LEED certification may result in minimal uptake by developers seeking the certification due to the considerable discount of 75% without the added cost of LEED.

Saskatoon, SA – CA

Program 1: Evergreen & Kensington Environment Incentives

Summary

For Homeowners in targeted neighborhoods:

- Driveway Drainage Rebate
- Landscaping Greenery Rebate
- \$500 rebate for Energy Star & LEED for Homes certifications for residential homeowners
- A free rainwater collection barrel
- A free home composter

[More information here.](#)

Pros

— Developers can install a high quantity of sustainable measures at once.

Cons

— This type of incentive is generally focused on homeowners not developers.

Kitchener, ON – CA

Program 1: Sustainable Building Practices

Summary

The Council has passed policies that ensure new city owned buildings greater than 5,330 sq. ft. are at minimum LEED silver standard; thus far the Kitchener Operations Facility is at Silver Standard, the Axtiva Sportsplex and Kingsdale Community Centre are at Gold Standard, and Fire Hall #7 has building features that allow it to qualify for Silver Standard. LED light retrofitting was conducted in multiple city buildings including City Hall, the Kitchener Auditorium, County Hills community centre and Victoria Hills community centre; the anticipated GHG reduction is 99 tonnes.

Pros

- Ensures sustainable development of municipal buildings.
- Municipality leads sustainable development by example.
- Could be part of a CIP program for sustainability.

Cons

- Does not provide any financial relief.
- May require the City to invest in additional staff resources to pursue certifications

Windsor, ON – CA

Program 1: Small Business Investment Grant Program

Summary

The city of Windsor offers the following grants for businesses to develop in the city with municipal property tax returned to the developer in the form of a grant to incentivize. This does not implicate sustainable development whatsoever; but does propose a new incentive system that ties in jobs available in the local economy, which can be used for constructive comparison.

Business Development Grant Program: Grant equivalent up to 100% of the municipal property tax increase created by the project for up to 10 years after project completion. Project must create a minimum of 50 new jobs within the manufacturing sector or more than 20 jobs within any other targeted sector(s).

Business Retention and Expansion Grant Program: Grant equivalent up to 100% of the municipal property tax increase created by the project for up to 10 years after project completion. Project must create or retain a minimum of 50 jobs within the manufacturing sector or create more than 20 jobs or retain a minimum of 35 jobs within any other targeted sector(s).

Small Business Investment Grant Program: Grant equivalent up to 100% of the municipal property tax increase created by the project for up to 10 years after project completion. Business must have less than 50 employees if in the manufacturing sector or less than 20 in any other targeted sector(s). Investment must result in a minimum increase of \$25,000 in assessed property value.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none">— Could be part of a CIP program for sustainability.— One of the few programs that is related to job creation/retention.	<ul style="list-style-type: none">— Focused on only one aspect of sustainability.— Decreased revenue to municipality.

Regina, SA – CA

Program 1: City of Regina Housing Incentive Policy

Summary

The policy's objective is to provide incentives and encourage the development of affordable, below-market, accessible housing options and rental units in city zoning where existing infrastructure exists. Incentives are provided in the form of tax exemptions which are awarded based on location, type of housing, status of developer (e.g. non-profit vs. for profit), accessible design, sustainable elements etc. These elements are integrated into a score card to assess each applicant's eligibility for municipal tax exemptions. There are 8 points available for inclusion of sustainable design. Total points available: 100, minimum 40 to qualify for any incentives.

- On-site renewable energy generation (1 point)
- Outdoor landscaping or irrigation systems (1 point)
- Energy Efficiency; 25% better than the NBC (5 points)
- Green roof or passive solar design (1 point)

[More information here.](#)

Pros

- Provides specific sustainable elements in the score card to achieve the goals of the municipality.
- Could use the metrics threshold score levels for eligibility or relate it back to specific metrics.
- Could be part of a CIP program for sustainability.

Cons

- Does not provide a third-party certification requirement which may create ambiguity in qualifying applications as successful or failed in achieving eligible sustainable points.

Burlington, ON – CA

Program 1: Sustainable Building and Development Guidelines

Summary

The guidelines apply to all new development applications submitted after the approval of the sustainable design policies in the Official Plan. Select guidelines are required for development applications including: Mixed use, institutional and public service facilities, commercial, industrial / employment, and high and medium density residential buildings. The program will include sustainable building awards and recognition to incent applicants to pursue additional voluntary guidelines. The guidelines are very similar to LEED certification credits. Developers who implement the highest number of voluntary guidelines and demonstrate compliance of these items will be eligible for an award. The guideline that discusses implementing green roofs is voluntary.

[More information here.](#)

Pros

— Awards rather than subsidies has capacity to influence market trends from a social perspective.

Cons

— An award program alone is not likely to result in a lot of voluntary uptake of guidelines.

Greater Sudbury, ON – CA

Program 1: Town Centre Community Improvement Plan

Summary

1. Tax increment Equivalent Grant Program (Provides tax abatements equivalent to increases for developments satisfying CIP criteria)
2. Planning and Building Fees Rebate Program (up to \$5000 maximum)
3. Feasibility Study Grant (up to \$5000 maximum)
4. Facade Improvement Program (50% of estimated cost up to \$15,000 maximum)
5. Multi-Residential Interest-Free Loan Program
6. Residential incentive Program (Per door grant)

[More information here.](#)

Pros

— Could be part of a CIP program for sustainability.

Cons

— Reduced revenue for municipality.

Caledon, ON – CA

Program 1: Caledon Green Development Program

Summary

Caledon's Green Development Program provides development charge discounts for new green commercial and industrial buildings. Certification from a professional that verifies the Leadership in Energy and Environmental Design (LEED) standard or green technologies proposed is required.

Green Development Charge Discounts

1. Solar hot water system (providing a min. of 25% of the building hot water needs) - 5%
2. Transpired solar collectors (providing a min. of 10% of the building energy needs) - 5%
3. Solar photovoltaic system (providing a min. of 5% of the building energy needs) - 5%
4. LEED certified - 20%
5. LEED silver - 22.5%
6. LEED gold - 25%

[More information here.](#)

Pros

- For the purposes of incentive research, discounts could be awarded based on the threshold score levels or specific metrics.
- Targeted discounts ensure specific municipal goals and achieved.

Cons

- Reduced revenue for municipality.
- Not clear how value of discount is commensurate with proposed features.

New York City, NY – USA

Program 1: New York City Energy Efficiency Corporation (NYCEEC): Green Construction Loan	
<p><u>Summary</u></p> <p>Minimum loan of \$300k is available to building owners / developers up to 90% of project costs to support an array of sustainable building elements including: building enclosure, HVAC & controls, lighting, domestic hot water, demand response, energy storage, solar photovoltaic, combined heat and power, fuel conversion, deep energy retrofits, high-performance buildings, other technology on a case by case basis.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Could be part of a CIP program for sustainability. — Generally, revenue neutral for municipality. — Reduces financing costs for proponent 	<ul style="list-style-type: none"> — Not a savings to developer over the long term.
Program 2: NYC Green Roof Tax Abatement	
<p><u>Summary</u></p> <p>Offers building owners a property tax abatement equal to \$4.50 / square foot of green roof up to \$100,000 or the building's tax liability (whichever is lower) for green roof installations that cover at least 50% of a roof. Applications must be submitted by March 15th for a tax abatement to be applied to the current fiscal year's property taxes. Additional eligibility requirements are included in a checklist format for applicants to meet.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Could be part of a CIP program for sustainability. — Proponent recovers costs over the long term. 	<ul style="list-style-type: none"> — Does not reduce up-front costs to proponent. — Municipality forgoes revenue.
Program 3: NYC Solar Property Tax Abatement	
<p><u>Summary</u></p> <p>Benefit to the proponent will be either an amount equal to the percentage of installation cost, an amount equal to Annual Property Taxes, or \$62,500; whichever is lowest. The percentage of installation cost eligible is dependent on the installation date. The</p>	

abatement will be applied to the property for a four-year period starting on July 1 following approval.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none">— Could be part of a CIP program for sustainability.— May be beneficial to pay over a longer time period of time.— Offsets cost to proponent	<ul style="list-style-type: none">— Amount required to be an effective incentive may be limited and subject to the City's budget.

Los Angeles, CA – USA

Program 1: Los Angeles County - Green Building Program

Summary

The program mandates various levels of energy efficiency for buildings and select third party green building certifications.

Residential Code

Permit filed after 1/1/2009: Must be 15% more energy efficient than Title 24 2005 CA Energy Efficiency Standards

Buildings with 5+ units; Permit filed after 1/1/2010: Must be LEED, Green Point Rated, or California Green certified

Commercial Code

Permit filed after 1/1/2009: Must be 15% more energy efficient than Title 24 2005 CA Energy Efficiency Standards

10,000-24,999 sq. ft.; Permit filed after 1/1/2010: Must be LEED certified or equivalent

25,000 sq. ft. or more; Permit filed after 1/1/2010: Must be LEED silver certified or equivalent

High-Rise Building: Permit filed after 1/1/2010: Must be LEED silver certified or equivalent

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
— Mandatory provisions would result in major changes	— City does not have the authority to mandate building requirements beyond the OBC.

Program 2: Los Angeles County - Cool Roof Ordinance

Summary

This ordinance implements building code requirements for new developments including energy efficiency, water efficiency, sustainable site development, etc. with reference to California law and the LEED rating system.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
— Building code requirements ensure application of sustainability measures consistently across municipality.	— Municipalities do not have the power to change Building Code, with the exception of Green Roofs.

Chicago, IL – USA

Program 1: Chicago Sustainable Development Policy	
<p><u>Summary</u></p> <p>Requires development projects that are receiving financial assistance or special approvals from the City to include sustainable elements.</p> <p>The policy provides two compliance paths. One path stipulates a minimum number of points required through the strategies listed.</p> <p>The second path is for projects that are choosing to achieve building certification where points are automatically given to these projects depending on the type of building certification being achieved.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Similar structure to RH system. — There are 2 compliance paths: 1) achieve point score versus 2) building certification. 	<ul style="list-style-type: none"> — Only applies to city funded projects.
Program 2: Chicago Rain Ready program	
<p><u>Summary</u></p> <p>The City encourages adoption of RainReady principles. RainReady is an external program. RainReady helps property owners and communities to implement infrastructure improvements to address Sewage Backup, Seepage and Building Dampness, and Yard and Street Flooding. It does so through education.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Addresses existing development however can influence new development 	<ul style="list-style-type: none"> — This is a voluntary program that only benefits willing participants.
Program 3: Chicago Watersave Program	
<p><u>Summary</u></p> <p>Provides free building level water meters along with a water conservation package for each unit. More information here.</p>	

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none">— Can support unit-level water meters instead of building-level water meters.— Supports water conservation goals	<ul style="list-style-type: none">— Upfront costs to install unit-level water meters would be costly for the City.

Houston, TX – USA

Program 1: Green Building Resolution	
<p><u>Summary</u></p> <p>The city of Houston targets Silver level LEED certification for new construction, replacement facilities and major renovations of city of Houston owned buildings and facilities with more than 10,000 square feet of occupied space.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — This could be considered a recognition award 	<ul style="list-style-type: none"> — No financial incentives provided. — This can be considered a "regulatory tool" type and not an incentive program. — Potentially a city-side zoning amendment.
Program 2: Quick Start Program	
<p><u>Summary</u></p> <p>The "Quick Start" service is offered to any project registered for LEED certification which expedites the permit and development approval process. Typically, this service was only offered to developments valued at >\$1M.</p> <p>Upon receiving LEED certification, developers are also offered a financial incentive in the form of a graduated rebate for the quick-start program fees based on the level of certification achieved. Platinum: 100% service fee rebate. Gold: 75%, Silver: 50%, Certified: 25%</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Ensures sustainable development of municipal buildings. — Municipality leads sustainable development by example. — Could be part of a CIP program for sustainability. 	<ul style="list-style-type: none"> — Does not provide any financial relief. — May require the City to invest in additional staff resources to pursue certifications
Program 3: Green Development Property Tax Abatements	
<p><u>Summary</u></p> <p>The owner of a new or refurbished commercial facility that has registered with the USGBC seeking LEED Certification may be eligible for a partial tax abatement for the incremental investment associated with obtaining such certification. The agreement shall be effective</p>	

up to ten years, at a percentage based upon the level of certifications: a. Basic "Certified" Level 1.0% b. Silver Level 2.5% c. Gold Level 5.0% d. Platinum Level 10%.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none">— Could be part of a CIP program for sustainability.— May be beneficial to pay over a longer time period of time.— Grant is payable upon project completion; therefore municipality can ensure LEED measures are in place prior to funding being released.	<ul style="list-style-type: none">— Amount required to be an effective incentive may be limited and subject to the City's budget.— Does not address upfront costs to developer.

Phoenix, AR – USA

Program 1: International Green Construction Code (IGCC) - Optional

Summary

The city of phoenix has adopted and amended the 2012 International Green Building Code to require green building developments.

[More information here.](#)

Pros

- Ensures sustainable development and fair application to all developers.
- Mandatory provisions would result in major changes

Cons

- City does not have the authority to mandate building requirements beyond the OBC.

Philadelphia, PA – USA

Program 1: Green Roof Density Bonus	
<u>Summary</u> The Philadelphia Zoning Code offers incentives to installing green roofs by providing exemptions to certain residential density by-laws. The exemptions vary by project type, site context, etc. More information here.	
<u>Pros</u> <ul style="list-style-type: none">— Simple, easily applied— Can potentially be a CIP program.	<u>Cons</u> <ul style="list-style-type: none">— Grant is retroactive and does not help with upfront costs to developers.
Program 2: Green Roof Tax Credit	
<u>Summary</u> The credit to be claimed is 50% of all costs incurred to construct the green roof, not to exceed \$100,000. More information here.	
<u>Pros</u> <ul style="list-style-type: none">— Simple and straightforward system— Reduces a common hurdle to green roof (cost)	<u>Cons</u> <ul style="list-style-type: none">— Incentive goes to building owner, not developer— Focused on a single sustainable element

San Antonio, TX – USA

Program 1: Build SA Green

Summary

Independent certification, education, and technical consultation body created by the City of San Antonio to promote and certify green buildings within the city. Offers a membership to developers or builders to access services. Focuses on community engagement, solar power projects, and green building development or renovation.

[More information here.](#)

Pros

- Unique approach. May reduce long term costs of sourcing certifications from LEED
- City-led mentorship to constrict green buildings would be valuable for developers that have not gone through the process.

Cons

- Effectiveness of certification and strict adherence may be less so in comparison to USGBC

San Diego, CA – USA

Program 1: The Green Building Program

Summary

This program offered by the city of San Diego offers the incentive of a reduced "plan check" turnaround time as well as a 7.5% reduction in plan check and building permit fees. To qualify for the incentives, the project must comply with one of the resource conservation measures listed below:

- Natural Resource Conservation (Straw bale construction, recycled content)
- Water Conservation (Installation of gray water Systems)
- Energy Conservation (Energy Use Below CEC Standards)

[More information here.](#)

Pros

- Relieves administrative wait times for developers and may decrease overall project delivery time which typically reduces costs overall project cost to aid in increased cost associated with seeking LEED cert. over long-term.
- Incentivizes higher certified LEED levels by offering lower quick-start program fees.

Cons

- Does not help developers with upfront costs to build to LEED standards.
- Processing times vary based on complexity of applications
- No guarantee that approval will actually result in sustainable measures being implemented.

Dallas, TX – USA

Program 1: City of Dallas - Green Building Requirements for Municipal Buildings	
<p><u>Summary</u></p> <p>LEED Silver Certification: All new municipal buildings over 10,000 square feet (2003 Bond Program and thereafter)</p> <p>LEED Gold Certification: Public Works and Transportation facilities (2006 Bond Program and thereafter)</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Ensures sustainable development of municipal buildings. — Municipality leads sustainable development by example. — Could be part of a CIP program for sustainability. 	<ul style="list-style-type: none"> — Does not provide any financial relief. — May require the City to invest in additional staff resources to pursue certifications
Program 2: 2015 City of Dallas Green Ordinance	
<p><u>Summary</u></p> <p>This ordinance enacted in 2015 outlines the sustainability requirements for developments within the city. Areas and requirements align closely with LEED certification and vary by zone, height, density, and type of development.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Ensures sustainable development and fair application to all developers. 	<ul style="list-style-type: none"> — Difficult to mandate beyond the OBC at the building level. — Municipalities do not have the power to change Building Code.

San Jose, CA – USA

Program 1: City of Dallas - Green Building Requirements for Municipal Buildings

Summary

The green building policy requires applicable City projects to achieve minimum green building performance levels as follow:

Commercial/Industrial - Tier 1: < 25,000 square feet = LEED Applicable NC Checklist

Commercial/Industrial - Tier 2: ≥ 25,000 square feet = LEED Silver

Residential < 10 units Tier 1: GreenPoint or LEED Checklist

Residential ≥ 10 units Tier 2: GreenPoint Rated 50 points or LEED Certified

High Rise Residential: (75' or higher) LEED Certified

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none">— Ensures sustainable development of municipal buildings.— Municipality leads sustainable development by example.— Could be part of a CIP program for sustainability.	<ul style="list-style-type: none">— Does not provide any financial relief.— May require the City to invest in additional staff resources to pursue certifications

Austin, TX – USA

Program 1: The Downtown Density Bonus Program (DDBP)

Summary

Developers that meet the program requirements, gatekeeper requirements, and community benefits will be eligible to a bonus area for their development application. The bonus area will be the greater of:

- a) The GFA that exceeds the max. allowable floor-to-area ratio allowed with the site's primary entitlements; or
- b) The GFA contained within the portion of a structure that exceeds the max. height allowed under the site's primary entitlements.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Allows developers the opportunity to increase revenue from increased density of units — Increases city revenue by charging development fees on added units to building developments. 	<ul style="list-style-type: none"> — Bonusing is typically associated with section 37 of the Planning Act. Section 37 is being replaced in the future with a community benefits by-law.

Program 2: S.M.A.R.T. Housing

Summary

Developers may apply for the S.M.A.R.T. Housing program if the proposal meets several eligibility criteria including:

Achieve at least a one-star rating under the Austin Green Building Program.

Projects that are successful in meeting the requirements will be eligible for a development fee waiver which will waive a % of the development fees owed.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Reduces up-front cost to developers 	<ul style="list-style-type: none"> — Lost revenue for municipality.

San Francisco, CA – USA

Program 1: San Francisco Green Building Code

Summary

Municipal construction projects shall reach a minimum of LEED Gold certification for projects of 10,000 square feet GFA or larger. Construction projects which are less than 10,000 square feet GFA shall be required to reach a minimum of LEED Certified.

[More information here.](#)

Pros

- Ensures sustainable development of municipal buildings.
- Municipality leads sustainable development by example.
- Could be part of a CIP program for sustainability.

Cons

- Does not provide any financial relief.
- May require the City to invest in additional staff resources to pursue certifications

Seattle, WA – USA

Program 1: Innovation Advisory Committee	
<u>Summary</u> This group of experts review energy-efficient proposals not covered in the technical codes.	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Provides opportunity for pro-bono expert consultation in field for developer. — Allows development to be innovative in sustainable design practices. 	<ul style="list-style-type: none"> — May require the City to invest in additional staff resources to review building energy proformas.
Program 2: Living Building Pilot & 2030 Challenge Pilots	
<u>Summary</u> Allows proponent to request departures from the Seattle Land Use Code through Design Review and offers additional height and floor area incentives for projects attempting to meet the Living Building Challenge.	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Provides high flexibility for development opportunities 	<ul style="list-style-type: none"> — Bonusing is typically associated with section 37 of the Planning Act. Section 37 is being replaced in the future with a community benefits by-law.
Program 3: Priority Green Facilitated	
<u>Summary</u> A streamlined permitting process for master use permits in exchange for meeting the living building pilot or higher performing green building requirements. More information here.	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Priority Service would not cause an upfront financial impact to the City. 	<ul style="list-style-type: none"> — Developer still incurs incremental cost of applying sustainable design.
Program 4: Green Building Permit Incentives: Residential Deconstruction	
<u>Summary</u>	

Deconstruction is taking apart a building in order to save the maximum amount of reusable building materials. If you are removing housing, a residential deconstruction permit may allow you to begin the process before a new building permit for the site is issued.

<u>Pros</u>	<u>Cons</u>
— Earlier construction access allows for potential savings.	— Weak overall incentive.

Program 5: Priority Green Expedited

Summary

Available for all new construction projects. Gives proponent faster building permit review and processing for projects that meet green building requirements with a focus on energy, water, resource conservation and indoor air quality.

[More information here.](#)

<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Relieves administrative wait times for developers and may decrease overall project delivery time which typically reduces costs overall project cost to aid in increased cost associated with seeking LEED cert. over long-term. — Priority Service may not cause an upfront financial impact to the City. 	<ul style="list-style-type: none"> — Does not help developers with upfront costs to build to LEED standards. — Processing times vary based on complexity of applications — No guarantee that approval will actually result in sustainable measures being implemented.

Washington – D.C.

Program 1: Structural Engineering Rebate Application	
<p><u>Summary</u></p> <p>For buildings with a footprint of 2,500 square feet or less, funds are available to defray the cost of a structural assessment due to green roof installations.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
— It is a very simple straightforward incentive.	— Does not guarantee that Green Roof will be installed
Program 2: Green Building Construction Codes: DC 2017, DC 2013	
<p><u>Summary</u></p> <p>The city of Washington DC integrates the international Green Building Code into its own building code requirements on an ongoing basis, with 2012 International Green Construction Code (IGCC) as the current code that is used. In addition, a supplemental DC Green Construction code is applied, the most recent in 2017.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
— Step code and Tiered Systems work in the Ontario Context (i.e. TGS)	— Current OBC does not operate as a Step Code.
Program 3: MapDwell	
<p><u>Summary</u></p> <p>This program offers a free evaluation of a business' rooftop solar potential to better inform them on the potential energy and cost savings associated with a solar panel installation.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
— Provides a partnership opportunity between a local building partner and the City	<p>— Utility Companies have delivered this service in the past but they are in control of when rebates on installing solar panels ends.</p> <p>— Does not guarantee installation</p>
Program 4: RiverSmart Rooftops Green Roof Rebate Program	

Summary

DOEE offers a rebate of \$10 – \$15 per square foot for voluntary installations of green roofs around the District. The specific rebate amount depends on whether the proposed green roof is located within the combined sewer system (\$10/sq.ft.) or the municipal storm sewer system (\$15/sq.ft.).

[More information here.](#)

Pros

— It is a very simple straightforward incentive.

Cons

— There is no financial gain for the City.
There is social gain for the City.

Boston, MA – USA

Program 1: Article 37 Green Building	
<p><u>Summary</u></p> <p>Zoning bylaw requires all projects achieve at minimum the 'certifiable' level of LEED.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
— Ensures sustainable development.	— May not be possible to implement in Ontario context.
Program 2: E+ Green Building Program	
<p><u>Summary</u></p> <p>Specialty developer program which the city funds in some capacity (information not provided) select developers to deliver exception Energy "positive" buildings to showcase the innovation of green building design.</p> <p>More information here.</p>	
<u>Pros</u>	<u>Cons</u>
<ul style="list-style-type: none"> — Forming Partnerships will help get the community involved in developing Green buildings. — Demonstration program can encourage other developers to try more innovative approaches if they see that it is working elsewhere and can better understand cost & benefits 	<ul style="list-style-type: none"> — There would be uncertainty of funding and support from the Government. — Applies to limited number of proponents.

Portland, OR – USA

Program 1: Eco Roof Incentive	
<u>Summary</u> Environmental Services offered property owners and developers an Eco roof construction incentive of \$5 per square foot. More information here.	
<u>Pros</u> <ul style="list-style-type: none">— It is a very simple straightforward incentive.— It could be included in a CIP or an annual grant format.	<u>Cons</u> <ul style="list-style-type: none">— Reduced revenue for municipality.

APPENDIX B: Implementation Partnership Opportunities

Partner	Purpose of Partnership	Related Sustainability Metric(s)	Link
Alectra	<ul style="list-style-type: none"> ○ To distribute information/educate. ○ To create buy-in to Metrics and partnering with demonstration projects. ○ To promote GHG reduction and energy efficiency. 	<ul style="list-style-type: none"> ○ IB-1 Buildings Designed and/or Certified under an Accredited “Green” Rating System ○ IB-4 Embodied Carbon of Building Materials: Supplementary Cementitious Materials ○ IB-5 Embodied Carbon of Building Materials: Life Cycle Assessment ○ IB-6 Embodied Carbon of Building Materials: Material ○ Efficient Framing ○ IB-7 Reduce Heat Island: Non- Roof ○ IB-8 Reduce Heat Island: Roof ○ IB-9 Passive Solar Alignment ○ IB-10 Controlling Solar Gain ○ IB-11 Solar Readiness ○ IB-12 Energy Strategy ○ IB-13 Building Energy Efficiency and Emissions ○ IB-15 Back-up Power 	https://www.alectrautilities.com/
BILD – York Region chapter	<ul style="list-style-type: none"> ○ To create buy-in to Metrics overall and partnering with demonstration projects 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://bildgta.ca/
Blue Door	<ul style="list-style-type: none"> ○ To provide training, experience and support on skilled trades (construction) including energy retrofits to help vulnerable people find well-paying and long-term careers in the construction trades 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://bluedoor.ca/
Blue Dot Richmond Hill	<ul style="list-style-type: none"> ○ To distribute information/educate. 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://www.facebook.com/BlueDotRH/
Canadian Green Building Council	<ul style="list-style-type: none"> ○ To distribute information/educate. ○ 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://www.cagbc.org/
City – EV Stations	<ul style="list-style-type: none"> ○ To promote the increase in EV charging stations 	<ul style="list-style-type: none"> ○ BE-10 Electric Vehicle Charging Stations 	https://www.richmondhill.ca/en/find-or-learn-about/electric-vehicles.aspx

Clean Air Partnership	<ul style="list-style-type: none"> ○ To distribute information/educate. ○ 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://www.cleanairpartnership.org/
Climate Wise Business Network	<ul style="list-style-type: none"> ○ To distribute information/educate. 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	http://windfallcentre.ca/climatewise/
Collective Community Gardens	<ul style="list-style-type: none"> ○ To distribute information/educate. ○ To promote growing plants. 	<ul style="list-style-type: none"> ○ NE-6 Supporting Pollinators ○ NE-7 Dedicate Land for Private Fruit and Vegetable Garden Space ○ IB-Reduce Heat Island: Non-roof 	https://www.richmondhill.ca/en/register-apply-or-pay/Community-Garden.aspx
Conservation Centre of Ontario	<ul style="list-style-type: none"> ○ To promote connections to nature and green spaces. ○ To promote the improvement of natural heritage system functions. 	<ul style="list-style-type: none"> ○ NE-4 Connection to Natural Heritage ○ NE-5 Natural Heritage System Enhancements 	https://www.ontarioconservationareas.ca/
Downtown BIA	<ul style="list-style-type: none"> ○ To create buy-in to Metrics overall and partnering with demonstration projects. ○ To educate businesses on what sustainable design features and incentive programs are available. 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://richmondhillbia.com/
Enbridge	<ul style="list-style-type: none"> ○ To distribute information/educate. ○ To create buy-in to Metrics and partnering with demonstration projects. ○ To promote GHG reduction and energy efficiency. 	<ul style="list-style-type: none"> ○ IB-1 Buildings Designed and/or Certified under an Accredited “Green” Rating System ○ IB-4 Embodied Carbon of Building Materials: Supplementary Cementitious Materials ○ IB-5 Embodied Carbon of Building Materials: Life Cycle Assessment ○ IB-6 Embodied Carbon of Building Materials: Material ○ Efficient Framing ○ IB-7 Reduce Heat Island: Non- Roof ○ IB-8 Reduce Heat Island: Roof ○ IB-9 Passive Solar Alignment ○ IB-10 Controlling Solar Gain ○ IB-11 Solar Readiness ○ IB-12 Energy Strategy ○ IB-13 Building Energy Efficiency and Emissions ○ IB-15 Back-up Power 	https://www.enbridge.com/

Evergreen Foundation	<ul style="list-style-type: none"> ○ To provide grants/funding for incentive programs. ○ To distribute information/educate. ○ To promote growing plants. 	<ul style="list-style-type: none"> ○ BE-6 Enhancing Urban Tree Canopy and Shaded Walkways and Sidewalks ○ NE-1 Preserve Existing Healthy Trees ○ NE-2 Soil Quantity and Quality for New Trees ○ NE-6 Supporting Pollinators ○ NE-7 Dedicate Land for Private Fruit and Vegetable Garden Space ○ IB-Reduce Heat Island: Non-roof 	https://www.evergreen.ca/
Horticultural organizations	<ul style="list-style-type: none"> ○ To distribute information/educate. ○ To promote growing plants. 	<ul style="list-style-type: none"> ○ BE-6 Enhancing Urban Tree Canopy and Shaded Walkways and Sidewalks ○ NE-1 Preserve Existing Healthy Trees ○ NE-2 Soil Quantity and Quality for New Trees ○ NE-6 Supporting Pollinators ○ NE-7 Dedicate Land for Private Fruit and Vegetable Garden Space ○ IB-Reduce Heat Island: Non-roof 	No specific organization identified.
L'Arche Daybreak	<ul style="list-style-type: none"> ○ To promote accessibility. ○ 	<ul style="list-style-type: none"> ○ IB-3 Universally Accessible Entry to Buildings and Sites 	https://larchedaybreak.com/about-us/
LEAF – backyard tree planting program	<ul style="list-style-type: none"> ○ To promote growing plants. 	<ul style="list-style-type: none"> ○ BE-6 Enhancing Urban Tree Canopy and Shaded Walkways and Sidewalks ○ NE-1 Preserve Existing Healthy Trees ○ NE-2 Soil Quantity and Quality for New Trees ○ NE-6 Supporting Pollinators ○ NE-7 Dedicate Land for Private Fruit and Vegetable Garden Space ○ IB-Reduce Heat Island: Non-roof 	https://www.yourleaf.org/
Oak Ridges Moraine Land Trust	<ul style="list-style-type: none"> ○ To promote connections to nature and green spaces. ○ To promote the improvement of natural heritage system functions. 	<ul style="list-style-type: none"> ○ NE-4 Connection to Natural Heritage ○ NE-5 Natural Heritage System Enhancements 	https://www.oakridgesmoraine.org/
Ontario Home Builders Association	<ul style="list-style-type: none"> ○ To create buy-in to Metrics overall and partnering with demonstration projects. 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://www.ohba.ca/

	<ul style="list-style-type: none"> To educate builders on what sustainable design features can contribute to their score and the incentive programs are available. 		
Ontario Streams	<ul style="list-style-type: none"> To promote connections to nature and green spaces. To promote the improvement of natural heritage system functions. 	<ul style="list-style-type: none"> NE-4 Connection to Natural Heritage NE-5 Natural Heritage System Enhancements 	https://www.ontariostreams.on.ca/
Ontario Professional Planners Institute (OPPI)	<ul style="list-style-type: none"> To share ideas with planning professionals 	<ul style="list-style-type: none"> Could apply to many metrics 	https://ontarioplanners.ca/home
Park People	<ul style="list-style-type: none"> To provide community engagement, creative placemaking, grants, workshops, research and reports. To promote connections to nature and green spaces. To promote the improvement of natural heritage system functions. 	<ul style="list-style-type: none"> NE-4 Connection to Natural Heritage NE-5 Natural Heritage System Enhancements Could apply to many others. 	https://parkpeople.ca/
Phyllis Rawlinson Park allotment garden (City of Richmond Hill)	<ul style="list-style-type: none"> To distribute information/educate. To promote growing plants. 	<ul style="list-style-type: none"> NE-6 Supporting Pollinators NE-7 Dedicate Land for Private Fruit and Vegetable Garden Space 	https://www.richmondhill.ca/en/register-apply-or-pay/Community-Garden.aspx
Regional Municipality of York	Provides supporting programs, such as the Sustainable Development through LEED in York Region and water Servicing Incentive Program (SIPS)	<ul style="list-style-type: none"> NE-9 Stormwater Quantity NE-10 Stormwater Quality NE-11 Greywater Reuse NE-12 Multi-purpose Stormwater Managements IB-14 Reduce Potable Water Use 	Sustainable Development through LEED in York Region Servicing Incentive Program (SIPS)
Smart Commute	<ul style="list-style-type: none"> To distribute information/educate. To promote increased walking and biking to school and work and increased use of public transit. To promote walkable blocks and transit-oriented communities. 	<ul style="list-style-type: none"> M-2 School Proximity to Transit Routes and Bikeways M-3 Intersection Density M-5 Pedestrian Amenities M-8 Proximity to Active Transportation Network M-9 Distance to Public transit M-10 Traffic Calming 	https://smartcommute.ca/
TD - Friends of the Environment Foundation Grant	<ul style="list-style-type: none"> To provide grants/funding for incentive programs. To distribute information/educate 	<ul style="list-style-type: none"> Could apply to many metrics 	https://www.td.com/ca/en/about-td/ready-commitment/funding/fe-f-grant/

Toronto and Region Conservation Authority – LID guides	<ul style="list-style-type: none"> ○ To promote LIDs such as rain gardens, bio-swales, infiltration trenches, permeable pavement, rainwater harvesting 	<ul style="list-style-type: none"> ○ NE-9 Stormwater Quantity ○ NE-10 Stormwater Quality ○ NE-11 Greywater Reuse ○ NE-12 Multi-purpose Stormwater Managements ○ IB-14 Reduce Potable Water Use 	https://trca.ca/conservation/restoration/low-impact-development/
Toronto Atmospheric Fund	<ul style="list-style-type: none"> ○ To provide grants/funds for incentive programs. ○ To distribute information/educate. 	<ul style="list-style-type: none"> ○ Could apply to many metrics 	https://taf.ca/
Toronto Transit Commission	<ul style="list-style-type: none"> ○ To distribute information/educate. To promote increased use of public transit. ○ To promote transit-oriented communities. 	<ul style="list-style-type: none"> ○ M-2 School Proximity to Transit Routes and Bikeways ○ M-3 Intersection Density ○ M-5 Pedestrian Amenities ○ M-9 Distance to Public transit ○ M-10 Traffic Calming 	https://www.ttc.ca/
Windfall Ecology Centre	<ul style="list-style-type: none"> ○ To promote connections to nature and green spaces. ○ To promote the improvement of natural heritage system functions. 	<ul style="list-style-type: none"> ○ NE-4 Connection to Natural Heritage ○ NE-5 Natural Heritage System Enhancements 	https://windfallcentre.ca/
York Region Cycling Coalition	<ul style="list-style-type: none"> ○ To distribute information/educate. To promote increased biking to school and work. ○ 	<ul style="list-style-type: none"> ○ M-2 School Proximity to Transit Routes and Bikeways ○ M-3 Intersection Density ○ M-5 Pedestrian Amenities ○ M-8 Proximity to Active Transportation Network ○ M-9 Distance to Public transit ○ M-10 Traffic Calming 	https://ontheroadwithrespect.ca/
York Region Food Network	<ul style="list-style-type: none"> ○ To distribute information/educate. To promote growing plants. 	<ul style="list-style-type: none"> ○ BE-6 Enhancing Urban Tree Canopy and Shaded Walkways and Sidewalks ○ NE-1 Preserve Existing Healthy Trees ○ NE-2 Soil Quantity and Quality for New Trees ○ NE-6 Supporting Pollinators ○ NE-7 Dedicate Land for Private Fruit and Vegetable Garden Space ○ IB-Reduce Heat Island: Non-roof 	https://yrfn.ca/

<p>York Region Transit</p>	<ul style="list-style-type: none"> ○ To distribute information/educate. To promote increased use of public transit. ○ To promote transit-oriented communities. 	<ul style="list-style-type: none"> ○ M-2 School Proximity to Transit Routes and Bikeways ○ M-3 Intersection Density ○ M-5 Pedestrian Amenities ○ M-9 Distance to Public transit ○ M-10 Traffic Calming 	<p>https://www.yrt.ca/</p>
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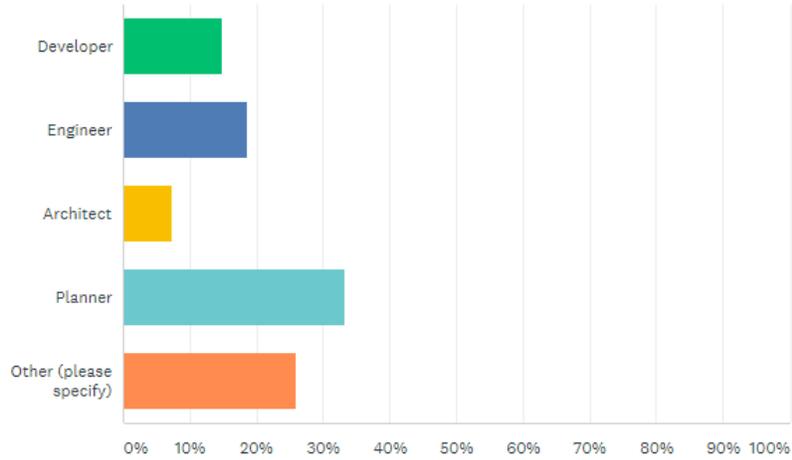
APPENDIX C: Stakeholder Survey Results

Q1



What is your profession?

Answered: 27 Skipped: 1



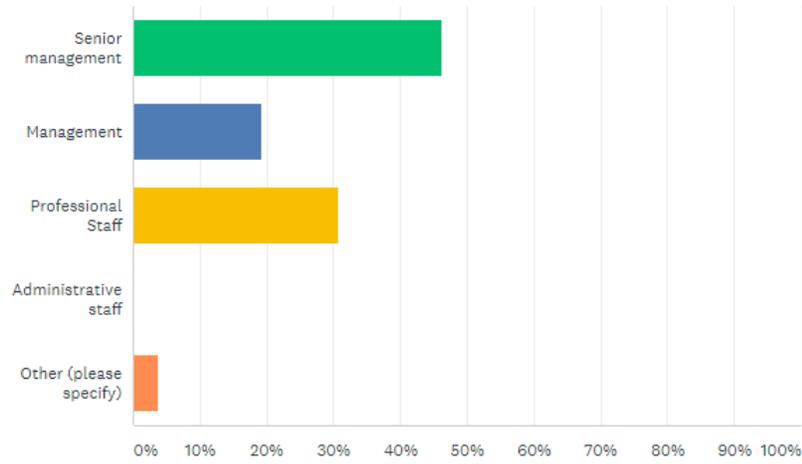
ANSWER CHOICES	RESPONSES	
Developer	14.81%	4
Engineer	18.52%	5
Architect	7.41%	2
Planner	33.33%	9
Other (please specify)	Responses 25.93%	7
TOTAL		27

Q2



What is your role in your organization?

Answered: 26 Skipped: 2



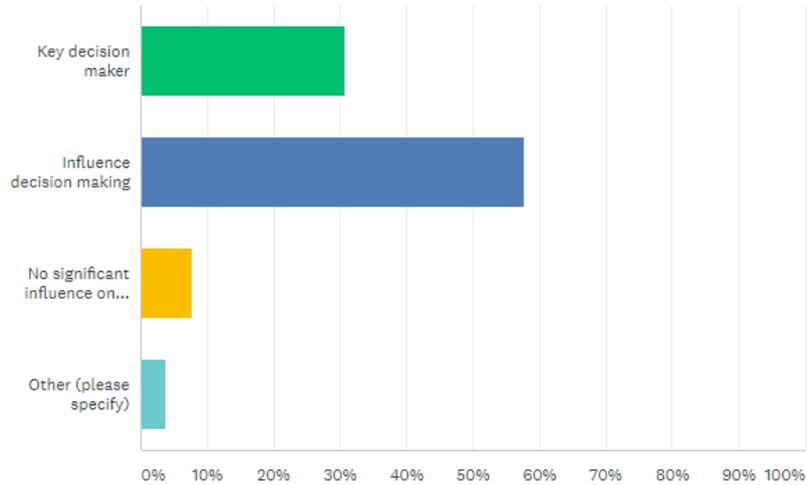
ANSWER CHOICES	RESPONSES	
Senior management	46.15%	12
Management	19.23%	5
Professional Staff	30.77%	8
Administrative staff	0.00%	0
Other (please specify)	Responses 3.85%	1
TOTAL		26

Q3



What is your level of responsibility within your organization to implement sustainable design within new development projects?

Answered: 26 Skipped: 2



ANSWER CHOICES	RESPONSES	
Key decision maker	30.77%	8
Influence decision making	57.69%	15
No significant influence on decisions	7.69%	2
Other (please specify)	Responses 3.85%	1
TOTAL		26

Q4



What is your contact information? (Optional)

Answered: 16 Skipped: 12

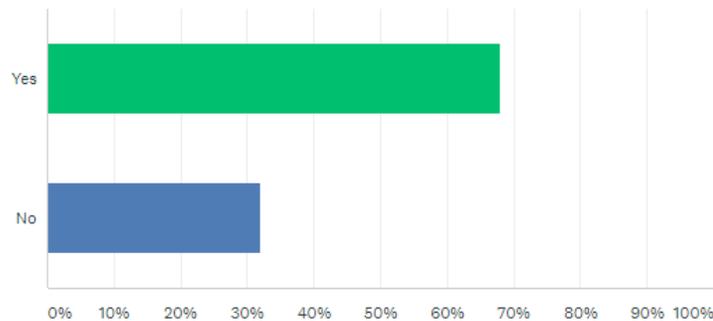
ANSWER CHOICES		RESPONSES	
Name	Responses	100.00%	16
Company	Responses	93.75%	15
Address	Responses	0.00%	0
Address 2	Responses	0.00%	0
Title	Responses	93.75%	15
State/Province	Responses	0.00%	0
ZIP/Postal Code	Responses	0.00%	0
Country	Responses	0.00%	0
Email Address	Responses	100.00%	16
Phone Number	Responses	0.00%	0

Q5



May we contact you if we have follow up questions?

Answered: 25 Skipped: 3



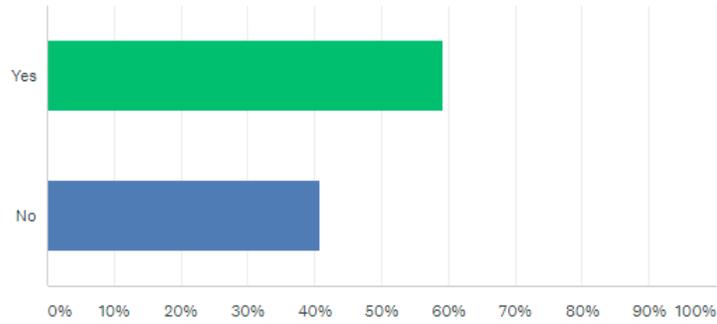
ANSWER CHOICES	RESPONSES	
Yes	68.00%	17
No	32.00%	8
TOTAL		25

Q6



Are you interested in participating in a Virtual Q&A Consultation on October 15th?

Answered: 27 Skipped: 1



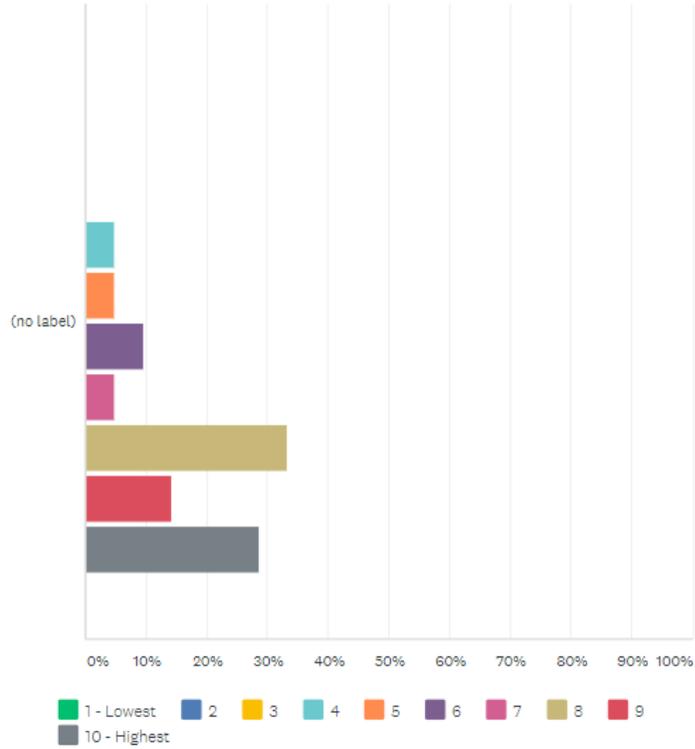
ANSWER CHOICES	RESPONSES	
Yes	59.26%	16
No	40.74%	11
TOTAL		27

Q7



How important is more sustainable construction to your organization?

Answered: 21 Skipped: 7



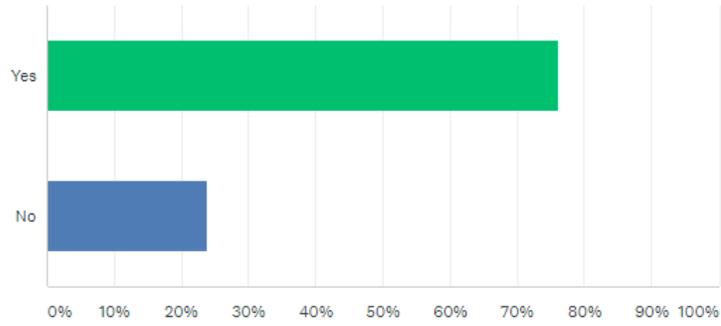
	1 - LOWEST	2	3	4	5	6	7	8	9	10 - HIGHEST	TOTAL	WEIGHTED AVERAGE
(no label)	0.00% 0	0.00% 0	0.00% 0	4.76% 1	4.76% 1	9.52% 2	4.76% 1	33.33% 7	14.29% 3	28.57% 6	21	8.14

Q8



Have you had experience in using the Sustainability Metrics tool in the City of Richmond Hill, City of Vaughan and/or City of Brampton?

Answered: 21 Skipped: 7



ANSWER CHOICES	RESPONSES	
Yes	76.19%	16
No	23.81%	5
TOTAL		21



In your opinion, what is the single largest barrier to adopting more sustainable design? (please explain)

Answered: 18 Skipped: 10

- Operations and maintenance budget shortfalls/lack of training on flagship/pilot projects means some fail and create poor impression.
- excessive costs of some of the sustainable measures
- feasibility
- Lack of consistent targets across regions and metrics that measure actual performance (including accurate enclosure efficiency).
- Cost followed by risk and work associated with implementation.
- Adaptability. Construction industry has followed the same practice/technology up until the last 20 years when energy efficiency/environmental concern has become more relevant. Old habits die hard, especially from builders, they don't like changes. Education and incentives are keys to driving changes.
- Cost of features over the minimum required which may not be acceptable by purchaser/market.
- perceived costs
- Codes and standards are not stringent enough. If not a requirement, developers will not adopt as playing field no longer level. make it an enforceable requirement.
- Cost
- I'd say the biggest barrier is having realistic requirements that have options for different project situations. Multiple compliance paths with opportunities for creative and innovative approaches encouraged.
- perceived capital cost increases
- Construction Industry Bid Process, first cost focus - Lack of a lifecycle view of construction costs
- It's easier to do the same thing over and over again than to take a risk on something unknown.
- knowledge
- Cost
- Predicting the sustainable measures to be implemented at the end of construction while at the approvals stage.
- from a planning perspective, it is difficult to get clients to commit to sustainable initiatives earlier on in the development approvals process. these elements are considered closer to construction and often only at the Site Plan Application and Draft Plan phase.

Q10



Are there any incentives related to sustainable design that have been or are currently offered by other municipalities which you have experience with, and that you would or would not recommend?

Answered: 14 Skipped: 14

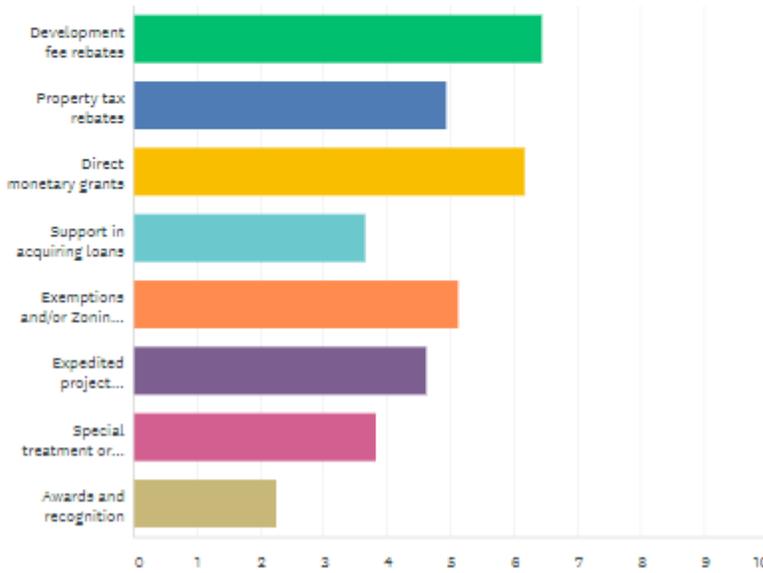
- I sit on the advisory committee to the Toronto Green Standard, in the technical group for my field = integrated water management.
- none that i can think of at this time.
- Development Charge Refund/Rebates. Would recommend but would have to balance out the additional costs/lost area incurred.
- DC rebates preferred. do not pick favourites - specify performance.
- The Toronto Green Standard Tier 2 DC rebate.
- Savings By Design, CHMC insurance rebate, are the most recognised programs.
- -DC Credits / reductions -faster approvals process
- development charge refunds, density bonuses
- TGS Tier 2 is an appealing framework / incentivizing tool, however it is usually only applicable to residential projects located adjacent to forested / wooded areas; needs to be expanded to provide an equitable opportunity for all building types.
- Toronto Green Standard offers DC rebate, which is a successful carrot-stick approach for developers to follow standards. Recently am working with City of Mississauga on their newly implemented Corporate Green Building Standard (GBS), which is very performance based and outline in Lvl 1, 2 and 3 options for each criteria.
- N/A
- Toronto's Tier 2 development charge refund was effective when it was in the 15 - 20% range. Additional height / density can also be effective.
- TGS tier 2 development charge rebates
- No

Q11



On a scale from 1 - 8 (1 being the most desirable, 8 being the least desirable), please rate the desirability of the following incentive types from your perspective. See background document for descriptions.

Answered: 18 Skipped: 10



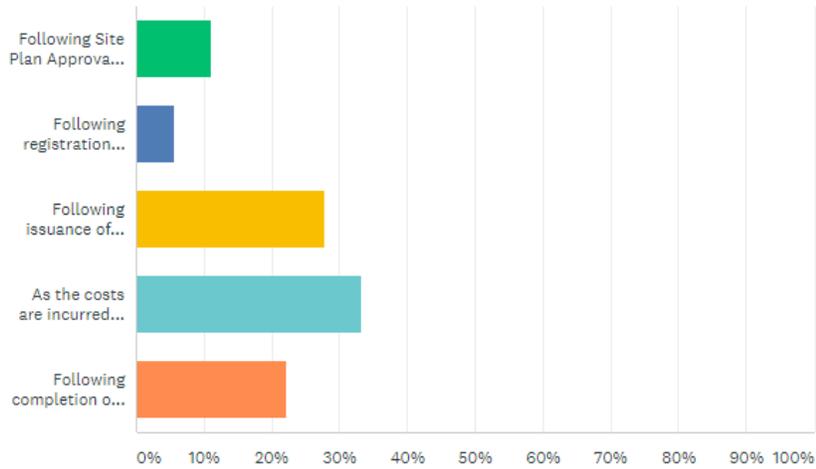
	1	2	3	4	5	6	7	8	TOTAL	SCORE
Development fee rebates	25.00% 4	43.75% 7	12.50% 2	6.25% 1	6.25% 1	0.00% 0	0.00% 0	6.25% 1	16	6.44
Property tax rebates	17.65% 3	5.88% 1	35.29% 6	0.00% 0	5.88% 1	17.65% 3	5.88% 1	11.76% 2	17	4.94
Direct monetary grants	23.53% 4	23.53% 4	17.65% 3	23.53% 4	5.88% 1	5.88% 1	0.00% 0	0.00% 0	17	6.18
Support in acquiring loans	0.00% 0	13.33% 2	13.33% 2	13.33% 2	6.67% 1	13.33% 2	20.00% 3	20.00% 3	16	3.67
Exemptions and/or Zoning relief (Height, density, etc.)	26.67% 4	6.67% 1	0.00% 0	26.67% 4	20.00% 3	6.67% 1	6.67% 1	6.67% 1	16	5.13
Expedited project administration (Fast Track)	12.50% 2	6.25% 1	18.75% 3	12.50% 2	12.50% 2	25.00% 4	6.25% 1	6.25% 1	16	4.63
Special treatment or technical services	0.00% 0	11.76% 2	0.00% 0	11.76% 2	35.29% 6	23.53% 4	11.76% 2	5.88% 1	17	3.82
Awards and recognition	6.25% 1	0.00% 0	6.25% 1	0.00% 0	0.00% 0	0.00% 0	50.00% 8	37.50% 6	16	2.26

Q12



What is the most appropriate time to pay out financial incentives?

Answered: 18 Skipped: 10



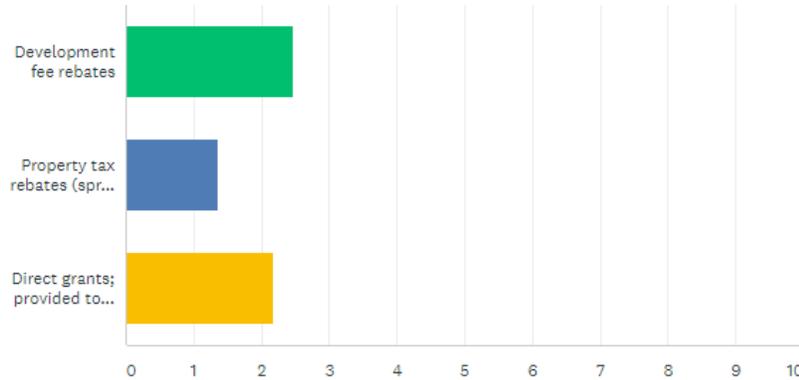
ANSWER CHOICES	RESPONSES	
Following Site Plan Approval / Draft Plan of Subdivision Approval	11.11%	2
Following registration of Site Plan / Draft Plan of Subdivision	5.56%	1
Following issuance of building permit	27.78%	5
As the costs are incurred during construction phase	33.33%	6
Following completion of construction/at occupancy (i.e. reduced property taxes for years following)	22.22%	4
TOTAL		18

Q13



On a scale of 1-3 (1 being the most desirable, 3 being the least desirable), please rate the desirability of the following types of financial incentives. Assume the financial amount for each incentive type is the same.

Answered: 17 Skipped: 11



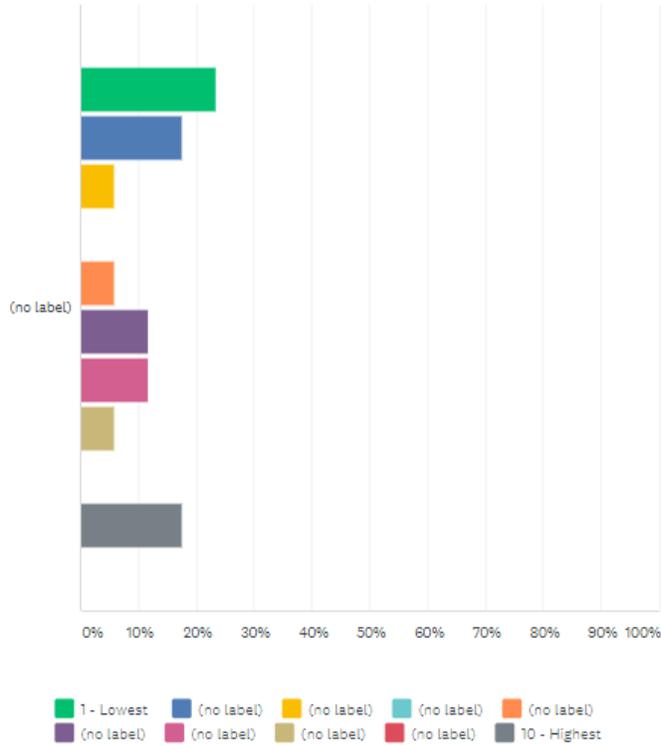
	1	2	3	TOTAL	SCORE
Development fee rebates	58.82% 10	29.41% 5	11.76% 2	17	2.47
Property tax rebates (spread out over several years)	5.88% 1	23.53% 4	70.59% 12	17	1.35
Direct grants; provided to account for the increased expense of sustainable buildings.	35.29% 6	47.06% 8	17.65% 3	17	2.18

Q14



How supportive are you of a program that incorporates financial penalties for developments which do not meet the minimum sustainability requirements? The penalties would provide additional funding for municipal incentive programs.

Answered: 17 Skipped: 11



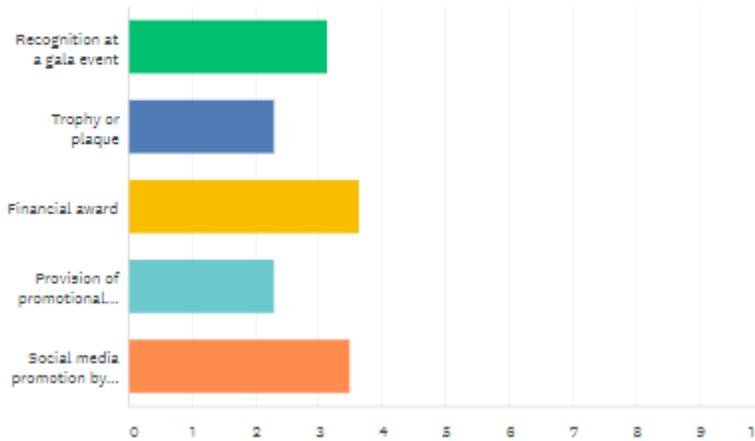
	1 - LOWEST	(NO LABEL)	(NO LABEL)	(NO LABEL)	(NO LABEL)	(NO LABEL)	(NO LABEL)	(NO LABEL)	(NO LABEL)	(NO LABEL)	10 - HIGHEST	TOTAL	WEIGHTED AVERAGE
(no label)	23.53% 4	17.65% 3	5.88% 1	0.00% 0	5.88% 1	11.76% 2	11.76% 2	5.88% 1	0.00% 0	17.65% 3	17	4.82	

Q15



On a scale of 1 - 5 (1 being the most preferable, 5 being the least preferable), please rank the following benefits of a sustainable development award for your organization:

Answered: 16 Skipped: 12



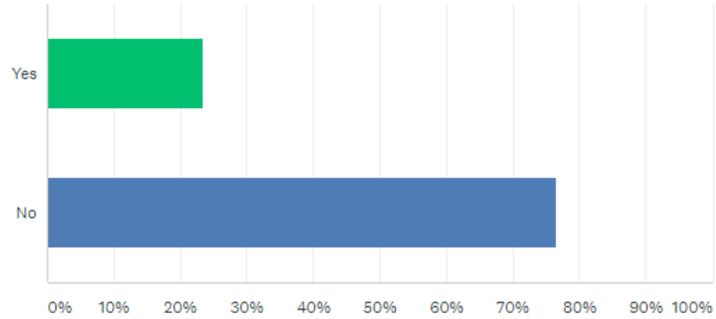
	1	2	3	4	5	TOTAL	SCORE
Recognition at a gala event	13.33% 2	26.67% 4	33.33% 8	13.33% 2	13.33% 2	16	3.13
Trophy or plaque	6.25% 1	6.25% 1	25.00% 4	37.50% 6	25.00% 4	16	2.31
Financial award	31.25% 5	25.00% 4	25.00% 4	12.50% 2	6.25% 1	16	3.63
Provision of promotional products that recognize the sustainable development elements and/or threshold achieved by a development project (e.g. decals that are placed on windows/doors of building; and/or stickers to be placed by light switches or EV chargers recognizing GHG savings)	12.50% 2	12.50% 2	12.50% 2	18.75% 3	43.75% 7	16	2.31
Social media promotion by the City	31.25% 5	31.25% 5	6.25% 1	18.75% 3	12.50% 2	16	3.60

Q16



Have you ever pursued a sustainable development award?

Answered: 17 Skipped: 11



ANSWER CHOICES	RESPONSES	
Yes	23.53%	4
No	76.47%	13
TOTAL		17

[Comments \(4\)](#)

Q17



Can you think of any good examples of award programs that the City might emulate?

Answered: 9 Skipped: 19

- Sustainable SITES (by GBCI). TGS by Toronto
- no
- no
- Toronto Green Standard / Guelph Water program
- City of TO Urban Design Awards
- Canada Green Building Award
- CaGBC Award Night Gala
- BILD marketing awards
- No

Q18



How can the municipality best recognize leaders in sustainable development in the region?

Answered: 9 Skipped: 19

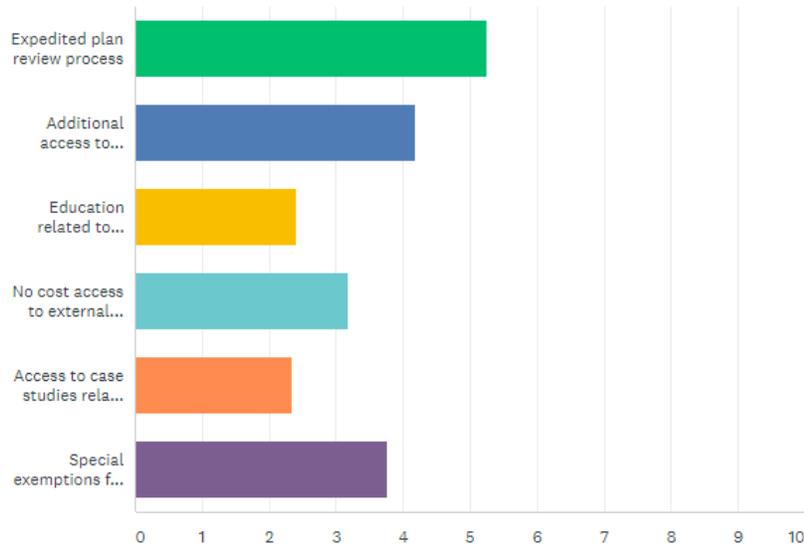
- highlight their projects and emphasize the benefits from an approvals perspective
- Social media promotion by City
- By having qualification exams for professional and industry standard criteria that sustainability consultant companies need to meet in order to be allowed to operate
- post on social media and issue certificate for Builder's promotional use
- annual awards for industry event
- awards, publicity
- Promotion across a wide audience
- I'd say that recognition and an award presented yearly is great start and like the idea of property tax rebate over time
- social media and gala dinner awards

Q19



On a scale of 1 - 6 (1 being the most desirable, 6 being the least desirable), please rank the options below. How desirable or useful to you are the following types of incentives to improve implementation of sustainable design measures in development?

Answered: 17 Skipped: 11



Question 19: continued

	1	2	3	4	5	6	TOTAL	SCORE
Expedited plan review process	50.00% 8	37.50% 6	6.25% 1	0.00% 0	6.25% 1	0.00% 0	16	5.25
Additional access to municipal staff for technical reviews and feedback to discuss proposals for innovative sustainable measures	17.65% 3	23.53% 4	29.41% 5	17.65% 3	11.76% 2	0.00% 0	17	4.18
Education related to specific sustainability elements, such as green roofs, district energy, or solar array design	0.00% 0	11.76% 2	5.88% 1	23.53% 4	29.41% 5	29.41% 5	17	2.41
No cost access to external specialists in various sustainability fields	5.88% 1	11.76% 2	23.53% 4	23.53% 4	23.53% 4	11.76% 2	17	3.18
Access to case studies related to more sustainable projects	0.00% 0	5.88% 1	11.76% 2	23.53% 4	29.41% 5	29.41% 5	17	2.35
Special exemptions for more sustainable projects, such as increased density, decreased parking requirements, increased height allowances,	29.41% 5	11.76% 2	23.53% 4	5.88% 1	0.00% 0	29.41% 5	17	3.76

Q20



Are there any other special treatment or services you value?

Answered: 9 Skipped: 19

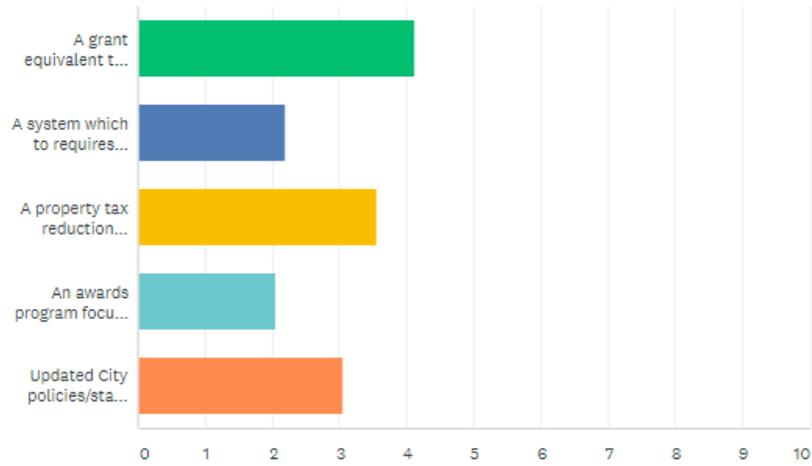
- I'm a regular contributor to the Sustainable by Design scheme run by Sustainable Buildings Canada and Enbridge/Union. I see you already have it on your website :)
<https://sbcCanada.org/services/markettransformation/>
- no
- more transparency and better communication between applicant/consultants and city staffs
- Development Charge rebate
- faster approvals, more cooperation from staff, aligned comments back from City staff that support the green guidelines
- None
- Make sure to include GHG emissions as a KPI in any program.
- consumer awareness
- No

Q21



On a scale of 1 - 5 (1 being the most desirable, 5 being the least desirable) please rate the following examples of sustainable development incentives:

Answered: 16 Skipped: 12



Question 21 – continued

	1	2	3	4	5	TOTAL	SCORE
A grant equivalent to a maximum of \$50,000 to pay for 50% of costs incurred for energy modeling, solar design services, or district energy design.	50.00% 8	25.00% 4	12.50% 2	12.50% 2	0.00% 0	16	4.13
A system which to requires green roofs on most large buildings. In cases where they cannot be installed, the proponent would pay a fee penalty, and this penalty would be given to other projects to offset some of the costs for the voluntary installation of a green roof.	0.00% 0	25.00% 4	6.25% 1	31.25% 5	37.50% 6	16	2.19
A property tax reduction amounting to 50% of the property tax increase for a re-developed property for five years, payable when a developer achieves a moderately high number of points using Richmond Hill's Sustainability Metrics program.	18.75% 3	37.50% 6	31.25% 5	6.25% 1	6.25% 1	16	3.66
An awards program focused on sustainable developments. The award would be presented at a gala event and winners would be publicized across the GTA and through social media, and on the City's website.	0.00% 0	6.25% 1	31.25% 5	25.00% 4	37.50% 6	16	2.06
Updated City policies/standards that consistently mandate building sustainability performance for buildings in like categories. For example, prior to building permit issuance, all new commercial and/or industrial buildings are required to demonstrate that they can be designed to achieve Net-Zero GHG emissions.	31.25% 5	6.25% 1	18.75% 3	25.00% 4	18.75% 3	16	3.06

Q22



Any additional comments overall?

Answered: 7 Skipped: 21

- Taxation and longer term return-on-investment schemes will not incentivize any of your condo and commercial property developers. They are very candid about that in the SBD events.
- not at this time
- Sustainability measures must be certified by 3rd party consultants and not be restricted to proprietary programs like EnergyStar or Energuide. HERS is a good system that I have used in Richmond Hill.
- I would like to see this as a requirement, not a guideline. It must be properly managed by staff to ensure compliance or it will not be followed. Needs to require absolute metrics similar to TGSv3.1
Thanks for asking!
- Need to ensure the reviewers / assessors are technically proficient and well versed in sustainability, but also are aware of the real-world implementation and execution impacts.
- Consider mandating ASHRAE Standard 209 for procurement of energy modelling services.
- Parallel planning and approvals dept for affordable housing projects. - See Dublin, Ireland