

From: Kyle Bentley
Director, City Development & CBO

Subject: Pickering Integrated Sustainable Design Standards
- City of Pickering
- File: File: D-7001-020

Recommendation:

1. That Council adopt the Pickering Integrated Sustainable Design Standards: Low-Rise Residential Checklist, dated August 2022, for Site Plan and Plan of Subdivision Applications for development of less than four storeys and a minimum of five dwelling units, as set out in Appendix I to Report PLN 38-22;
2. That Council adopt the Pickering Integrated Sustainable Design Standards: Mid to High-Rise Residential & Non-Residential Checklist, dated August 2022, for Site Plan and Plan of Subdivision Applications for development of residential buildings of four storeys and higher, and all Industrial, Commercial and Institutional buildings, as set out in Appendix II to Report PLN 38-22;
3. That Council require all Site Plan and Plan of Subdivision Applications, for the type and scale of development referenced in Recommendations 1 and 2 above, that are deemed complete on or after January 1, 2023, to meet Tier 1 – Mandatory Performance Criteria as outlined in the Pickering Integrated Sustainable Design Standards Checklists;
4. That Council direct staff to:
 - a. initiate an amendment to the Pickering Official Plan to add new policies that support the Pickering Integrated Sustainable Design Standards;
 - b. add provisions to the City's Draft Comprehensive Zoning By-law that support the Pickering Integrated Sustainable Design Standards;
 - c. identify any additional staff resources, and cost recovery mechanisms, necessary to implement and enforce the ISDS, for inclusion within the proposed 2023 budget;
 - d. review the Pickering Integrated Sustainable Design Standards every four years to reflect Ontario Building Code revisions, updated industry standards and climate science, and changing market demands; and
 - e. report back to Council on a proposed non-financial incentive strategy that supports the Pickering Integrated Sustainable Design Standards by the end of 2023;
5. That Report PLN 38-22 of the Director, City Development & CBO, which responds to Council Resolution #914/22 regarding a green roof by-law, be received for information ; and

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6. That the appropriate officials of the City of Pickering be authorized to take the necessary actions as indicated in this report.
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Executive Summary: This report provides an overview of the Pickering Integrated Sustainable Design Standards (ISDS) – a tool that has been created to advance sustainability and resiliency in new development. The ISDS will replace the City’s current 2007 Sustainable Development Guidelines.

These standards are intended to both support Pickering’s goal of reducing greenhouse gas emissions, and to encourage the creation of a more livable community, through the construction of sustainable, resilient built forms, using updated sustainable community and building design best practices.

Pickering’s ISDS were drafted following a comprehensive review process, involving extensive consultation, engagement, and outreach with many stakeholders, including the development community, key agencies, Greater Toronto and Hamilton Area municipalities, and the public. A variety of methods were used, including: Let’s Talk Pickering, surveys, workshops, one-on-one meetings, direct correspondence, and social media. Also, presentations to Mayor and Members of Council, Pickering Accessibility Advisory Committee, and the Durham Region Roundtable on Climate Change Committee, provided opportunities to share information and obtain feedback on the ISDS project.

Many of the developers in Pickering build in other communities. At the onset of the project, there was a request to align Pickering’s ISDS with other jurisdictions where applicable. Similar to other municipalities, the ISDS consists of two tiers of performance criteria. Tier 1 elements would be required for all new developments arising from Site Plans and Subdivision applications deemed complete on or after January 1, 2023. Tier 1 incorporates, in part, existing City standards for green building, as well as reflects requirements in other municipal green standards. Tier 2 performance measures are optional and propose more advanced sustainability criteria to serve as a road map for future development.

It is recommended that Council adopt the Pickering Integrated Sustainable Design Standards Checklists for Low-Rise Residential, and for Mid to High-Rise Residential & Non-Residential. For clarification, low-rise residential checklist applies to development that is less than four storeys, with a minimum of five units. The mid to high-rise residential checklist & non-residential checklist applies to residential development that is four storeys or more, and to all non-residential development.

To support the implementation of the ISDS, it is also recommended that Council direct staff to: initiate an amendment to the Pickering Official Plan; prepare appropriate provisions for inclusion in the City’s Draft Comprehensive Zoning By-law; identify any staff resources and cost recovery mechanisms to implement and enforce the ISDS; review the ISDS every four years; and explore non-financial incentive programs to support ISDS elements.

Subject to Council’s approval of the ISDS, staff will continue to finalize the related supporting ISDS deliverables as part of the grant program with The Atmospheric Fund (TAF). The remaining components include:

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- an **ISDS internal Training Guide** to support municipal staff;
 - a **Carbon Emissions Reduction Report** to forecast the estimated carbon emission reductions of building to Tier 1, oppose to the current Ontario Building Code requirements for proposed development in Pickering over the next five years; and
 - a **Shared Learning Report** to document lessons learned, strategies, and resources used to develop the ISDS, so that other municipalities can benefit from Pickering's experience.

A final report to TAF is required by November 1, 2022. In addition to the above noted deliverables, staff will be revising the appropriate City application forms; developing appropriate clauses respecting sustainability for inclusion in site plan and subdivision agreements; and initiating internal training to familiarize staff with implementing the ISDS.

On May 24, 2022, Council passed Resolution #914/22, requesting staff to explore the feasibility of establishing a by-law for green roofs, or of alternative roof surfaces that achieve similar levels of performance to green roofs (see Resolution #914/22, Attachment #11). The ISDS performance criteria supports the installation of green roofs, along with the flexibility to implement other measures to optimize the use of roof space. Many municipalities use their sustainability standards to support the installation of green roofs, whereas the City of Toronto has a Green Roof By-law. While there are policies within the Pickering Official Plan supporting green roofs, based on staff's review, an interdepartmental working group will be required to investigate the legal authority for a by-law, associated impact to City resources (e.g., financial, required technical skills, staff time), and effectiveness of other roof optimizing strategies (e.g., solar PV, rooftop amenity space, and the ISDS itself). Subject to Council's approval, the ISDS will start to be applied in January 2023. At year-end, staff will be able to assess the uptake of green roofs, in comparison to other sustainable performance measures, and report back in December 2023.

Financial Implications: Stage 1 of the ISDS project cost \$26,510.00 (plus HST) and was funded in 2020 from the consulting & professional budget within the City Development Department. Stage 2 of the ISDS project has been funded by an \$86,000.00 grant from The Atmospheric Fund and a \$10,000.00 grant from the Regional Municipality of Durham, as identified in the 2022 Council approved budget. There are no additional direct financial implications associated with the completion of this project.

1. Background

In 2007, Pickering adopted Sustainable Development Guidelines (SDG), that required mandatory and optional sustainability elements for new development, as well as draft plans, site plans, rezoning applications and building permits. As the only municipality in the Durham Region with such guidelines at the time, Pickering emerged as a leader in sustainable building and development.

Best practices have evolved since then. Many municipalities have completed sustainable development guidelines, and the City of Pickering had the benefit of being able to learn from their various approaches to formulate a path forward to best serve the community

and City. Recognizing this, in early 2020, City staff drafted a revised set of standards with the purpose of updating and expanding upon the original SDG. However, due to the evolving variety and complexity of sustainable measures, and in researching the level of effort undertaken by neighbouring municipalities to obtain widespread stakeholder engagement, it became evident that outside expertise would be necessary.

The process to review the staff's background work and finalize a new set of standards was divided into two stages. Urban Equation Corp. was retained to complete Stage 1, which included the following tasks: to assess the draft standards for alignment with existing provincial, regional, and municipal plans; to identify gaps and/or conflicts, reflect current best practices; compare the benefits and drawbacks to various frameworks (e.g., checklists, checklists with points, tiered levels); and to advise on the legislative authority of municipalities to require green/sustainable development standards. Urban Equation completed this background work in December, 2020.

Stage 2 included drafting and finalizing the Pickering Integrated Sustainable Design Standard (ISDS) through a comprehensive engagement strategy with the public, development community, staff, and Pickering Council. Completion of this stage was contingent on securing grant funds to offset the consulting costs.

In early 2021, City staff was successful in securing \$86,000.00 in funding from the Toronto Atmospheric Fund (TAF), and \$10,000.00 from the Region of Durham, to update the 2007 Sustainable Development Guidelines. Subsequently, Council approved the hiring of Urban Equation to develop a tiered Sustainable Development Standard (see Resolution #738/21, Attachment #12). To assist Urban Equation, a cross departmental internal staff working group was formed to help guide the ISDS project. Staff also established a Building Advisory Panel, comprised of representative volunteers from the development community and building associations, to assist staff by providing feedback on the ISDS checklists.

All work done to develop the ISDS checklist has been accomplished through an iterative, collaborative, community based approach to engage with the public, development community, community groups, agencies, staff, and Council. The Stage 2 process to develop the ISDS was divided into four phases:

Phase 1: Launch and 1st Draft ISDS Checklist (December 2021 – March 2022);
Phase 2: Content Development and 2nd Draft ISDS Checklists (February – May 2022);
Phase 3: Final ISDS, User Guide and Presentation (June – September 2022); and
Phase 4: Other Tools and Knowledge Workshops (Fall 2022).

2. Discussion

2.1 Benefits of Sustainable Standards

There are several economic, health, and environmental benefits to the community and homeowners by implementing the ISDS, such as:

- reduced urban heat island temperatures;
- reduced energy consumption and associated costs;

- lowered greenhouse gas emissions;
- diverted waste during construction;
- increased outdoor amenity space;
- increased building resilience to climate change;
- promotion of active transportation; and
- protection and restoration of natural heritage.

2.2 Applicable Laws in support of the ISDS

The *Municipal Act*, the *Planning Act*, and the Provincial Policy Statement provide the underlying policy frameworks that support the development and application of Pickering's ISDS, and aid in the construction of more efficient buildings and well-designed communities.

2.2.1 *Municipal Act*

The *Municipal Act* outlines the scope of municipal powers, including the ability for a municipality to pass by-laws respecting various matters. Section 97.1 of the *Municipal Act*, which came into effect on May 30, 2017, addresses standards for the construction of buildings, whereby a municipality may pass a by-law respecting the protection or conservation of the environment that requires buildings to be constructed in accordance with provisions of the Ontario Building Code.

Also, municipalities may provide for, or participate in, long-term energy planning for energy use in the municipality, and influence the design of development sites, including considering external building design details.

2.2.2 *Planning Act*

Section 2 of the *Planning Act* sets out matters of provincial interest, which include:

- the protection of ecological systems, including natural areas, features and functions;
- the supply, efficient use, and conservation of energy and water;
- the minimization of waste;
- the orderly development of safe and healthy communities;
- the promotion of development that is designed to be sustainable, to support public transit and to be oriented to pedestrians; and
- the mitigation of greenhouse gas emissions and adaption to a changing climate.

These interests give a clear indication of the kinds of issues municipalities should consider when creating policies and plans. Section 41 of the *Planning Act* provides municipalities with a broad scope of powers to approve plans and drawings for development applications, including exterior sustainable design features of buildings. This is the same authority used by other municipalities to enable their green development standards. The authority under the *Planning Act* is limited to exterior design elements, and it is not applicable law under the Ontario Building Code.

2.2.3 Provincial Policy Statement (2020)

Section 1.8.1 of the Provincial Policy Statement supports municipal efforts for energy conservation and efficiency, improved air quality, reduced greenhouse gas emissions, and preparing for the impacts of a changing climate through land use and development patterns that:

- promote the building design and orientation to maximize energy efficiency and conservation, and consider the mitigating effects of vegetation and green infrastructure; and
- maximize vegetation within settlement areas, where feasible.

2.3 Pickering Official Plan

Through the *Planning Act*, municipalities can use their Official Plan as a tool for providing high-level strategic direction on land-use planning issues.

The Pickering Official Plan (POP) embraces the principles of sustainability and livable urban communities through the promotion of energy and water conservation, energy efficient buildings, and renewable energy systems. Also, the POP has been leveraging sustainable development practices through Policies 16.5A and 16.5.B. Studies in support of development applications must include:

“a sustainable development report, or checklist, describing the sustainable measures being implemented in the development, including but not limited to initiatives related to energy efficiency, water efficiency, building materials, indoor air quality, landscaping, stormwater management and construction waste.”

These policies, along with others, were added through Official Plan Amendment 23 in support of the 2007 Sustainable Development Guidelines. Accordingly, a future amendment to the Official Plan will be required to align with, and support, the new ISDS.

2.4 2011 Seaton Sustainable Place-Making Guidelines

The 2011 Seaton Sustainable Place-Making Guidelines set out minimum standards and benchmarks to be achieved in the Seaton Urban Area, consistent with Chapters 11 and 12 of the POP. Further Section 11.42 of the POP states “City Council shall periodically review and revise the Seaton Sustainable Place-Making Guidelines, in consultation with landowners and other interested stakeholders, as sustainability initiatives, design innovations, building technologies, and other regulatory standards evolve”.

The ISDS is consistent with the above-noted policy section, and is applicable to all new development in the City of Pickering. However, it is not applicable to lands that already have an approved Plan of Subdivision or Site Plan. Development applications/approval processes in Seaton, which have been initiated, are still subject to the 2011 Seaton Sustainable Place-Making Guidelines. Most of the Seaton lands already have an approved Plan of Subdivision. The ISDS will only be applicable to those remaining areas that have not been subject to either a Plan of Subdivision or Site Plan application.

However, the development community in Seaton is encouraged to build to sustainable building performance criteria, whether by following the ISDS, or the enhanced benchmarks in the Seaton Sustainable Place-Making Guidelines, to reflect the best practices of today. It is recognized that there are developments in Seaton being built to enhanced levels of sustainability, such as the Mattamy 'Bloom in Seaton' project, which was recently recognized at the BILD Awards.

2.5 Municipal Scan

The ISDS process has benefited from a review of other Greater Toronto and Hamilton Area (GTHA) municipal green design standards, in particular those adopted by Toronto, Vaughan, Brampton, Halton Hills, and East Gwillimbury. Staff also reflected on the standards adopted within Durham Region by both the Town of Whitby and the Town of Ajax, and their implementation through the development review process.

In February 2022, the City and Urban Equation hosted a workshop with staff from five other municipalities, the Clean Air Partnership, and TAF. The goal of the workshop was to hear from municipalities who have experience creating and implementing sustainable design standards.

Recently, two additional municipalities adopted green development standards – Markham and Aurora.

3. Community Engagement

A collaborative community-based approach was used over the four phases of the ISDS project to develop the Pickering ISDS as follows:

Phase 1 of the project included the launch and first draft of Pickering Integrated Sustainable Design Standards checklists. The project team presented a series of workshops in order to consult with the public, an internal staff-working group, the development community, GTHA municipalities, the newly established Building Advisory Panel, as well as the Mayor and Members of Council. The workshops were used to gain insight from the different stakeholders on what were important sustainable design features for buildings and the community, the positive and negative experiences with sustainable development projects, potential barriers to specific sustainability criteria, and key sustainability building principles.

Phase 2 of the ISDS project included content development and the review of the second draft of the ISDS checklists. The project team consulted with the public, development community, Building Advisory Panel, and Mayor and Members of Council, to receive feedback on the draft checklists, and report on key findings from the second public and development community surveys (e.g., comments, big trends, actions, City direction).

Phase 3 of the ISDS project included finalization of the performance criteria and User Guide for the Development Community (see Building Green – User Guide Pickering Integrated Sustainable Design Standards, dated August 2022, Attachment #1). During this phase, the project team presented an overview of the draft checklists to the Pickering Accessibility Committee, and to the Durham Region Roundtable on Climate

Change, and completed a final consultation on the checklists with members of the Building Advisory Panel and development community representatives. The project team also consulted with the staff working group to understand barriers and requirements, when integrating the ISDS into the development review process. The consultations were followed by the finalization of the ISDS Checklists (Low-Rise Residential, and Mid to High-Rise Residential & Non-Residential) and the User Guide.

Phase 4 of the ISDS project includes the development of resource tools and educational workshops. Similar to the ISDS User Guide to support the development industry, the project team will develop an ISDS Training Guide to assist staff in implementing the standards. As required by the TAF grant, a Carbon Emissions Reduction Report will be completed for the overall project. The report will summarize the estimated carbon emission reductions that could be achieved if the projected development to occur in Pickering over the next five years was built to Tier 1 as opposed to the current Ontario Building Code. In addition, a Shared Learning Report, will document lessons learned, strategies, processes, and resources used to create the ISDS, so that other municipalities can learn and benefit from Pickering's example.

To engage the public and development community throughout phases 1 to 4, staff employed multiple media tools and engagement opportunities, both online and in-person, to solicit feedback, including:

- Media releases;
- Let's Talk Pickering project page;
- Municipal website page (pickering.ca/standards);
- Social media campaigns;
- Municipal facility posters;
- Municipal digital sign promotions;
- Article in City's "Your City" magazine (digital and physical distribution);
- Municipal eNewsletters;
- Banner and rack card at facilities;
- Paid advertising with local media;
- Media interview with Global News Durham;
- Establishment of a Building Advisory Panel;
- Two public and two development community surveys;
- Direct industry input from John Godden, Founder and CEO Clearsphere, Clean Air Partnership, TAF, Region of Durham, TRCA, and CLOCA;
- Letters to Mississaugas of Scugog Island First Nation;
- Notice included in sustainability comments for development applications;
- Presentations and workshops to stakeholders, committees and the public;
- In-person engagement at the Pickering Farmers' Market; and
- Targeted direct emails to request participation in the project and surveys to over 200 community group contacts (e.g., rate payer/community association, clubs, sports users, service/senior and cultural clubs, places of worship, schools, etc.), as well as over 70 development community and planning consultant representatives.

A more detailed report about the consultation process is provided in Attachment #2 – Public and Development Community Engagement Summary.

4. Key Elements of the ISDS

4.1 Principles

The ISDS is organized under seven key principles that reflect the performance criteria and provide a general framework for what goals the City wants to achieve.

1. **Education:** Educating homeowners about the use, and maintenance of, sustainable building features, and sustainable lifestyle practices.
2. **Energy & Resilience:** Designing and constructing resilient energy efficient buildings, and encouraging on-site renewable energy systems.
3. **Neighbourhood:** Creating accessible and safe places to live for all.
4. **Land & Nature:** Protecting, conserving, and enhancing the natural environment.
5. **Transportation:** Providing opportunities for sustainable modes of transportation.
6. **Waste Management:** Providing opportunities to recycle, and divert materials, in order to reduce waste.
7. **Water:** Using water efficiently, and supporting sustainable stormwater management practices.

4.2 Tiered Approach

Pickering’s ISDS is based on a tiered approach, with a series of progressive green development measures. Tier 1 contains the mandatory performance measures and Tier 2 presents options for voluntary, enhanced performance measures (see example Table below).

Tier 1 Mandatory	Met	Tier 2 Optional	Met
Design and construct all buildings to achieve a minimum energy performance level of 15% or better than the Ontario Building Code requirements in force at the time of application.	<input type="checkbox"/>	Design and construct all buildings to achieve a minimum energy performance level of 25% or better than the Ontario Building Code requirements in force at the time of application	<input type="checkbox"/>

Tier 2 standards are helpful to inform, and enable the development community time to prepare and plan for potential future mandatory criteria. Not all Tier 2 optional criteria will necessarily become mandatory Tier 1 in a future update of the ISDS. It is important at the time of the first update to reassess best practices, legislative changes, and engage with the development community, stakeholders, and public again to determine the most appropriate amendments.

4.3 Development Review Process

The ISDS User Guide (see Attachment #1) details the implementation process for new development. The process is briefly outlined below:

Step 1: Pre-Consultation Meeting

The Applicant will fill out and submit the Mandatory Pre-Consultation Request Form, and come prepared to discuss the ISDS Checklist.

Step 2: Application Preparation

Following the Pre-Consultation Meeting, the Applicant will revise the proposal and prepare reports based on staff feedback, and complete the relevant ISDS Checklist.

Step 3: Application Submission

The Applicant must submit the final version of the applicable ISDS Checklist and a Sustainability Report as part of the Development Application Submission package to the City.

Step 4: Technical Review

Staff will circulate the ISDS Checklist and Sustainability Report to the applicable City departments as part of the development review process.

Step 5: Application Revisions and Resubmission (Applicant)

The Applicant will revise and resubmit plans, reports, and other materials, as may be required, based on agency comments through the overall evaluation of the development application.

Step 6: Report to Council

Where required, City Development staff will report on the ISDS performance measures, committed to by the applicant, in their development application.

Step 7: Agreements

Draft development agreements, and/or final plans, will contain specific conditions for meeting the ISDS measures, committed to by the Applicant, on their ISDS Checklist.

Step 8: Implementation

As development proceeds, the Applicant will implement the approved ISDS commitments. Staff may attend the site during construction to verify installation. Letters of Credit may be required as a mechanism to hold. A Post Construction and Verification Checklist is required to be completed prior to releasing Letters of Credit.

5. Correspondence Received

5.1 Letter of Concern and Action Taken to Address

A letter was received from Elizabeth Howson, of Macaulay Shiomi Howson Limited, Planning Consultant (on behalf of the Seaton Landowners Group and Ontario Infrastructure and Lands Corporation) expressing concern that the ISDS appeared to be designed to be applicable to all development in the City of Pickering (see Comment Letter from Elizabeth Howson, Attachment #3). The letter indicated that it was not appropriate to introduce new requirements at this late stage in the development of the Seaton Community, and therefore, requested that the ISDS be modified to clearly identify that the proposed new standards are not applicable to the Seaton Community.

In response, City staff issued a letter dated June 1, 2022, whereby staff confirmed that the new ISDS are intended to be applicable to all new development. However, it is not applicable to lands that already have an approved Plan of Subdivision or Site Plan.

Development applications/approval processes in Seaton, which have been initiated are therefore, still subject to the 2011 Seaton Sustainable Place-Making Guidelines.

Accordingly, clarifying language was added to the ISDS User Guide to address their concerns.

5.2 Public and Development Community Submissions

Written and verbal comments were received from the public and development community, on the draft ISDS Checklists (exclusive of agency comments). Comments were collected through surveys, and a series of one-on-one meetings with members of the Building Advisory Panel and development community representatives. City staff also followed up with individual members of the development community to solicit feedback. Staff extended the project timeline by three months to allow for additional engagement opportunities and to solicit more input.

For analysis, Urban Equation compiled the comments and organized them into a matrix based on if the comment should be reflected in the current version of the checklists, in future editions, or not reflected if it was outside the scope of the ISDS project or objectives. Following the review of the feedback, Urban Equation and City staff incorporated changes into the checklists, where appropriate, to either clarify or modify the performance criteria (see Development Community Comments, Attachment #4).

5.3 Agency Submissions

Written comments were received from the Region of Durham, the Toronto and Region Conservation Authority (TRCA) and Fatal Light Awareness Program (FLAP) Canada (see Attachments #5, #6 and #7). Primarily, Regional staff suggested adding wording to the On-Site Waste Storage criteria of the checklists. TRCA staff proposed suggestions to both the Low-Rise Residential and Mid to High-Rise Residential & Non-Residential Checklists. FLAP Canada requested minor changes to the Bird Friendly Design performance criteria. These suggestions were reviewed, and incorporated into the final ISDS Checklists where appropriate.

5.4 Letters of Support

The City received letters of support from the following organizations (see Letters of Support, Attachments #8, #9 & #10):

- Region of Durham;
- Town of Whitby; and
- Clean Air Partnership.

6. Special Considerations – Green Roofs

Council Resolution #914/22 directed staff to investigate the feasibility of establishing a by-law requiring the construction of green roofs, or of alternative roof surfaces that achieve similar levels of performance to green roofs (see Resolution #914/22, Attachment #11). To this end, staff completed an internal policy and external municipal scan of tools currently used with respect to these types of roofs.

The Pickering Official Plan (POP) recognizes green roofs as a low impact development measure, and encourages the installation of green or white roofs to improve energy efficiency in buildings, stormwater management absorption quality, and to reduce urban heat island effects.

Pickering's current 2007 Sustainable Development Guidelines, and 2011 Seaton Sustainable Place-Making Guidelines, were a first step in encouraging green roofs in Pickering. The ISDS builds on this premise by providing the development community the option to pursue a green roof, cool roof, solar ready (based on a specific size), or a combination of green roof, cool roof and solar photovoltaics (PV) for mid to high-rise residential development. While developing the ISDS, there was a desire from the development community for flexibility to explore roof options, and this is reflected in the performance criteria. Once the ISDS have been implemented, staff will be able to collect data on the uptake of green roofs in comparison to other sustainable performance measures (e.g., cool roofs, solar PV).

There are different types of green roofs, and associated advantages/disadvantages. In general, benefits of green roofs include increased biodiversity, air purification, temperature regulation, rain water filtration and retention, and aesthetics. However, there are also challenges that require consideration, including increased maintenance costs, suitability (not all buildings may be suitable to accommodate a green roof or the extra weight), and increased technical skills of staff reviewing submissions to ensure the system is designed to prevent issues associated with water drainage. Another matter that requires investigation is prioritizing the competing interests for roof space (i.e., mechanical equipment, energy production, social/amenity space).

The City of Toronto is the only municipality in Ontario that has a Green Roof By-law in place. Many municipalities have been promoting green roofs through their sustainable design guidelines or green standards. While there are policies within the POP supporting green roofs, investigation is required into a municipalities' legal ability to adopt and enforce a green roof by-law.

In addition, the implementation of a green roof by-law, and its impact on City resources, requires investigation. To this end, it is recommended that an interdepartmental working group be established to investigate these matters, and report back to Council by the end of 2023.

7. Recommendations

7.1 That Council adopt the Pickering Integrated Sustainable Design Standards and require all new Site and Plan of Subdivision applications deemed complete on or after January 1, 2023, to meet Tier 1 – mandatory performance criteria as outlined in the ISDS.

Pickering's ISDS aligns with the Pickering Official Plan's sustainable policies, addresses climate change and community sustainability through green building practices, and is consistent with other GTHA (and specifically Durham) municipalities' green development standards. Implementing the ISDS will help reduce greenhouse gas emissions, decrease outdoor air pollution, help preserve the natural environment, and provide flexibility and certainty for developers. The ISDS aligns with the work being done by both the City and Region of Durham to address climate change, support urban forests, pollinators, waste reduction, water conservation, energy efficiency, and improve access to greenspaces.

The ISDS project also builds upon a solid foundation that aligns with the goals of Pickering Council-adopted plans, including: Durham Community Climate Action Plan; Durham Community Energy Plan; Corporate Energy Management Plan; Integrated Transportation Master Plan; and the Climate Emergency Declaration.

7.2 That staff be directed to initiate an amendment to the Pickering Official Plan to add new policies to the Pickering Official Plan that support the ISDS.

To enhance the City's Official Plan policies, which pre-date the ISDS initiative, minor amendments are required to clearly articulate the City's expectation with respect to sustainable development, and integrate the ISDS into the planning process. This will also include amending pre-submission consultation policies, complete application policies, and other related policies.

7.3 That staff be directed to include appropriate zoning provisions in the Draft Comprehensive Zoning By-law to support the ISDS performance measures.

There are measures in the ISDS that require zoning support. Rather than amend all of the City's Zoning By-laws, a more practical approach is to insert appropriate provisions in the second Draft of the Comprehensive Zoning By-law. For example, electric and hybrid vehicle dedicated parking/charging spaces can be included, along with certain measures for bird friendly design, private outdoor amenity space, green roofing, and bicycle parking and storage facilities.

7.4 That City staff be directed to identify any additional staff resources, and cost recovery mechanisms, necessary to implement and enforce the ISDS, for inclusion in the 2023 budget.

Based on the ISDS performance criteria, staff will identify if technical resources are required as part of the application review and implementation verification process (review of reports e.g., Energy Modeling and/or site visits) to ensure successful compliance with performance criteria that was committed too. Staff will explore cost recovery mechanisms to support as necessary.

7.5 That City staff be directed to review the ISDS every four years to reflect Ontario Building Code revisions, updated industry standards, climate science, and changing market demands.

It is intended that the ISDS be updated every four years. This will to help ensure the City's sustainable development standards are in alignment with industry practices and other municipal green standards, since best practices evolve over time. As the City continues to grow, ISDS updates will help ensure the City stays on track to reduce energy use and greenhouse gas emissions, and reflect the community's sustainability priorities. There are already some builders in Pickering who are building to advanced sustainability performance levels. Going forward, all ISDS Checklists submitted will be monitored and tracked to assess commonly achieved advanced performance criteria.

7.6 That City staff be directed to report back to Council on a proposed non-financial incentive strategy to support the implementation of the Pickering Integrated Sustainable Design Standards by the end of 2023.

Incentives are an effective tool to facilitate change in the building industry. The development community has advocated for both financial and non-financial incentives from the City.

At this time, staff are proposing to explore only non-financial incentives measures to support advanced sustainable building practices. As appropriate, staff will research tools that other municipalities use, and also solicit input from the development community, Durham Region, local area municipalities, stakeholders, and utility providers, to help identify suitable incentive options.

7.7 That Council authorize staff to investigate establishing a Green Roof By-law and report back by the end of 2023.

There are many benefits and challenges associated with green roofs. Based on staff's review, an interdepartmental working group is required to explore the legal authority of establishing a green roof bylaw, associated impacts to City resources, and the effectiveness of other roof optimizing strategies (e.g., solar PV, amenity space, and the ISDS itself). Subject to Council's approval, the ISDS, will start being implemented in January 2023. Tier 1 performance criteria provide flexibility for applicants to install a green roof, cool roof, solar PV or a combination. As sustainability (or green) standards are the current means used by other municipalities to encourage green roofs, (outside of the City of Toronto), reporting back in this timeframe will allow staff to collect data and reflect on the uptake of different options.

8. Next Steps

The ISDS will apply to new development applications for Site Plan and Subdivision, submitted under the *Planning Act*, commencing January 1, 2023. In the interim, staff will finalize the other required ISDS related deliverables as part of The TAF grant including: ISDS internal Training Guide, Carbon Emissions Reduction Report, and a Shared Learning Report. Additionally, staff will be undertaking other administrative and training activities. Staff will also work directly with the development community to ensure successful implementation of the ISDS process with the provision of the User Guide.

Appendices:

Appendix I Pickering Integrated Sustainable Design Standards: Low-Rise Residential Checklist

Appendix II Pickering Integrated Sustainable Design Standards: Mid to High-Rise Residential & Non-Residential Checklist

Attachments:

1. Building Green – User Guide, Pickering Integrated Sustainable Design Standards, dated August 2022
2. Public and Development Community Engagement Summary Report, dated 2022
3. Comment Letter from Elizabeth Howson, MSH, dated April 6, 2022
4. Development Community Comments Submission, dated 2022
5. Region of Durham Email, dated June 21, 2022
6. FLAP Canada Email, dated June 21, 2022
7. Toronto and Region Conservation Authority Letter, dated June 14, 2022
8. Letter of Support, dated June 28, 2022 – Region of Durham
9. Letter of Support, dated May 27, 2022 – Town of Whitby
10. Letter of Support, dated June 7, 2022 – Clean Air Partnership
11. Resolution #914/22
12. Resolution #738/21

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Recommended for the consideration
of Pickering City Council

Original Signed By

Marisa Carpino, M.A.
Chief Administrative Officer

Pickering Integrated Sustainable Design Standards

Low-Rise Residential Checklist

Pickering Integrated Sustainable Design Standards

Low-Rise Residential Checklist



Instructions

The Pickering Integrated Sustainable Design Standards (ISDS) for low-rise residential applies to development less than 4 **storeys** with a minimum of 5 dwelling units. Tier 1 performance measures are required by the City of Pickering and must be included as part of your complete development application. Tier 2 performance is encouraged, but optional.

Words and terms identified in **bold** in the Performance Criteria and Documentation cells are defined further in the Glossary of the User Guide.

Performance criteria apply to all building types except where specified.

Applicant Information:

Applicant/Agent:

Name (First, Last Name):

Telephone Number:

Email:

Address of Subject Land (Street Number and Name):

Registered Owner (First, Last Name):

Project Information:

Project Name:

Date Checklist Completed (yyyy-mm-dd):

Is this checklist revised from an earlier submission (Yes/No):

Gross Floor Area (square metres):

Number of Storeys:

Non Residential Gross Floor Area (square metres):

Proposal Description (narrative of your project):

Education

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
E1	Resident Education	Provide a Resident Education Information Package (hardcopy or digital through website link) to residents that explains the use and maintenance of sustainable building features as well as sustainable lifestyle practices.	<input type="checkbox"/>	Meet Tier 1 and post signage and other education materials onsite to educate residents and visitors of sustainability features.	<input type="checkbox"/>	<input type="checkbox"/> Educational package or other educational materials demonstrating compliance.	

Energy & Resilience

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
ER1	Urban Heat Island Reduction	Roof: Install cool roof (high albedo/light coloured materials with a Solar Reflective Index (SRI) of 78 or over (for low-sloped roofs <2:12)) or 29 (for steep-sloped roofs >2:12) for 100% of the available roof area . or Install solar PV for 50% of the available roof area .	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/> Roof plan indicating heat island reduction measures, including the SRI values(s) of roof materials.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
		<p>Non-Roof: Use one or a combination of the following strategies to treat at least 50% of the site's hardscape:</p> <ul style="list-style-type: none"> • High-albedo paving materials with an initial solar reflectance of at least 0.33 or SRI of 29; • Open grid pavement with at least 50% perviousness; • Shade from existing tree canopy or new tree canopy within 10 years of landscape installation; • Shade from architectural structures that are vegetated or have an initial solar reflectance of at least 0.33 at installation or an SRI of 29; • Shade from structures with energy generation. 	<input type="checkbox"/>	<p>Non-Roof: Use one or a combination of the following strategies to treat at least 75% of the site's hardscape:</p> <ul style="list-style-type: none"> • High-albedo paving materials with an initial solar reflectance of at least 0.33 or SRI of 29; • Open grid pavement with at least 50% perviousness; • Shade from existing tree canopy or new tree canopy within 10 years of landscape installation; • Shade from architectural structures that are vegetated or have an initial solar reflectance of at least 0.33 at installation or an SRI of 29; • Shade from structures with energy generation. 	<input type="checkbox"/>	<input type="checkbox"/> Report, Plan(s), or other documentation indicating the heat island reduction measures.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
ER2	Building Energy Performance and Emissions	<p>Design and construct all buildings to achieve or exceed the Energy Star® for New Homes, latest version, or demonstrated modeled equivalent (e.g., Better Than Code ® using Home Energy Rating System (HERS)).</p> <p>or</p> <p>Design and construct all buildings to meet or exceed the Energy Performance Emissions' Total Energy Use Intensity (TEUI), Thermal Energy Demand Intensity (TEDI) and GHG Emission Intensity (GHGI) targets.</p>	<input type="checkbox"/>	<p>Design and construct all buildings to achieve a minimum energy performance level of 25% or better than the Ontario Building Code requirements in force at the time of application.</p> <p>or</p> <p>Design and construct all buildings to meet or exceed the Energy Performance Emissions' Total Energy Use Intensity (TEUI), Thermal Energy Demand Intensity (TEDI) and GHG Emission Intensity (GHGI) targets.</p>	<input type="checkbox"/>	<input type="checkbox"/> Energy Modelling Report or other documentation demonstrating compliance with the target standard.	
ER3	Renewable Energy	<p>Design and construct all buildings to be solar ready.</p> <p>or</p> <p>Incorporate web-based Home Energy Management Systems (HEMS).</p>	<input type="checkbox"/>	<p>Incorporate on-site renewable energy sources of power generation to meet 5% or more of the building energy needs.</p> <p>or</p> <p>Incorporate peak shaving devices like battery storage.</p>	<input type="checkbox"/>	<input type="checkbox"/> Drawings, plans, or other documentation demonstrating compliance.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
ER4	Building Resilience	Implement at least two of the primary measures from the Durham Region Climate Resilience Standard for New Houses additional to those required by this Standard.	<input type="checkbox"/>	Implement at least two of the secondary measures from the Durham Region Climate Resilience Standard for New Houses .	<input type="checkbox"/>	<input type="checkbox"/> Drawings, plans, or other documentation demonstrating that the project incorporates resilient measures.	

Neighbourhood

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
N1	Private Pedestrian Walkways	Provide on-site private pedestrian walkways from buildings to features outside of the development site, such as public sidewalks, multi-use trails, transit stops and adjacent buildings. All connections must be AODA compliant.	<input type="checkbox"/>			<input type="checkbox"/> Site plan(s) highlighting on-site walkways.	
N2	Private Play Areas & Structures	All private play areas and play structures must be AODA compliant.	<input type="checkbox"/>			<input type="checkbox"/> Site plan(s) highlighting play areas with accessibility features.	
N3	Community Safety	Design the project using CPTED principles to create a safe space.	<input type="checkbox"/>			<input type="checkbox"/> or Report demonstrating community safety strategies.	

Land & Nature

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
LN1	Topsoil	The topsoil layer should have a minimum depth of 30 cm for all turf areas, and a minimum depth of 45 cm of high-quality topsoil for all planting beds and scarify hard packed subsoil in all soft landscape areas prior to placement of topsoil.	<input type="checkbox"/>	Meet Tier 1 and install a minimum depth of 60 cm of high-quality topsoil for all planting beds.	<input type="checkbox"/>	<input type="checkbox"/> Landscape Plan(s) and/or other documentation indicating applicable soil characteristics (depth, pH, organic matter content) and planting depth.	
LN2	Light Pollution Reduction	All exterior lighting to be Dark Sky Compliant with the exemption of street lighting, which is governed by the City's Street Lighting Requirements . If a Dark Sky Fixture Seal of Approval is not available, fixtures must be full cut-off and with a colour temperature rating of 3000K or less.	<input type="checkbox"/>	Meet Tier 1 and install motion sensors or timers for outdoor lights to maintain security without excessively lighting the building's exterior.	<input type="checkbox"/>	<input type="checkbox"/> Exterior Lighting Plan, Schedule, or other documentation indicating lighting type, orientation and location.	
LN3	Native and Non-Invasive Species	Plant 50% native plant species , including trees, shrubs and herbaceous plants preferably drought-tolerant and pollinator-friendly outside of the buffer area and within the development limit. Remaining non-native species must be non-invasive.	<input type="checkbox"/>	Plant 75% or greater with native plant species .	<input type="checkbox"/>	<input type="checkbox"/> Landscape Plan(s), drawings or other documentation demonstrating the percentage of plant species, preferably are drought-tolerant and pollinator-friendly.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
LN4	Vegetated Buffers	The disturbed buffer area between the development limit and a key natural heritage feature shall be restored with 100% native plant species , including trees, shrubs and herbaceous plants, preferably drought- tolerant.	<input type="checkbox"/>			<input type="checkbox"/> Landscape Plan(s), drawings or other documentation demonstrating that plant species are 100% native, preferably drought-tolerant.	
LN5	Tree Preservation and Removal Compensation	Plant 60 mm caliper deciduous trees and 1.8 m high coniferous trees in accordance with the tree compensation requirements . This applies to the removal of any existing trees that are 15 cm or more in diameter at breast height.	<input type="checkbox"/>	Provide a site design solution that includes the preservation and protection of existing mature trees and a net gain of tree canopy through additional tree plantings in accordance with the tree compensation requirements .	<input type="checkbox"/>	<input type="checkbox"/> A Tree Inventory Report and Preservation Plan that includes all trees on the development site and those on adjoining lands that may be affected by the proposed construction activities.	
LN6	Healthy Street Trees	Plant 60 mm caliper deciduous trees on both sides of private streets and in public boulevards at an interval rate of 1 tree per 8 m of street frontage or spaced appropriately having regard to site conditions; and Design, implement, and pay for a watering and fertilizing program for at least the first 2 years of planting.	<input type="checkbox"/>	Meet Tier 1 and provide 30 m ³ high quality soil for street trees with a minimum topsoil depth of 75 cm.	<input type="checkbox"/>	<input type="checkbox"/> Tree Planting Plan(s), drawings or other documentation demonstrating species, and quantity for each planting area. <input type="checkbox"/> Watering program methods and watering schedule.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
LN7	Natural Heritage Features and Open Space Enhancement	<p>Protect key natural heritage features and key hydrologic features on site, including associated setbacks/buffers;</p> <p>or</p> <p>Where all alternatives to protect and enhance key natural heritage features and open spaces on site have been evaluated and determined to not be feasible, provide compensation for the loss of ecosystem functions due to development impacts.</p>	<input type="checkbox"/>	<p>Protect and enhance key natural heritage features and key hydrologic features on site and</p> <ul style="list-style-type: none"> • Create new natural heritage features on or off-site; <p>or</p> <ul style="list-style-type: none"> • Restore and enhance connectivity among natural heritage features on or off-site. 	<input type="checkbox"/>	<input type="checkbox"/> Landscape Plan(s), drawing(s) or other documentation highlighting implemented features(s) and/or an Ecosystem Compensation Report where required.	

Transportation

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
T1	Electric Vehicles including plug-in hybrid vehicles	Require 90% EV Rough-in & 10% EV Ready charging infrastructure or equivalent electric vehicle energy management systems (load sharing/circuit sharing) capable of providing Level 2 or higher charging for the resident parking spaces; or Require EV Ready charging infrastructure capable of providing Level 2 charging or higher for 50% of the resident parking spaces.	<input type="checkbox"/>	Require EV Ready charging infrastructure capable of providing Level 2 charging or higher for 100% of the resident parking spaces.	<input type="checkbox"/>	<input type="checkbox"/> Electric Vehicle (EV) Charging Infrastructure Plan , drawings or other documentation.	

Waste Management

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
WM1	Construction Waste Reduction	Divert 50% or more of all non-hazardous construction, demolition, and land clearing waste from landfill.	<input type="checkbox"/>	Divert 75% or more of all non-hazardous construction, demolition, and land clearing waste from landfill.	<input type="checkbox"/>	<input type="checkbox"/> Commitment Letter to divert waste through a third-party hauler.	
WM2	On-Site Storage	For low rise multi-storey residential buildings, design the site so that all individual units can be served by curbside collection; and allocate space for separate recyclables, organics and garbage containers inside each dwelling unit.	<input type="checkbox"/>			<input type="checkbox"/> Drawing(s) demonstrating compliance.	

Water

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
W1	Stormwater Management	<p>Achieve a level one/enhanced stormwater treatment for all stormwater, and achieve runoff reduction of a minimum 5 mm of rainfall depth;</p> <p>and</p> <p>Demonstrate that the applicable groundwater recharge targets are met based on site-specific water balance/budget studies, in accordance with the CTC Source Protection Plan;</p> <p>and</p> <p>Provide an enhanced level of protection for water quality through the long-term average removal of 80% of Total Suspended Solids (TSS) on an annual loading basis from all runoff leaving the site, in accordance with the City of Pickering Stormwater Management Design Guidelines.</p>	<input type="checkbox"/>	<p>In a manner best replicating natural site hydrology processes, manage on-site runoff using at least two of the following low-impact development (LID) and green infrastructure techniques:</p> <ul style="list-style-type: none"> • permeable pavement • bioswales • soakaways • rain gardens • filtered strips • infiltration trenches <p>or</p> <p>Achieve post-development runoff reductions to no more than 50% of annual precipitation (approx. 10 mm of rainfall event retention from all site surfaces) through infiltration, evapotranspiration, water harvesting and reuse.</p>	<input type="checkbox"/>	<input type="checkbox"/> Stormwater Management Report, Plan(s), and drawing(s) demonstrating compliance.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
W2	Water Efficiency	Implement two of the following: <ul style="list-style-type: none"> • Use WaterSense® labeled water fixtures. • Use a non-potable watering system for irrigation purposes. • Install a drain water heater recovery unit. • Install a hot water recirculation pump with an integrated adjustable timer or auto-adaptive controls to shut off during periods of low/no hot water use. • Use Energy Recovery Ventilation in lieu of conventional humidifier. 	<input type="checkbox"/>	Implement three of the following: <ul style="list-style-type: none"> • Use WaterSense® water fixtures that obtain a minimum 30% better than the Ontario Building Code baseline. • Use a non-potable watering system for irrigation purposes. • Design 25% of the dwelling units/buildings to be "greywater ready" (i.e., plumbing and infrastructure roughed in, adequate utility room space). • Install a hot water recirculation pump with an integrated adjustable timer or auto-adaptive controls to shut off during periods of low/no hot water use. • Use Energy Recovery Ventilation in lieu of conventional humidifier. 	<input type="checkbox"/>	<input type="checkbox"/> Plan(s), drawing(s), or other documentation demonstrating implementation of target element(s). <input type="checkbox"/> Plumbing fixtures specifications or other documentation demonstrating WaterSense® labelling and flush/flow rates. or <input type="checkbox"/> Third party verification of water reductions with systems e.g., Home Energy Rating System H2O or WaterSense® labeling.	

Pickering Integrated Sustainable Design Standards

Mid to High-Rise Residential & Non-Residential Checklist

Integrated Sustainable Design Standards

Mid to High-Rise

Residential & Non-Residential Checklist



Instructions

The Pickering Integrated Sustainable Design Standards (ISDS) for Mid to High-Rise Residential & Non-Residential development, applies to residential buildings 4 storeys and higher, and all Industrial, Commercial and Institutional (ICI) buildings.

Tier 1 performance measures are required by the City of Pickering and must be included as part of your complete development application.

Tier 2 performance is encouraged, but optional.

Words and terms identified in **bold** in the Performance Criteria and Documentation cells are defined further in the Glossary of the User Guide. Performance criteria apply to all building types except where specified.

Applicant Information:

Applicant/Agent:

Name (First, Last Name):

Telephone Number:

Email:

Address of Subject Land (Street Number and Name):

Registered Owner (First, Last Name):

Project Information:

Project Name:

Date Checklist Completed (yyyy-mm-dd):

Is this checklist revised from an earlier submission (Yes/No):

Gross Floor Area (square metres):

Number of Storeys:

Non Residential Gross Floor Area (square metres):

Proposal Description (narrative of your project):

Education

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
E1	Resident Education	For residential buildings, provide a Resident Education Information Package (hardcopy or digital through website link) to residents that explains the use and maintenance of sustainable building features as well as sustainable lifestyle practices.	<input type="checkbox"/>	Meet Tier 1 and post signage and other education materials onsite to educate residents and visitors of sustainability features.	<input type="checkbox"/>	<input type="checkbox"/> Educational package or other educational materials demonstrating compliance.	

Energy & Resilience

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
ER1	Urban Heat Island Reduction	<p>Roof: For flat roofs (low slope $\leq 2:12$) over 500 m², buildings must provide.</p> <ol style="list-style-type: none"> Green roof for at least 50% of available roof space; <ul style="list-style-type: none"> Where possible, green roof area should be incorporated into visible or accessible locations such as podiums. Where the green roof is accessible, the common outdoor amenity space may be reduced by no more than 25%. Where green roof is edible landscaping, the whole garden area including pathways and adjacent terraces, may be counted as common outdoor amenity space. <p>or</p> <ol style="list-style-type: none"> Cool roof installed for 90% of available roof space and if the roof is over 2,500 m² a minimum of 1,000 m² will be designated solar ready. 	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/> Roof plan indicating heat island reduction measures, including the SRI values(s) of roof materials.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
		<p>or</p> <p>3. A combination of a green roof, cool roof and solar PV installed for at least 75% of available roof space.</p>					
		<p>Non-Roof: Treat 50% of the hardscapes (i.e., roads, sidewalks, and driveways) with heat island reduction measures such as:</p> <ul style="list-style-type: none"> • High-albedo paving materials with an initial solar reflectance of at least 0.33 or Solar Reflectance Index (SRI) of 29; • Open grid pavement with at least 50% perviousness; • Shade from existing tree canopy or new tree canopy within 10 years of landscape installation; • Shade from architectural structures that are vegetated or have an initial solar reflectance of at least 0.33 at installation or an SRI of 29; and • Shade from structures with energy generation. 	<input type="checkbox"/>	<p>Non-Roof: Treat 75% of the hardscapes (i.e., roads, sidewalks, and driveways) with heat island reduction measures.</p>	<input type="checkbox"/>	<p>Plan(s), drawing(s), or other documentation indicating heat island reduction measures measure(s).</p>	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
ER2	Building Energy Performance and Emissions	Design and construct all buildings to meet or exceed the Energy Performance Emissions' Total Energy Use Intensity (TEUI), Thermal Energy Demand Intensity (TEDI) and GHG Emission Intensity (GHGI) targets.	<input type="checkbox"/>	Design and construct all buildings to meet or exceed the Energy Performance Emissions' Total Energy Use Intensity (TEUI), Thermal Energy Demand Intensity (TEDI) and GHG Emission Intensity (GHGI) targets.	<input type="checkbox"/>	<input type="checkbox"/> Energy Modelling Report or other documentation demonstrating compliance with the target standard and a Commissioning Closeout Report.	
ER3	Energy			Incorporate on-site renewable energy of power generation to meet 5% or more of the building energy needs. or Incorporate peak shaving devices like battery storage.	<input type="checkbox"/>	<input type="checkbox"/> Drawings, plans, or other documentation demonstrating compliance.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
ER4	Building Resilience			<p>For high-rise residential buildings greater than 12 storeys, provide:</p> <ul style="list-style-type: none"> • A 72 hour minimum back-up power system, preferably using a non-fossil fuel source, to ensure power is provided to the refuge area, and to the ground floor or the first two floors as applicable to the building use, to supply power to: building security systems, domestic water pumps, sump pumps, at least one elevator, boilers and hot water pumps to enable access and egress and essential building functions during a prolonged power outage. 	<input type="checkbox"/>	<input type="checkbox"/> Drawings, plans, or other documentation demonstrating that the project incorporates resilient measures.	

Neighbourhood

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
N1	Private Pedestrian Walkways	Provide on-site private pedestrian walkways from buildings to features outside of the development site, such as public sidewalks, multi-use trails, transit stops and adjacent buildings. All connections must be AODA compliant.	<input type="checkbox"/>			<input type="checkbox"/> Site plan(s) highlighting on-site walkways.	
N2	Private Play Area & Structures	All private play areas and play structures must be AODA compliant.	<input type="checkbox"/>			<input type="checkbox"/> Site plan(s) highlighting play areas with accessibility features.	
N3	Building Access	Provide the same means of entrance for all users to public entrances of buildings on site, or provide equivalent access when access by the same means is not possible.	<input type="checkbox"/>			<input type="checkbox"/> Plan(s), drawing(s), or other documentation indicating building entrance(s).	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
N4	Wayfinding Signage	Install AODA compliant wayfinding signage (e.g., braille and/or tactile signage) in all buildings and public spaces.	<input type="checkbox"/>			<input type="checkbox"/> Plan(s), drawing(s), or other documentation indicating implemented measure(s).	
N5	Community Safety	Design the project using CPTED principles to create a safe space.	<input type="checkbox"/>			<input type="checkbox"/> Report demonstrating community safety techniques.	

Land & Nature

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
LN1	Topsoil	The topsoil layer should have a minimum depth of 30 cm for all turf areas, and a minimum depth of 45 cm of high quality topsoil for all planting beds and scarify hard packed subsoil in all soft landscape areas prior to placement of topsoil.	<input type="checkbox"/>	Meet Tier 1 and a minimum depth of 60 cm of high-quality topsoil for all planting beds.	<input type="checkbox"/>	<input type="checkbox"/> Landscape Plan(s) and/or other documentation indicating applicable soil characteristics (depth, pH, organic matter content) and planting depth.	
LN2	Light Pollution Reduction	Require all exterior lighting to be Dark Sky Compliant with the exemption of street lighting which is governed by the City's Street Lighting Requirements. If a Dark Sky Fixture Seal of Approval is not available, fixtures must be full-cutoff and with a colour temperature rating of 3000K or less.	<input type="checkbox"/>	Meet Tier 1 and use motion sensors or timers for outdoor lights to maintain security without excessively lighting the building's exterior.	<input type="checkbox"/>	<input type="checkbox"/> Exterior Lighting Plan, Schedule(s), or other documentation indicating lighting type, orientation and location.	
LN3	Native and Non-Invasive Species	Plant 50% native plant species , including trees, shrubs and herbaceous plants preferably drought-tolerant and pollinator-friendly outside of the buffer area and within the development limit. Remaining non-native species must be non-invasive.	<input type="checkbox"/>	Plant 75% or greater with native plant species .	<input type="checkbox"/>	<input type="checkbox"/> Landscape Plan(s), drawings or other documentation demonstrating the percentage of native plant species, preferably are drought-tolerant and pollinator-friendly.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
LN4	Vegetated Buffers	The disturbed buffer area between the development limit and a key natural heritage feature shall be restored with 100% native plant species , including trees, shrubs and herbaceous plants, preferably drought-tolerant.	<input type="checkbox"/>			<input type="checkbox"/> Landscape Plan(s), drawings or other documentation demonstrating that plant species are 100% native, drought-tolerant.	
LN5	Tree Preservation and Removal Compensation	Plant 60 mm caliper deciduous trees and 1.8 m high coniferous trees in accordance with the tree compensation requirements to ensure no net loss. This applies to the removal of any existing trees that are 15 cm or more in diameter at breast height.	<input type="checkbox"/>	Provide a site design solution that includes the preservation and protection of existing mature trees and a net gain of tree canopy through additional tree plantings in accordance with the tree compensation requirements .	<input type="checkbox"/>	<input type="checkbox"/> A Tree Inventory Report and Preservation Plan that includes all trees on the development site and those on adjoining lands that may be affected by the proposed construction activities.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
LN6	Healthy Street Trees	Plant 60 mm caliper deciduous trees on both sides of private streets and in public boulevards at an interval rate of 1 tree per 8 m of street frontage or spaced appropriately having regard to site conditions; and Design, implement, and pay for a watering and fertilizing program for at least the first 2 years of planting.	<input type="checkbox"/>	Meet Tier 1 and provide 30 m ³ high quality soil for street trees with a minimum top soil depth of 75 cm.	<input type="checkbox"/>	<input type="checkbox"/> Tree Planting Plan(s), drawings or other documentation demonstrating species, and quantity for each planting area. <input type="checkbox"/> Watering program methods and watering schedule.	
LN7	Common Outdoor Amenity Space	For residential buildings with 20 or more dwelling units, provide 4.0 square metres of common outdoor amenity space per dwelling unit (a minimum contiguous area of 40.0 square metres must be provided in a common location). and Where a green roof functions as an amenity space, no more than 25% of the outdoor component may be on the green roof.	<input type="checkbox"/>	For residential buildings with 20 or more dwelling units, provide 6.0 square metres of common outdoor amenity space per dwelling unit (a minimum contiguous area of 40.0 square metres must be provided in a common location).	<input type="checkbox"/>	<input type="checkbox"/> Site Plan(s), drawing(s), or other documentation indicating size and location of outdoor amenity area.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
LN8	Natural Heritage Features and Open Space Enhancement	<p>Protect key natural heritage features and key hydrologic features on site.</p> <p>or</p> <p>Where all alternatives to protect and enhance key natural heritage features and open spaces on site have been evaluated and determined to not be feasible, provide compensation for the loss of ecosystem functions due to development impacts.</p>	<input type="checkbox"/>	<p>Maintain and enhance key natural heritage features and key natural hydrologic features on site and</p> <ul style="list-style-type: none"> • Create new natural heritage features on or off-site. <p>or</p> <ul style="list-style-type: none"> • Restore and enhance connectivity among natural heritage features on or off-site. 	<input type="checkbox"/>	<p><input type="checkbox"/> Landscape Plan(s), drawing(s), or other documentation highlighting implemented feature(s) and/or an Ecosystem Compensation Report where required.</p>	
LN9	Bird-Friendly Design	<p>For residential and non residential buildings, use a combination of bird-friendly design treatments for a minimum of 90% of all exterior glazing within the first 16 m of the building above grade or the height of the mature tree canopy (including all balcony railings, clear glass corners, parallel glass and glazing surrounding interior courtyards and other glass surfaces).</p>	<input type="checkbox"/>		<input type="checkbox"/>	<p><input type="checkbox"/> Elevations indicating bird-friendly glazing measures implemented, including treated area, type of treatment, density of visual markers, etc.</p> <p>Summary table of treated glazing areas for each elevation.</p>	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
		Where green roof is constructed with adjacent glass surfaces, glass is to be treated within 12 metres above green roof surface.	<input type="checkbox"/>			<input type="checkbox"/> Elevations indicating bird-friendly glazing measures implemented, including treated area, type of treatment, density of visual markers, etc.	

Transportation

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
T1	Electric Vehicles including plug in hybrid vehicles	For multi residential buildings, require 90% EV Rough-in & 10% EV Ready charging infrastructure or equivalent electric vehicle energy management systems (load sharing/circuit sharing) capable of providing Level 2 or higher charging for the resident parking spaces; or Require EV Ready charging infrastructure capable of providing Level 2 charging or higher for 50% of the resident parking spaces.	<input type="checkbox"/>	For multi-residential buildings, require EV Ready charging infrastructure capable of providing Level 2 charging or higher for 100% of the parking spaces excluding visitor parking.	<input type="checkbox"/>	<input type="checkbox"/> Parking plan(s) indicating the location of EV Rough-in or EV Ready parking spaces. <input type="checkbox"/> Electric Vehicle (EV) Charging Infrastructure Plan, drawings or other documentation.	
T2		For non-residential buildings, require EV Rough-in charging infrastructure for 20% of the parking spaces.		For non-residential buildings, require EV Ready charging infrastructure for 20% of the parking spaces.	<input type="checkbox"/>	<input type="checkbox"/> Parking plan(s) indicating the location of EV Rough-in or EV Ready parking spaces.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
T3	Bicycle Parking and Storage Facilities	For residential buildings, provide 0.5 long-term bicycle parking spaces (includes adaptive bikes, trikes, and scooters for people with disabilities) in weather protected areas located within a secure area of the building or common garage for each dwelling unit. and At least 15% of the required long-term bicycle parking spaces, or one parking space, whichever is greater, shall include an Energized Outlet (120 V) adjacent to the bicycle rack or parking space.	<input type="checkbox"/>	For residential buildings, provide 0.75 long-term bicycle parking spaces (includes adaptive bikes, trikes, and scooters for people with disabilities) in weather protected areas located within a secure area of the building or common garage for each dwelling unit. and At least 15% of the required long-term bicycle parking spaces, or one parking space, whichever is greater, shall include an Energized Outlet (120 V) adjacent to the bicycle rack or parking space.	<input type="checkbox"/>	<input type="checkbox"/> Plan(s) indicating location, number and type (long-term) of bicycle parking spaces.	
		For residential buildings, provide 0.1 short-term bicycle parking spaces per dwelling unit in locations that are highly visible and in close proximity to primary entrances.	<input type="checkbox"/>			<input type="checkbox"/> Plan(s) indicating location, number and type (short-term) of bicycle parking spaces.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
		For non-residential buildings and mixed use buildings, provide long-term bicycle parking spaces at a rate of 1.0 bicycle parking space for each 1,000 square metres of gross leasable floor area and at least one bicycle rack shall be installed for short-term bicycle parking.	<input type="checkbox"/>			<input type="checkbox"/> Plan(s) indicating location, number and type (long-term) of bicycle parking spaces.	
		For non-residential buildings and mixed use buildings, provide two trip-end facilities (i.e., showers and a change room) for every 60 long term bicycle parking spaces (minimum of 1 facility when more than 5 bicycle parking spaces are provided).	<input type="checkbox"/>			<input type="checkbox"/> Plan(s) indicating trip-end facilities.	

Waste Management

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory	Met	Tier 2 Optional	Met	Documentation	Comments
WM1	Construction Waste Reduction	Divert 50% or more of all non-hazardous construction, demolition, and land clearing waste from landfill.	<input type="checkbox"/>	Divert 75% or more of all non-hazardous construction, demolition, and land clearing waste from landfill.	<input type="checkbox"/>	<input type="checkbox"/> Commitment letter to divert waste through a third-party hauler.	
WM2	On-Site Storage	For multi-storey residential buildings, provide a tri-sorter or separate chutes to direct and separate materials into either recyclables, organics or waste. Ensure there is adequate storage space for accumulated recyclables, waste and organics generated between collection days and be designed to minimize litter and pests.	<input type="checkbox"/>	Meet Tier 1 and include a dedicated space for materials such as textiles, batteries and electronics is provided.	<input type="checkbox"/>	<input type="checkbox"/> Drawing(s) demonstrating compliance.	
		For non-residential development, provide a dedicated area or area attached to the building for the separate collection and storage for accumulated recyclables, waste and organics.	<input type="checkbox"/>			<input type="checkbox"/> Site plan(s) or Drawing(s) indicating location of waste storage area.	

Water

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory Requirement	Met	Tier 2 Optional Requirement	Met	Documentation	Comments
W1	Stormwater Management	<p>Achieve a level one/enhanced stormwater treatment for all stormwater, and achieve runoff reduction of a minimum 5 mm of rainfall depth;</p> <p>and</p> <p>Demonstrate that the applicable groundwater recharge targets are met based on site-specific water balance/budget studies, in accordance with the CTC Source Protection Plan;</p> <p>and</p> <p>Provide an enhanced level of protection for water quality through the long-term average removal of 80% of Total Suspended Solids (TSS) on an annual loading basis from all runoff leaving the site, in accordance with the City of Pickering Stormwater Management Design Guidelines.</p>	<input type="checkbox"/>	<p>In a manner best replicating natural site hydrology processes, manage on-site runoff using at least two of the following low-impact development (LID) and green infrastructure:</p> <ul style="list-style-type: none"> • permeable pavement • bioswales • soakaways • rain gardens • filtered strips • infiltration trenches <p>or</p> <p>Achieve post-development runoff reductions to no more than 50% of annual precipitation (approx. 10 mm of rainfall event retention from all site surfaces) through infiltration, evapotranspiration, water harvesting and reuse.</p>	<input type="checkbox"/>	<input type="checkbox"/> Stormwater Management Report, Plan(s), and drawing(s) to verify compliance.	

Performance Measures		Performance Criteria			For Submission		
Number	Development Feature	Tier 1 Mandatory Requirement	Met	Tier 2 Optional Requirement	Met	Documentation	Comments
W2	Building Water Efficiency	Install WaterSense® labeled water fixtures.	<input type="checkbox"/>	All buildings reduce indoor aggregate potable water consumption (not including irrigation) by 30% better than the Ontario Building Code baseline.	<input type="checkbox"/>	<input type="checkbox"/> Plumbing fixture specifications or other documentation demonstrating WaterSense® labelling and flush/flow rates. <input type="checkbox"/> Calculations demonstrating water use reduction. or Third party verification of water reductions with systems like Home Energy Rating System H2O or WaterSense® labeling. Hand calculations could be done according to LEED version 4.1 approach.	
W3	Rainwater Harvesting			For mid to high-rise residential development, each building includes a separate, non-potable subsurface watering system for irrigation and outdoor-reuse purposes.	<input type="checkbox"/>	Plan(s), drawing(s), or other documentation indicating non-potable water system.	



Building Green - User Guide

Pickering Integrated Sustainable Design Standards

For more information, connect with City Development at:

Website:

pickering.ca/standards

Email:

citydev@pickering.ca

Phone: 905.420.4617

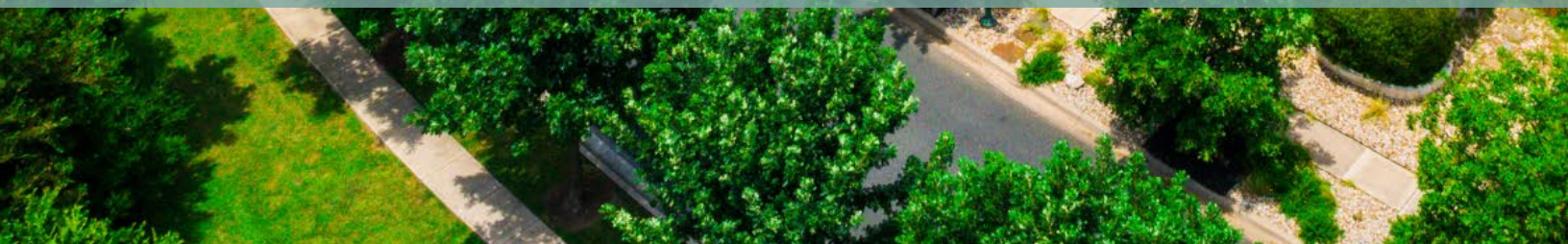


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Vision for a Sustainable Pickering



Vision for a Sustainable Pickering

The Pickering Integrated Sustainable Design Standards (ISDS) are born out of the City of Pickering's commitment to becoming one of the most sustainable cities in Canada. Sustainable Place-Making is a corporate priority for the City that aims to improve the long-term social, environmental, economic and cultural health of the community.

As Durham Region is slated for significant growth, Pickering is required to accommodate both residential and non-residential development. The ISDS support the City's commitment to mitigating the impact of development on climate change, while adapting to a changing environment and growing community.

The ISDS is a tool to assist the City in implementing and achieving its sustainable community vision through the development approval process. Green development practices have evolved and it is important that the City's ISDS reflect innovative green best practices and technology of today. The ISDS also reflects the work being done by both the City and Region of Durham to address climate change, support urban forests, pollinators, waste reduction, water conservation, energy efficiency, and protection of greenspaces.

Additional information on the Pickering Integrated Sustainable Design Standards is found at pickering.ca/standards.

Pickering Integrated Sustainable Design Standards

The ISDS were created to evaluate the sustainable performance of new development in the City of Pickering. The ISDS support many existing policies, which already include various components of sustainable design including the City of Pickering Official Plan, Integrated Transportation Master Plan, Stormwater Management Design Guidelines, the City's Boulevard Tree Planting Standards, Age Friendly Community Plan and many more. The ISDS applies to new applications submitted as of January 1, 2023 for Draft Plan of Subdivisions and Site Plans.

Our ISDS are organized under 7 key principles that showcase environmental, social and economic sustainability, together with innovative green practices and technologies.



Education

Educating homeowners about the use and maintenance of sustainable building features and sustainable lifestyle practices.



Energy & Resilience

Designing and constructing resilient, energy efficient buildings and encouraging on-site renewable energy systems.



Neighbourhood

Creating accessible and safe places to live for all.



Land Use & Nature

Protecting, conserving and enhancing the natural environment.



Transportation

Providing opportunities for sustainable modes of transportation.



Waste Management

Providing opportunities to recycle and divert materials in order to reduce waste.



Water

Using water efficiently and supporting sustainable stormwater management practices.

ISDS Overview

The ISDS defines a set of performance criteria for all new development in the City of Pickering. These standards apply to all new Draft Plan of Subdivision and Site Plan applications submitted to the City under the *Planning Act*. The ISDS are applicable to the following development types:

Low-Rise Residential:

Residential developments less than four storeys with a minimum of five dwelling units.

Mid to High-Rise Residential and Non-Residential:

Residential developments four storeys and above and all industrial, commercial and institutional developments.

Renovation and expansions to existing buildings are not required to meet the ISDS requirements but are encouraged to implement relevant sections of the ISDS where possible. The ISDS Checklists complement the sustainability policy requirements in the Pickering Official Plan.

As indicated, the ISDS is applicable to all new development in the City of Pickering and will replace the 2007 Sustainable Development Guidelines. However, it is not applicable to lands that already have an approved Plan of Subdivision or Site Plan.

Development applications/approval processes in Seaton, which have been initiated are still subject to the 2011 Seaton Sustainable Place-Making Guidelines (Seaton Guidelines). Most of the Seaton lands already have an approved Plan of Subdivision. The ISDS will only be applicable to those remaining areas that haven't been subject to either a Plan of Subdivision or Site Plan application.

However, the development community in Seaton is encouraged to build to sustainable building performance criteria, whether by following the ISDS, or the enhanced benchmarks in the Seaton Sustainable Place-Making Guidelines to reflect the best practices of today.

Performance Tiers

ISDS checklists have both mandatory and optional performance criteria for new development. There are two levels of achievement for the ISDS: Tier 1 and Tier 2.

Tier 1: the mandatory minimum level of achievement required

Tier 2: an optional, higher level of achievement

Development features and the corresponding performance measure for each of the 7 principles are listed throughout the checklists. All Performance Measures require commentary on how the Performance Criteria will be met. The checklists specify the required plan(s), drawings, or report(s) for the applicant to demonstrate how the performance criteria will be achieved.

Exemptions from specific measures in the ISDS may be granted on a case-by-case basis at the discretion of the City. Exemptions will be determined through the application review process. Where the applicant is unable to meet a mandatory Tier 1 requirement, they may propose an alternative sustainable development solution that either achieves equal to or above the benefits of the required measure, to the satisfaction of the Director, City Development.

Process for Completing the Checklist

1. Select the Appropriate Checklist to Complete from the City's website

Low-Rise Residential or Mid to High-Rise Residential & Non-Residential.

2. Confirm Tier 1 (Mandatory) and Tier 2 (Optional) Performance Measures

Check off the 'Met' box in Tier 1 and/or Tier 2 columns to indicate whether the Performance Criteria has been met for each Performance Measure.

3. Documentation

Use the Documentation column to review what specific documentation (e.g. plans, reports, drawings, etc.) is required. Where the Performance Criteria is demonstrated within a report, provide the specific page number reference.

4. Comments

Provide a detailed explanation as to how each measure is being met under the 'Comments' column. Further details regarding how a Performance Measure is to be implemented by the project may be requested or required at the discretion of the City.

5. Submit/Resubmit the Completed Checklist and Sustainability Report to the City

Submit/Resubmit the appropriate Application Information Form and ISDS Checklist to the City. The submission of a Sustainability Report demonstrating how the proposal is consistent with the ISDS Checklist is also required.

The City will evaluate the submission, conduct peer review(s) if necessary, and complete an assessment of the application. As part of the City's overall development application review, details of the ISDS will be included in reports to Council about the application.

Draft Plan of Subdivision Agreements and Site Plan Agreements will contain specific conditions relating to the implementation of the ISDS measures that an applicant has committed to undertake in their approved checklist. The Director, City Development has discretion to consider an alternative to a mandatory Tier 1 Performance Criteria, where appropriate.

Preparing a Sustainability Report

As part of the development application submission, the Applicant is required to submit the ISDS Checklist and a Sustainability Report. The intent of the Sustainability Report is to provide an overview of the Applicant's sustainability measures and how that commitment will be achieved. The following components should be included in the Sustainability Report:

- 1. Executive Summary:** Overview of the project and Tier 1 (Mandatory) and Tier 2 (Optional) commitments.
- 2. Purpose of the Application:** Detailed description of the project.
- 3. Sustainability Overview:** Summary of project's sustainability vision and objectives.
- 4. Innovation:** If applicable, provide an overview of any innovative performance measures being pursued by the project.
- 5. Mandatory Performance Criteria:** Provide details on all of the Tier 1 Performance Criteria and related documentation.
- 6. Optional Performance Criteria:** Where a Tier 2 is being pursued, provide details about the Performance Criteria selected and related documentation.

Review Process

Step 1. Pre-Consultation Meeting



The Applicant will fill out and submit the Mandatory Pre-Consultation Request Form, together with the associated fee. The Applicant's team will come prepared to the Pre-Consultation meeting, having reviewed the ISDS Checklist and must be prepared to speak to any planned sustainability features of the proposal (as per the City's Pre-Consultation Request Form).



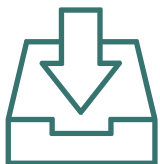
Step 2. Application Preparation



Following the Pre-Consultation Meeting, the Applicant will revise the proposal or reports based on staff feedback and direction. Applicants will complete the relevant ISDS Checklist to identify which Performance Criteria will be achieved and how they will be met. The Applicant will prepare a Sustainability Report. The Applicant must also indicate the drawings, plans, or reports that demonstrate criteria compliance.



Step 3. Application Submission



The Applicant must submit a completed version of the applicable ISDS Checklist and a Sustainability Report as part of the Complete Application Submission package to the City. The City Development staff will ensure that the complete ISDS Checklist and Sustainability Report are submitted at the initial application submission before it is processed.



Step 4. Technical Review



City Development staff will circulate the ISDS Checklist and Sustainability Report to the applicable City departments and main point of contact within each department as part of the development review process. Comments on the application and the ISDS Checklist will be provided by the applicable commenting person(s) to City Development. These comments will be provided to the Applicant to be addressed.

Step 5. Application Revisions and Resubmission



The Applicant will revise and resubmit plans, reports, and other materials, as may be required, based on agency comments through the overall evaluation of the development application. If revisions are proposed to the development plan, a revised ISDS Checklist and Sustainability Report may be required to be included in the resubmission. To ease the review process, Applicants should indicate how the revised Checklist addresses feedback in the “Applicant Comments” column.



Step 6. Report to Council



Where required, City Development reports to Council will address the ISDS Performance Criteria, committed to by the Applicant in their development application.



Step 7. Agreements



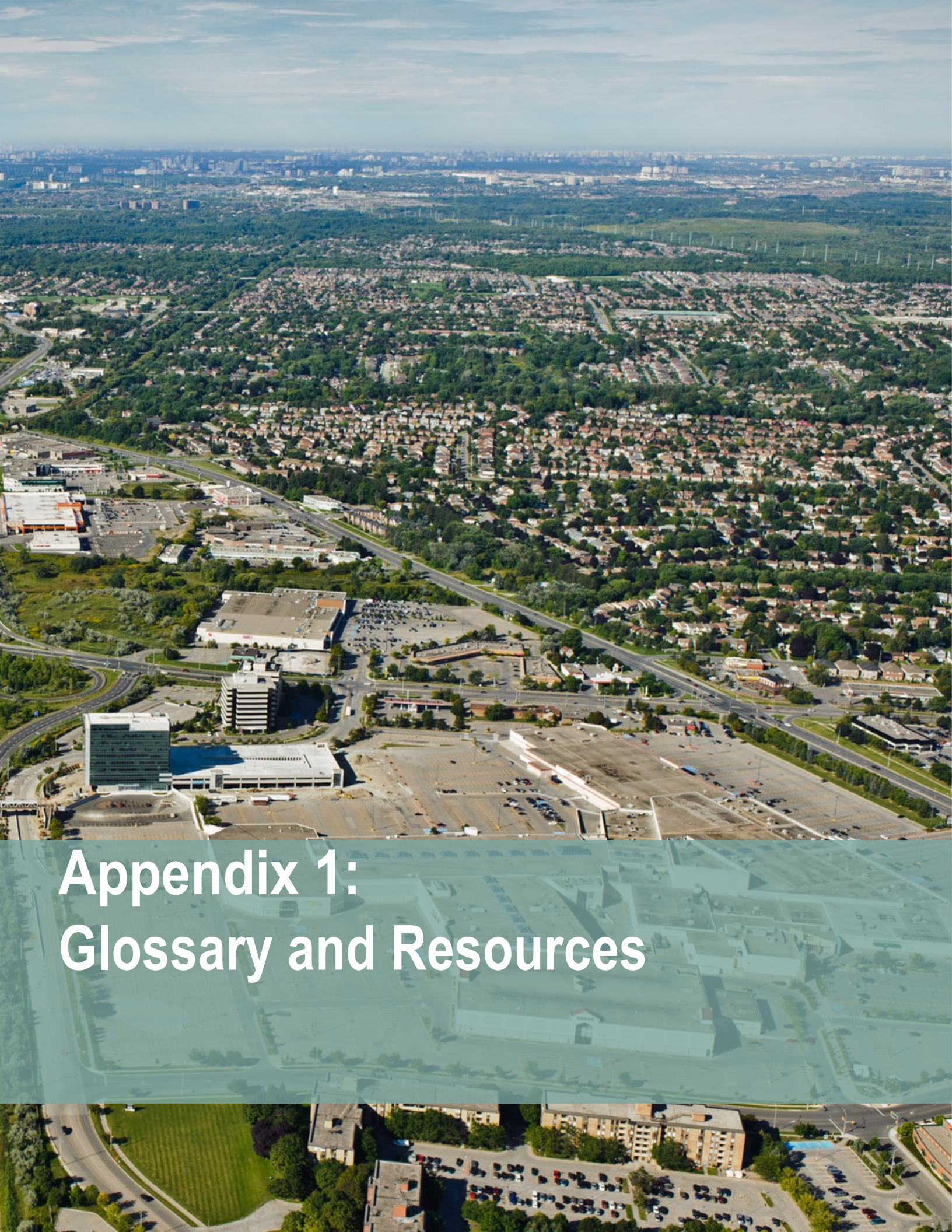
If Council approves the development application, either subdivision or site plan agreements and/or final plans will contain specific conditions for meeting the ISDS measures, that an Applicant, committed to undertaking in their approved Checklist.



Step 8. Implementation



As development proceeds, the Applicant will implement the approved ISDS Performance Criteria commitments. Staff may attend the site during construction to verify installation. Letters of Credit may be required to ensure completion of the approved development works. A Post Construction and Verification Checklist is required to be completed prior to releasing Letters of Credit.



Appendix 1: Glossary and Resources

Accessibility for Ontarians with Disabilities Act (AODA)

Recognizing the history of discrimination against persons with disabilities in Ontario, the purpose of this Act is to benefit all Ontarians by:

- a. Developing, implementing and enforcing accessibility standards in order to achieve accessibility for Ontarians with disabilities with respect to goods, services, facilities, accommodation, employment, buildings, structures and premises on or before January 1, 2025; and
- b. Providing for the involvement of persons with disabilities, of the Government of Ontario, and of representatives of industries and of various sectors of the economy in the development of the accessibility standards.

For more information, visit the *Accessibility for Ontarians with Disabilities Act* [website](#).

Available Roof Area

Available roof space is considered roof space that is not otherwise occupied by mechanical and electrical equipment.

Bird-Friendly Building Design Standard

FLAP Canada has released CSA A460:19 Bird-Friendly Building Design Standard that outlines specific measures that can be taken to make new and existing structures safe for birds.

For more information, visit the FLAP Canada [website](#).

Caliper

Caliper size refers to the diameter measurement of a tree's trunk at breast height.

CHBA Net Zero Home

Net zero homes are defined as homes that produce as much clean energy as they consume annually, using on-site renewable energy systems.

For more information, visit the CHBA Net Zero Home [website](#).

City of Pickering Official Plan

An Official Plan is a statutory document that sets out policy directions for land use planning matters regarding long-term growth and development in a municipality.

For more information visit the City of Pickering Official Plan [webpage](#).

City of Pickering's Tree Compensation Requirements

Existing tree size cm diameter breast height (DBH)	Ratio
15 cm to 29 cm	1:1
30 cm to 49 cm	2:1
50 cm to 74 cm	3:1
75 cm or greater	4:1

For more information, visit the City of Pickering Tree Compensation [webpage](#).

City of Pickering Tree Inventory Report and Preservation Plan

A Tree Inventory Report and Preservation Plan documents all trees on the development site, and those on adjoining lands, that may be affected by the proposed construction activities and proposes preservation protection measures.

City of Pickering Stormwater Management Design Guidelines

The guidelines provide the technical tools and guidelines necessary to comply with the City's stormwater management (SWM) requirements and infrastructure design standards. For more information, City of Pickering Storm Water Management Guidelines [webpage](#).

City of Pickering Street Lighting Requirements

The City of Pickering has requirements for street lighting systems along different road categories within urban Pickering.

For more information, contact the City of Pickering Engineering Services.

Common Outdoor Amenity Area

An outdoor area located at grade on the same lot as the development, and intended exclusively for the passive and recreation needs of the residents and may include common landscape gardens, sitting areas, outdoor fitness elements and similar facilities intended for recreational purposes.

Crime Prevention Through Environmental Design (CPTED)

CPTED is a proactive design philosophy built around a core set of principles, based on the belief that the proper design and effective use of the built environment can lead to a reduction in the fear and incidence of crime, as well as an improvement in the quality of life.

For more information, visit the CPTED Canada [website](#) and the CPTED Ontario [website](#).

CTC Source Protection Plan

The Approved Source Protection Plan: CTC Source Protection Region is a policy document developed under the Clean Water Act, 2006, to protect existing and future municipal drinking water sources, and which applies to all three Source Protection Areas in the CTC (Credit Valley-Toronto and Region-Central Lake Ontario) Source Protection Region.

Dark Sky Compliant

Dark Sky compliant outdoor lighting fixtures are certified by the International Dark-Sky Association Fixture Seal of Approval program. This program provides objective, third-party certification for lighting that minimizes glare, reduces light trespass and doesn't pollute the night sky.

For more information, visit the Dark Sky Compliant [website](#).

Durham Community Energy Plan

The Durham Community Energy Plan (DCEP) was developed to accelerate the transition to a clean energy economy in Durham while simultaneously achieving multiple economic, environmental and social benefits.

For more information, visit the Region of Durham [website](#).

Durham Region Official Plan

The Durham Region Official Plan contains policies and maps, which guide the type and location of land uses in the Region to 2031. Land use categories are displayed on the maps, while the policies describe the Region's goals for these categories, and the type of information the Region requires to evaluate land uses changes.

For more information, visit the Region of Durham [website](#).

Durham Region Climate Resilience Standard for New Houses

The Durham Region Climate Resilience Standard for New Houses is aimed at increasing the resilience of new low-rise residential buildings to current and future extreme weather conditions.

For more information, refer to the Resilience Standard for New Houses [website](#).

Electric Vehicle Charging Infrastructure Plan

Electric Vehicle Charging Infrastructure Plan consists of electrical drawings and electrical load calculations indicating the EV charging infrastructure and sufficient capacity. Also, electrical single-line drawing(s) and electrical room layout with equipment schedule indicating sufficient space for current and future equipment (e.g. future additional transformer) are required.

Electric Vehicle Energy Management Systems (EVEMS)

A means used to control electric vehicle supply equipment loads through the process of connecting, disconnecting, increasing, or reducing electric power to the loads and consisting of any of the following: a monitor(s), communications equipment, a controller(s), a timer(s), and other applicable device(s).

Electric Vehicle Ready

A parking space that has an energized electrical outlet, rated at 5.7 kW or greater continuous load, installed at the time of construction that is capable of charging an EV when a charging station is installed in the future.

Electric Vehicle Supply Equipment (EVSE)

An installed a multi-coupler charging station serving adjoining parking spaces (2 or 4 spaces with a common corner), capable of delivering a minimum 7.6 kW per coupler during single-vehicle charging, and 3.8 kW per coupler during simultaneous multi-vehicle charging.

The use of dynamic load management systems is acceptable to limit peak simultaneous charging loads as part of a demand response strategy.

Electric Vehicle Rough-in

A resident parking space that:

- a. has a minimum 21 mm trade-size conduit with pull-string, installed at the time of construction to allow for the later installation of EV charging station(s), terminating at
 - i. the resident electrical panel with space for one full-module double-pole breaker and sufficient load capacity for a 5.7 kW charger, or
 - ii. a dedicated common electrical panelboard, with space for one full-module double-pole breaker per charging station. For buildings up to 20 resident parking spaces, the panelboard and supply conductors shall be rated minimum 200 amp 240 V/1-phase or 208 V/3-phase. For buildings with more than 20 resident parking spaces, the panelboard, switchboard, and transformer shall be sized at minimum to accommodate the greater of a 38.4 kW load, or 5% of parking spaces multiplied by 3.8 kW/space; or
- b. has a single conduit with pull-string, from the common point of adjoining parking spaces (2 or 4 spaces with a common corner) to an electrical panelboard complying with a. ii., for future installation of a multi-coupler charging station, with conduit trade size sufficient to accommodate conductors delivering a minimum 3.8 kW per parking space.

Energy Performance Emissions

TEUI, TEDI, and GHGI are used to set performance-based energy and emissions targets. Descriptions provided below chart.

	TEUI (kWh/m ² /yr)		TEDI (kWh/m ² /yr)		GHGI (kg CO ₂ e/m ² /yr)	
	Tier 1	Tier 2	Tier 1	Tier 2	Tier 1	Tier 2
MURB (≥4 storeys)	135	100	50	30	15	10
MURB (< 4 storeys)	130	100	40	25	15	10
Commercial Office	130	100	30	22	15	8
Commercial Retail	120	90	40	25	10	5
Mixed Use Buildings	Calculated using an area weighted average of the performance targets from the other building types above					

Total Energy Use Intensity (TEUI)

The sum of all energy consumed on site annually (e.g. electricity, natural gas, district heat), including all process energy, per unit of modelled floor area. Measured in kWh/m²/year.

Heating: The annual heat input required to offset heat loss from a building's envelope and ventilation, after accounting for all passive heat gains and losses, per unit of modelled floor area. Measured in kWh/m²/year.

Thermal Energy Demand Intensity (TEDI)

The annual heating delivered to the building for space conditioning and conditioning of ventilation air. Measured with modelling software, this is the amount of heating energy delivered to the project that is outputted from all types of heating equipment, per unit of Modelled Floor Area. Heating equipment includes electric, gas, hot water, or DX heating coils of central air systems (e.g. make-up air units, air handling units, etc.), terminal equipment (e.g. baseboards, fan coils, heat pumps, reheat coils, etc.), or any other equipment used for the purposes of space conditioning and ventilation. The heating output of any heating equipment whose source of heat is not directly provided by a utility (electricity, gas, or district) must still be counted towards the TEDI. For example, hot water or heat pump heating sources that are derived from a waste heat source or a renewable energy source do not contribute to a reduction in TEDI, as per the above definition.

GHG Emission Intensity (GHGI)

The annual greenhouse gas emissions resulting directly from fuel consumed on site (e.g. natural gas) or indirectly from purchased energy (e.g. electricity), per unit of modelled floor area. Measured in kg CO₂e/m²/ year.

Energy Recovery Ventilation

Energy recovery ventilation (ERV) is the energy recovery process in Heating, Ventilating and Air Conditioning (HVAC) systems that exchanges the sensible and latent heat energy between the normally exhausted air of a building or conditioned space and incoming outdoor ventilation air.

Energy Star®

A program that provides certification to buildings and consumer products that meet certain standards of energy efficiency

For more information, visit the Energy Star [website](#).

Greywater Ready

A 'greywater ready' system includes separate piping to permit the future discharge and reuse of water in waste conveyance from a clothes washer, bathtub, showers, and bathroom/restroom wash basins for non-potable purposes.

Home Energy Rating System (HERS)

The industry index standard by which a home's energy efficiency is measured. It's also the nationally recognized system for inspecting and calculating a home's energy performance.

For more information, visit the Home Energy Rating System (HERS) [website](#).

Home Energy Rating System H2O

HERSH2O is a system for rating whole-house water efficiency that includes both indoor and outdoor uses. The rating is determined by comparing the home that is being rated with a "Reference Home" that is representative of construction practices (plumbing products and practices).

For more information, visit the Home Energy Rating System (HERS) [website](#).

Home Energy Management System (HEMS)

HEMS is a combination of hard and software components that work together to efficiently manage the energy usage of a home.

Keeping Our Cool: Managing Urban Heat Islands in Durham Region

This report examines urban heat islands in the context of risks and concerns for Durham Region. The first half of the report provides an overview including definitions, causes, impacts, and measures that can lessen urban heat island effects. The second half of the report contains a set of surface temperature maps for each of the eight local area municipalities in Durham Region. The maps show areas with high surface temperatures – locations most at risk to the impacts of urban heat islands.

For more information, see the Region of Durham [website](#).

Key Hydrologic Feature

Includes wetlands, permanent and intermittent streams, kettle lakes, seepage areas and springs, Lake Ontario, and the Lake Ontario Shoreline.

For more information, see the [City of Pickering Official Plan](#).

Key Natural Heritage Feature

Includes the significant habitat of endangered species, threatened species and special concern species, fish habitat, wetlands, Areas of Natural and Scientific Interest, significant woodlands, significant valleylands, significant wildlife habitat, sand barrens, savannah and tallgrass prairies, and altars.

For more information, see the [City of Pickering Official Plan](#).

Landscape Plan Guidelines for Site Plan and Subdivision Developments

The Landscape Plan Guidelines provide a Checklist of typical information required to be included on a landscape plan, as well as design criteria and standards for proposed landscape works within new and existing developments.

Low Impact Stormwater Management Planning and Design Guidelines

Low Impact Development (LID) deals with stormwater by mimicking natural water cycles. It increases the infiltration of stormwater into the soil, where it can be filtered and/or absorbed by plants. LID is a lower-cost alternative to conventional grey infrastructure and provides a number of ecological, economic and social benefits. Toronto and Region Conservation Authority (TRCA) developed LID Stormwater Management Planning and Design Guidelines in partnership with the Credit Valley Conservation Authority (CVC) and the Sustainable Technologies Evaluation Program (Step) Wiki tool in partnership with both CVC and Lake Simcoe Region Conservation Authority.

For more information, visit the Toronto and Region Conservation Authority [website](#).

Native Plant Species

A plant that originated and is indigenous to a specific region.

For more information on trees and shrubs native to Ontario, visit the Ontario Native Plant [website](#).

Ontario Building Code (OBC)

A regulation under the Building Code Act that establishes detailed technical and administrative requirements as well as minimum standards for building construction.

For more information, visit the Ontario Building Code [website](#).

Peak Shaving Devices

Peak shaving devices reduce the amount of energy purchased from the utility company during peak demand hours. Options include reducing consumption by turning off non-essential equipment during peak hours and installing automated thermostats to help reduce consumption. Installing solar and battery solutions can assist with reducing demand.

Renewable Energy

Renewable energy is derived from natural processes that are replenished at a rate that is equal or faster than the rate at which they are consumed. There are various forms of renewable energy, deriving directly or indirectly from the sun, or from heat generated deep within the earth. They include energy generated from solar, wind, biomass, geexchange, hydro power and ocean resources, solid biomass, biogas and liquid biofuels.

Resident Education Information Package

The resident information package should include the following:

1. Waste collection and disposal services;
2. Resident role as a steward to the natural environment including, natural landscaping, litter & illegal dumping, responsible pet ownership;
3. Access to sustainable transportation options; and
4. Energy and Water conservation measures and other sustainability features specific to the project that impact or could be of interest to the resident as deemed by the applicant.

Although not required, the applicant may wish to include information pertaining to nearby parks, greenspaces or trails, and contact information for other agencies (i.e. Toronto and Region Conservation Authority).

For items 1 – 3 refer to the City of Pickering [website](#).

Solar Ready

Solar ready refers to the design and installation of elements in preparation for the installation of a future solar system. Design considerations and modifications include the following elements: roof space, rooftop equipment and wind loads, solar domestic hot water systems and solar PV conduits, plumbing connections to an existing hot water heater, an electrical outlet, mechanical room floor space and mechanical / electrical room wall space. It requires the installation of a conduit from roof to electrical room and appropriate electrical service entrance.

For more information, refer to Natural Resources Canada Solar Ready Guidelines.

Solar Reflectance Index (SRI)

A composite measure that combines surface's solar reflectance and emittance. Essentially, the SRI is an indicator of how well a surface reflects (reflectance) and releases absorbed solar radiation (emittance). The lower the SRI, the hotter a material is likely to become in the sunlight.

Storey

Storey means that portion of a building other than a basement, cellar, or attic, included between the surface of any floor, and the surface of the floor, roof deck or ridge next above it.

The *Planning Act* (Ontario)

The *Planning Act* is provincial legislation that sets out the ground rules for land use planning in Ontario. It describes how land uses may be controlled, and who may control them.

For more information, visit the Ministry of Ontario – *Planning Act* [webpage](#).

TRCA Draft Guideline for Determining Ecosystem Compensation

The Draft Guideline for Determining Ecosystem Compensation presents an approach for replacing natural features lost through the development and/or infrastructure planning processes after the decision to compensate has been made.

For more information, TRCA Draft Guideline for Determining Ecosystem Compensation [webpage](#).

WaterSense®

An Environmental Protection Agency (EPA) program designed to encourage water efficiency through the use of a special label on consumer products.

For more information, visit the WaterSense® [website](#).

For any questions on the Pickering Integrated Sustainable Design Standards User Guide please contact the City's Sustainability staff at citydev@pickering.ca.

Alternate formats available upon request at 905.683.7575 or customercare@pickering.ca



The City of Pickering's Integrated Sustainable Design Standards Project

Public and Development Community Engagement Summary

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1.0 Context

The purpose of the Pickering Integrated Sustainable Design Standards (ISDS) is to replace the 2007 Sustainable Development Guidelines and develop a new set of standards that allows the City to review development through a lens that includes modern, green best practices and technology. The ISDS reflects the work being done by both the City and Region of Durham to address climate change, support urban forests, pollinators, waste reduction, water conservation, energy efficiency, and improve access to greenspaces.

These standards will help the City of Pickering continue to shape a more sustainable, and resilient community. Development of the ISDS has 4 phases:

- Phase 1: Launch and 1st Draft ISDS Checklist
- Phase 2: Content Development and 2nd Draft ISDS Checklists
- Phase 3: Finalize ISDS Checklist (Low Rise Residential & Mid to High-Rise Residential & Non-Residential) and User Guide for the development community
- Phase 4: Other Tools and Knowledge Workshops

Communications and Consultation:

The City of Pickering worked closely with the Urban Equation consultants, development community, Members of Council, agencies, and the general public to develop the Pickering Integrated Sustainable Design Standards. Best practices from other municipalities were also reviewed and assisted in the development of the ISDS. To ensure all necessary comments were received from the groups above, staff extended the project timeline with extended survey deadlines, and follow-up meetings, to allow more time for additional comments to be received. The City of Pickering would like to extend its appreciation to all stakeholders for their time and input in helping to shape Pickering's Integrated Sustainable Design Standards.

2.0 Consultation Objectives

An extensive engagement process was undertaken. The overall consultation sessions were intended to fulfill the following objectives for the Pickering ISDS:

- Communicate projects details and opportunities to get involved regularly
- Receive feedback on community priorities
- Solicit development community input on current practices, barriers, and suggestions moving forward
- Engage municipal staff, advisory committees, agencies, and stakeholders
- Build community awareness and support
- Create a final ISDS that reflects the feedback received from the public and development community as well as current best practices

2.1 Project Management and Working Groups

The ISDS project was led by the City Development Department. A staff working group consisting of representatives from various City of Pickering departments was established to provide background knowledge, and review the draft and final documents.

The Staff Working Group consisted of the following:

- Kyle Bentley, Director, City Development & CBO
- Grant McGregor, Project Manager, Strategic Initiatives
- Chantal Whitaker, Manager, Sustainability & Strategic Environmental Initiatives
- Catherine Rose, Chief Planner
- Nilesh Surti, Manager, Development Review & Urban Design
- Kristy Kilbourne, Principal Planner, Sustainability
- Paul Wirch, Principal Planner, Policy
- Melanie Edmond, Coordinator, Sustainability
- Déan Jacobs, Manager, Policy & Geomatics
- Peter Furnell, Supervisor, Building Permits
- Margaret Kish, Principal Planner, Policy
- Isabelle Janton, Senior Planner, Site Planning
- Catherine Hodge, Senior Coordinator, Development Liaison
- David Escudero, Senior Examiner/Inspector
- Laura Gibbs, Manager, Cultural Services
- Paal Helgesen, Acting, Division Head, Water Resources & Development Services
- Arnold Mostert, Manager, Landscape & Parks Development
- Irina Marouchko, Senior Water Resources Engineer
- Nadeem Zahoor, Transportation Engineer
- Mark Guinto, Division Head, Public Affairs & Corporate Communications
- Jaclyn San Antonio, Senior Advisor, Diversity, Equity & Inclusion
- Nicole Hann, Public Affairs Assistant
- Laraib Arshad, Senior Economic Development Officer
- James Halsall, Division Head, Budgets & Internal Audit
- Rob Gagen, Manager, Parks & Property
- Vince Plouffe, Division Head, Operations Services
- Robin Thornton, Supervisor, Energy Management

At the onset of the project, a call for volunteers to participate on a Building Advisory Panel was sent out to the development community. A Building Advisory Panel was established comprised of representatives from the development community and related associations to represent a diverse array of built forms. Over the course of the project, the City engaged with this panel through a series of surveys, workshops and one-on-one meetings to collect input/comments on the project and checklist performance criteria. The panel also helped identify opportunities and barriers to the development community when building to more advanced sustainable design standards. The volunteers' time and input was very much appreciated throughout the process.

The Building Advisory Panel consisted of the following:

- Andrea Cammisa, Director of Architecture, Mattamy Homes
- Ben Hawken, Vice President of Architecture, Mattamy Homes
- Amanda Santo, Vice President –Development, Dorsay Development Corporation
- Kevin Watt, Vice President Construction, ICON Homes
- Steven Warsh, President, Planning & Development, Chestnut Hill Developments
- Stacey Hawkins, Executive Officer, Durham Region Homebuilders Association
- Craig Marshall, President, Marshall Homes
- Paula Tenuta, Senior Vice President, Policy & Advocacy & Victoria Mortelliti, Manager, Policy & Advocacy, BILD
- Silvana Ramirez and Brittany Wong, Planning Coordinators, Averton
- Peter Jakovcic, Vice President of High Rise & Mark Iogna, Project Manager, Land Development, Tribute Communities

2.2 Consultation with Stakeholders

It was critical for the ISDS to be developed using a collaborative approach with the expertise, experience and cooperation of stakeholders throughout the community. In addition to input from general public and Building Advisory Panel members, staff benefited from the input provided by members of the development community and many other stakeholders; they played a critical role by providing comments that helped inform the ISDS.

The following groups provided valuable input during the ISDS review process:

- Pickering Accessibility Advisory Committee
- Durham Region Roundtable on Climate Change
- Region of Durham
- Toronto and Region Conservation Authority (TRCA)
- Central Lake Ontario Conservation Authority (CLOCA)
- The Atmospheric Fund
- Clean Air Partnership
- John Godden, Clearsphere & publishing editor Better Builder magazine
- FLAP Canada
- TACC Developments
- Deco Homes
- Arista Homes
- Aspen Ridge
- Brookfield Properties
- Evans Planning

3.0 Consultation Activities

To engage the public and development community, staff employed multiple tools and engagement opportunities (both online and in-person) to solicit feedback, including:

- Media releases
- Let's Talk Pickering project page
- Municipal website page (pickering.ca/standards)
- Social media campaigns
- Municipal facility posters
- Municipal digital sign promotions
- Article in City's "Your City" magazine (digital and physical distribution)
- Municipal eNewsletters
- Banner and rack card at facilities
- Paid advertising with local media
- Media interview with Global News Durham
- Establishment of a Building Advisory Panel
- Two public and two development community surveys
- Direct industry input from John Godden, Founder and CEO Clearsphere, Clean Air Partnership, The Atmospheric Fund, Region of Durham, TRCA, and CLOCA
- Letters to Mississaugas of Scugog Island First Nation
- Notice included in sustainability comments for development applications
- Presentations and workshops to stakeholders, committees and the public
- In-person engagement at the Pickering Farmers' Market
- Targeted direct emails to request participation in project and surveys to over 200 community group contacts e.g., rate payer/community association, clubs, sports users, service/senior and cultural clubs, places of worship, schools, etc., as well as over 70 development community and planning consultant representatives

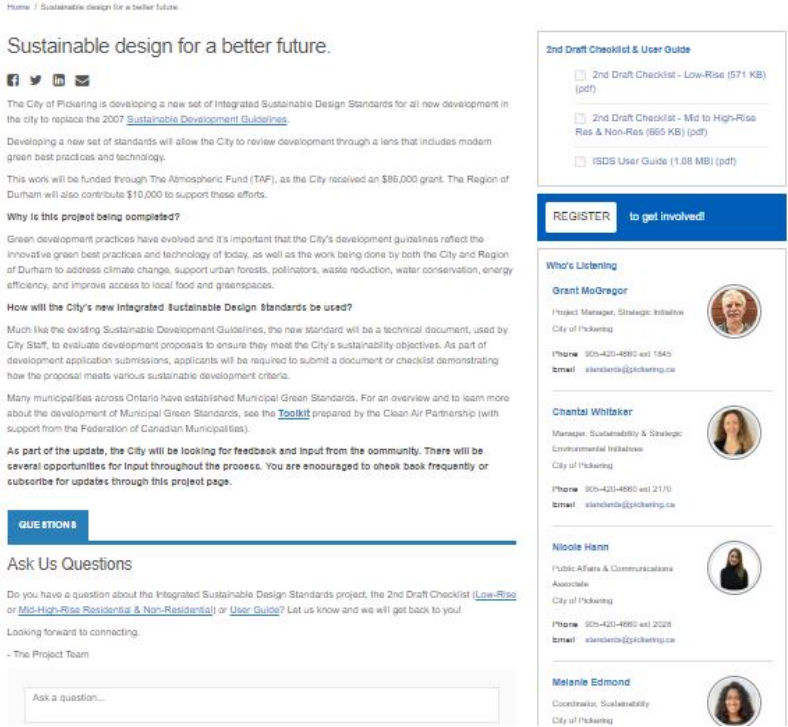


Figure 1a. [LetsTalkPickering.ca/Standards](https://www.letsstalkpickering.ca/standards) Project Page



Figure 1b. Facility banner and rack card



Figure 1c. Electronic signage content

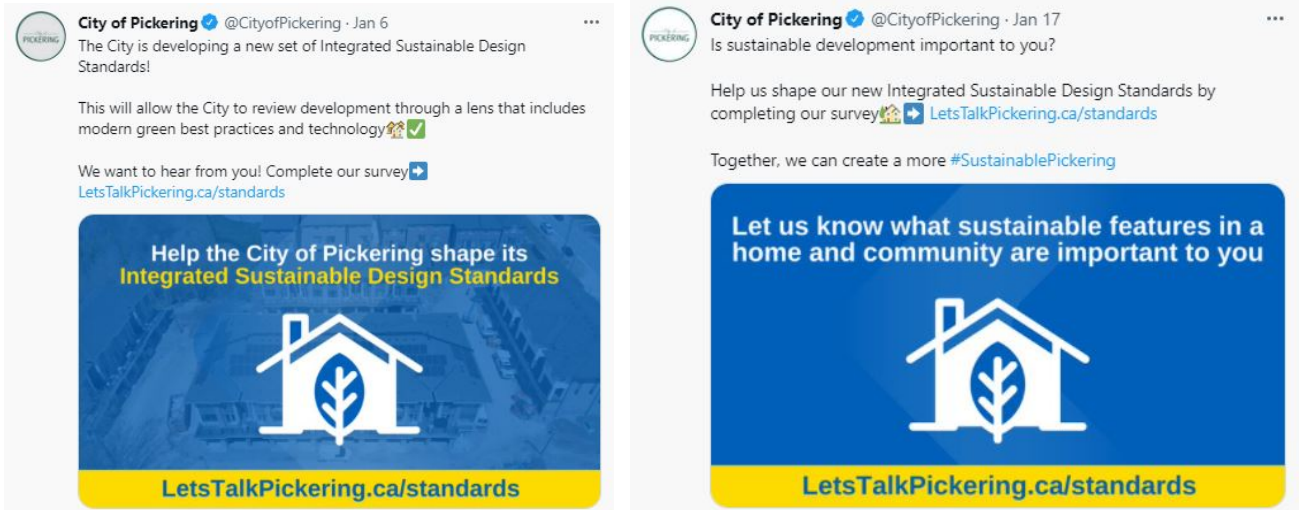


Figure 1d. Example of social media designs (some were paid/boosted promos)

3.1 The following consultation activities occurred during Phase 1: Launch and First Draft of the Integrated Sustainable Design Standards

Engagement	Target audience	Description/Outcome	Platform
<p>Public Survey #1 January 6 to 24, 2022</p> <p>Survey summary report available at Let's Talk Pickering and pickering.ca/standards.</p>	<p>General Public</p>	<p>The public survey #1 helped the City gain insight from the public on important sustainable design elements for both their home and community. Extensive marketing as outlined in section 3.0 was undertaken including a media release, paid advertising, facility posters, direct emails to 200 community (e.g., schools, organizations, neighbourhood associations, places of worships, etc.), Sustainable Pickering eNewsletter (1,030 subscribers), agencies, committees, and community leaders.</p> <p>142 surveys were completed and 327 comments collected.</p> <p>Key Findings The most highly rated sustainability features for a</p>	<p>Let's Talk Pickering</p>

Engagement	Target audience	Description/Outcome	Platform
		<p>home were: energy-efficient windows, thermally efficient exterior walls, and energy-efficient HVAC system. Most highly rated sustainable elements of a community included: access to parks and greenspaces, trees in public spaces, accessibility measures, and off-road bicycle and multi-use trails.</p>	
<p>Staff Workshop January 15, 2022</p>	<p>City staff</p>	<p>Provided staff an introduction on the standards project, an overview of relevant experiences, the project timeline and engagement strategy.</p>	<p>Teams</p>
<p>Development Community Survey #1 January 10 – 26, 2022</p> <p>Survey summary report available at Let’s Talk Pickering and pickering.ca/standards.</p>	<p>Development Community</p>	<p>Gained insight from development community on experience with sustainable development projects, key sustainability building principles, and overall comments on barriers to constructing sustainable buildings. The survey was emailed to 70 development community and planning consultant representatives. 18 representatives completed the survey and 29 comments were received.</p> <p>Key Findings According to the survey primary barriers to building to more advanced green building standards included: lack of skilled trades, lack of materials or suppliers, supply costs and interest in sustainable features from homebuyers.</p>	<p>Survey Monkey</p>

Engagement	Target audience	Description/Outcome	Platform
Building Advisory Panel Workshop January 19, 2022	Building Advisory Panel	Information session to discuss the benefits and barriers of sustainable design standards. Also shared preliminary findings of Development Community Survey #1. Key Findings Investigate City staff training on incentives, new policies, training programs for skilled trade workers, legal authority, and consistency across municipalities.	Teams
Council Workshops February 2022	Members of Council	Introduced the sustainable design standards and discussed Survey #1 results.	Teams
Public Workshop #1 February 15, 2022	General Public	Information session to explain project, need and benefits of sustainable design standards. Also shared preliminary findings of Public Survey #1.	Zoom Webinar
GTHA Municipalities Workshop February 23, 2022	GTHA Municipalities	Information session at which municipalities shared knowledge and experiences creating and implementing sustainable development standards. Key Findings Investigate change management processes, public education awareness campaigns, municipal authority, and incentive program options.	Teams

3.2 The following consultation activities occurred during Phase 2: Content Development and Second ISDS Checklist

Engagement	Target audience	Description/Outcome	Platform
<p>Public Survey #2 March 23 – April 3</p>	<p>General Public</p>	<p>Purpose was for the public to comment on the objectives and performance criteria in the ISDS checklist. As with the first survey extensive marketing was done to promote participation.</p> <p>30 survey responses were received with 324 comments.</p> <p>Key Findings 93% of respondents 'strongly agreed or agreed' with the goals and objectives of the ISDS standards. 73% 'strongly agreed or agreed' with the performance criteria.</p>	<p>Let's Talk Pickering</p>
<p>Development Community Survey #2 March 21 – April 3</p>	<p>Development Community</p>	<p>Purpose was for the development community to comment on the objectives and performance criteria in the ISDS checklist. The survey was sent to over 70 industry representatives. One response was received with 7 comments but they represented an agency.</p> <p>Key Findings A different approach was needed to solicit feedback on the checklist and additional consultation time was required. To this end, the project timeline was extended by three months and staff solicited feedback through email, workshops and one-on-one meetings.</p>	<p>Survey Monkey</p>

Engagement	Target audience	Description/Outcome	Platform
Building Advisory Panel Workshop #2 April 19, 2022	Building Advisory Panel	Information session on the ISDS draft checklist to discuss preliminary feedback on performance criteria.	Teams
Council Workshops April 21, 2022	Members of Council	Information session on the ISDS draft checklist and review of public and development survey #2 results (e.g., comments, big trends, actions, City direction).	Teams
Public Workshop April 21, 2022	General Public	Information session on the ISDS draft checklist and review of public survey #2 results (e.g., comments, big trends, actions, City direction).	Zoom Webinar

3.3 The following consultation activities occurred during Phase 3: Finalized ISDS Checklist (Low-Rise Residential & Mid to High-Rise Residential & Non-Residential) and User Guide for Development Community.

Engagement	Target audience	Description/Outcome	Platform
Presentation to Pickering Accessibility Committee June 15, 2022	Accessibility Committee	Overview of the standards and draft ISDS checklist. Focus was directed to the neighbourhood principle and the accessibility development features. Included a Q&A session.	Teams
Presentation to Durham Region Roundtable on Climate Change June 17, 2022	Durham Region Roundtable on Climate Change	Overview of the standards and draft ISDS checklist. Included a Q&A session.	Teams

Engagement	Target audience	Description/Outcome	Platform
<p>One-on-One meetings with members of the Building Advisory Panel and development community representatives and written comments solicited June – July 2022</p>	<p>Development community</p>	<p>Sessions were organized to focus on Low Rise and Mid-High Rise & Non-Residential draft checklists separately. Staff met with representatives from Mattamy Homes, Averton, ICON Homes, Marshall Homes, Chestnut Hill Developments, Dorsay Developments, Tribute Communities, TACC Developments, Deco Homes, and Arista Homes to discuss comments about the draft checklists.</p> <p>During this time, comments were received from other industry and stakeholder representatives by email.</p> <p>Over 130 comments were received and compiled into a matrix. Comments were either reflected in the current version of the checklists, will be considered in future editions, or not integrated because it was outside the scope of the ISDS project or objectives. A summary of the comments are in Attachment #4 – Development Community Comments.</p>	<p>Teams / In-person</p>
<p>Staff Working Group Presentation June 23, 2022</p>	<p>City staff</p>	<p>Meeting focus was to identify and find solutions to barriers City staff may face when integrating the ISDS into the development review process. This information informed the development of the Staff Training Guide.</p>	<p>Teams</p>

3.4 At the time this summary was prepared, the project was working through Phase 4. The following activities are part of Phase 4: Other Tools and Knowledge Workshops.

- ISDS User Guide to support the development industry in implementing the standards.
- ISDS Training Guide to support municipal staff in using the Standards.
- Carbon Forecasting Report on the estimated emission reductions that could be achieved once the Standards are implemented
- Shared Learning Report, which identifies the processes used, tools, and resources needed to develop the ISDS. The Shared Learning Report will be used to assist other municipalities who are developing their own green standards so that they can benefit from the City of Pickering's experience.

4.0 Conclusion

A number of external groups have reached out to City staff about writing a story about Pickering's efforts to share on their platform (e.g., magazine, eNewsletter). Subject to Council's approval, staff will continue to work with Corporate Communications to promote the City of Pickering's ISDS. The ISDS is a tool to assist the City in implementing and achieving its sustainable community vision through the development approval process. Green development practices have evolved and it is important that the City's ISDS reflect innovative green best practices and technology of today. The ISDS will be updated every four years using public and development community consultation and feedback to help to inform those updates to ensure the standards serve the interests of the community.



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April 6, 2022

City of Pickering
City Development Department
Pickering Civic Complex
One The Esplanade
Pickering, Ontario
L1V 6K7

Attention: Mr. Grant McGregor, Project Manager, Strategic Initiatives, Sustainability
Sent only via email to gmcgregor@pickering.ca

Dear Sir:

**Re: Integrated Sustainable Design Standards (ISDS) – First Draft
Submission by North Pickering Management Inc. / Seaton Landowners Group**

Macaulay Shiomi Howson Ltd. (MSH) is the planning consultant for North Pickering Community Management Inc. North Pickering Management Inc. along with 1133373 Ontario Incorporated, Lebovic Enterprises Limited, Oak Ridges Seaton Inc., Zavala Developments Inc., Las Lomas Developments Inc., Mattamy (Seaton) Limited, White Sun Developments Limited, Seaton TFPM Inc., Kubota Canada Ltd., Shirva Investment and Development Corporation, 10466921 Canada Inc. and Her Majesty The Queen in Right of Ontario, as represented by the Minister of Government and Consumer Services, comprise what is known as Seaton Landowners Group (the “SLG”).

We have reviewed the ISDS – First Draft on behalf of the SLG and the individual owners. Our key concern is that the ISDS appears to be designed to be applicable to all development in the City of Pickering. There is no acknowledgement or recognition that development in the Seaton Community has already been approved through a lengthy process involving settlements approved by the Ontario Municipal Board (OMB). That approved development is based on a mutual understanding by the SGL and the City of the development requirements, in particular that development in Seaton is subject to the Seaton Sustainable Place-Making Guidelines (Seaton Guidelines).

It is not appropriate to introduce new requirements at this late stage in the development of the Seaton Community. We would request therefore, on behalf of the SGL, that the ISDS be modified to clearly identify that the proposed new Standards are not applicable to the Seaton Community. The ISDS should identify that development in Seaton will continue to be evaluated only with respect to the Seaton Guidelines.

Should you have any questions regarding these comments please contact the undersigned (416-487-4101 ext. 307 howson@mshplan.ca) or Mr. Glenn Pitura, the Group Project Manager (416-708-2212, glenn@arutip.com).

SLG would request notice of any decisions regarding the ISDS. Notice should be provided to SLG care of North Pickering Community Management Inc., Mr. Andrew Orr, President, A.S.O. Trustee.

Yours truly,

MACAULAY SHIOMI HOWSON LTD.



Per: Elizabeth Howson, MCIP, RPP

c.c. North Pickering Community Management Inc. Trustee – Mr. A. Orr (via email only)
Group Project Manager – Mr. G. Pitura (via email only)

The City of Pickering's Integrated Sustainable Design Standards Project

Development Community Comments

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2022

ISDS Development Community Comments

The below chart includes comments from the Development Community regarding the Pickering Integrated Sustainable Design Standards (ISDS) draft checklist #2. Comments were collected during one-on-one meetings with members of the Building Advisory Panel and development community representatives as well as in writing. Sessions were organized to focus on Low Rise and Mid-High Rise & Non-Residential Draft 2 Checklists separately. Staff met with representatives from Mattamy Homes, Averton, ICON Homes, Marshall Homes, Chestnut Hill Developments, Dorsay Developments, Tribute Communities, TACC Developments, Deco Homes, and Arista Homes. During this time, some comments were also received from other industry and stakeholder representatives by email. Urban Equation compiled the comments and organized them into a matrix based on if the comment should be reflected in the current version of checklists, in future editions, or not reflected if it was outside the scope of the ISDS project or objectives. Following a review of the feedback, Urban Equation and City staff incorporated changes into the checklists, where appropriate, to either clarify or modify the performance criteria.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
1.	Low-Rise Residential	Education	Resident Education	No Comment.
2.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	Concern with this section: to note max SRI value of 20 as regulated by the Cool Roof Rating Council (CRRC). Available product that meets criteria is IKO Cambridge Cool Color Plus. Only way to achieve a SRI value of 20+ is to select Arctic white for all roofs, to would not be possible due to arch control and consumer demand. Lastly, due to the current volatile market with supply and demand since product not readily used currently on production build, it could easily be discontinued or limited with available colours in Canada.
3.	Low-Rise Residential	Energy & Resilience	Building Energy Performance and Emissions	No Comment, ok with Tier 1 Mandatory notes.
4.	Low-Rise Residential	Energy & Resilience	Passive Solar Orientation	Only if possible, design intent of configurations already established by developer before builder has attained serviced lots.
5.	Low-Rise Residential	Energy & Resilience	Renewable Energy	Please use same verbiage as SDIP.
6.	Low-Rise Residential	Energy & Resilience	Building Resilience	More information needed for comment.
7.	Low-Rise Residential	Neighbourhood	Private Pedestrian Walkways	Developer requirement.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
8.	Low-Rise Residential	Neighbourhood	Play Areas & Structures (where applicable)	Developer requirement.
9.	Low-Rise Residential	Neighbourhood	Community Safety	Developer requirement.
10.	Low-Rise Residential	Land & Nature	Topsoil	Requesting, a max of 6" (15 cm) same as SDIP.
11.	Low-Rise Residential	Land & Nature	Light Pollution Reduction	To apply to Street Lighting by Developer only. Any exterior fixture on home to have LED bulbs.
12.	Low-Rise Residential	Land & Nature	Planting of Native or Non-Invasive Species	No Comment.
13.	Low-Rise Residential	Land & Nature	Vegetated Buffers	Developer requirement.
14.	Low-Rise Residential	Land & Nature	Tree Preservation and Removal Compensation	Developer requirement.
15.	Low-Rise Residential	Land & Nature	Healthy Street Trees	Developer requirement.
16.	Low-Rise Residential	Land & Nature	Natural Heritage Features and Open Space Enhancement	Developer requirement.
17.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	No Comment.
18.	Low-Rise Residential	Material & Products	Material Recycled Content	No Comment.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
19.	Low-Rise Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	No Comment.
20.	Low-Rise Residential	Waste Management	Construction Waste Reduction	No Comment.
21.	Low-Rise Residential	Water	Stormwater Management	Developer requirement.
22.	Low-Rise Residential	Water	Water Efficiency	Should specify Water Sense labeled toilets, lavatory faucets and shower faucets. Most Kitchen faucets do not meet this criteria.
23.	Low-Rise Residential	Education	Education	Should be similar to the marketing material provided by Savings by Design.
24.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	Cool roofs (assuming light coloured shingles) have the potential to encourage algae growth on the shingles since the roofs may not fully dry (shading dependent) – Vegetated roofs are cost prohibitive and require additional maintenance, something that homeowner do not want – PV panel are very house design and siting dependent, they are not practical for all houses (ones with small south facing roof area) – An area based requirement for PV panels does not make sense. There may be energy generation limits imposed by other stakeholders such as, utility companies, ESA, home

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				insurance companies. Systems over a certain size (based on kWh) require additional engineering. It does not make sense to oversize a system just to meet An area requirement.
25.	Low-Rise Residential	Energy & Resilience	Passive Solar Orientation	Passive solar orientation is an interesting requirement especially with ever increasing adoption of solar panels. Depending on the type of building form, the optimal orientation for PV changes (detached house vs townhouse). Passive solar heating will likely not be a practical solution for most developments, and will likely lead to overheating and increased a/c usage.
26.	Low-Rise Residential	Energy & Resilience	Renewable Energy	Solar ready is fine, and relatively easy to meet, although solar panels may not be practical for all house designs. HEMS systems are readily available and is already a requirement for CHBA Qualified Net Zero Homes.
27.	Low-Rise Residential	Energy & Resilience	Building Resilience	Do backwater valves count as a measure to address flooding? Does sodding count as a measure to address flooding and extreme heat waves? Does installing A/C count as a measure to address extreme heat waves?

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				Do hurricane straps count as a measure to address extreme high winds?
28.	Low-Rise Residential	Neighbourhood	Community Safety	Do front doors that face the street and front porches to encourage more “eyes on the street” meet the CPTED principles requirements?
29.	Low-Rise Residential	Land & Nature	Topsoil	12" of top soil for sod is already a common requirement.
30.	Low-Rise Residential	Land & Nature	Light Pollution Reduction	Dark sky compliant light fixtures seems like an easy substitution.
31.	Low-Rise Residential	Material & Products	Material Recycled Content	Fiberglass insulation already contains a lot of recycled content FSC or SFI wood may be cost prohibitive and not readily available.
32.	Low-Rise Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	Will this also require providing 200A service?
33.	Low-Rise Residential	Waste Management	Construction Waste Reduction	This seems similar to LEED requirements.
34.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a bylaw that supersedes the code.
35.	Low-Rise Residential	Energy & Resilience	Passive Solar Orientation	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
36.	Low-Rise Residential	Energy & Resilience	Renewable Energy	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
37.	Low-Rise Residential	Energy & Resilience	Building Resilience	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
38.	Low-Rise Residential	Neighbourhood	Private Pedestrian Walkways	Due to the nature of grading this is not feasible.
39.	Low-Rise Residential	Land & Nature	Healthy Street Trees	In higher density communities the 8 m will not be realistic, due to driveways and street furniture.
40.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
41.	Low-Rise Residential	Material & Products	Material Recycled Content	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
42.	Low-Rise Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
43.	Low-Rise Residential	Water	Water Efficiency	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
44.	Low-Rise Residential	General Comment	General Comment	<p>For the purposes of these checklists, how is a 'Storey' defined? Would a rooftop access with a limited floor area be considered a 'Storey'?</p> <p>We suggest that the specific method of demonstrating compliance with the performance measures should be clearly identified and described.</p>
45.	Low-Rise Residential	Education	Resident Education	Will there be a terms of reference to specify what the required educational package is to include/consist of?
46.1	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	This measure appears difficult to achieve for ground related housing with sloped roofs, while being relatively simple for buildings with flat roofs (such as commercial/industrial). Is it assumed that the majority of dwellings either have to have a white roof or a flat roof with access and a green rooftop?
46.2	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	What is the definition of 'Available Roof Area'? Will there be exemptions for rooftop patios?

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
46.3	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	What is the definition of a 'cool roof'?
46.4	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	The viability of 50% rooftop coverage with solar panels may not be achievable for a variety of reasons, including building orientation.
47.	Low-Rise Residential	Energy & Resilience	Passive Solar Orientation	How is the 'feasibility' of satisfying this performance measure determined? Who makes this determination?
48.	Low-Rise Residential	Energy & Resilience	Renewable Energy	To encourage innovation and flexibility, we suggest that consideration for alternative renewable energy options or systems which meet the intent of this measure should be permitted.
49.	Low-Rise Residential	Energy & Resilience	Building Resilience	What constitutes an 'extreme heat wave' or 'extreme high wind' for the purposes of this measure? What building measures are contemplated to satisfy these measures?
50.	Low-Rise Residential	Land & Nature	Healthy Street Trees	How does this measure differ from the standard Subdivision/Site Plan maintenance requirements?
51.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	How is this to be quantified? For example, we note that many landscape pavers consist of recycled/reused materials, but may only comprise a small proportion of the paver itself. Would such a material be considered to

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				satisfy the measure in this circumstance?
52.	Low-Rise Residential	Waste Management	Construction Waste Reduction	Such aspects are not typically known or determined during the planning/development approvals phase. Accordingly, we are uncertain how this measure could be quantified or enforced.
60.	Low-Rise Residential	Energy & Resilience	Building Energy Performance and Emissions	<p>For low-rise residential, you may want to consider including one or more alternative compliance options for ER2 Tier 2. Builders opting for Tier 2 may want to build to 3rd party standard, such as R-2000 or CHBA net zero ready or Passivehouse, and if they choose to build and certify to one of these standards they shouldn't have to also pay a consultant to write a report saying its more than 25% better than code. If there are builders certified to R-2000, for example, they may be more familiar/comfortable with R-2000 requirements than 25% better than code. And the certification adds value (both for marketing the home and for quality assurance purposes).</p> <p>a. sample language that could be inserted: "or, Design, construct and label the building(s) to achieve at least R-2000" (and/or others standards noted)."</p>
61.1	Low-Rise Residential	Energy & Resilience		Make clear which TEDI, EUI, and GHGI targets are being referenced for tier 2 (I'm

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				assuming its TGS V3 T2?). If so that seems reasonable.
61.2	Low-Rise Residential	Energy & Resilience		The other thing would be that since tier 2 is already optional, I would rather see Pickering specifying the use of absolute targets for building types covered by them, and have the 25% better than code only for other building types not covered by the absolute targets. This would help prime the local industry leaders to the use of absolute targets, facilitating a future update where absolute targets could become mandatory in Tier 1.
62.	Low-Rise Residential	Education	Resident Education	Are there any specific guidelines that would follow to ensure that everyone is providing equal education for the residents? How would these guidelines be measured and or enforced?
63.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	I think this is much easier to achieve on flat roofs although it has been said that green roofs are not responding well in our climate. Cool roofs in general are only required for 2 months of the year in extreme heat waves, is the cost of doing cool roofs worth what it gives back. There is no real definition to "Available roof area". We need clarification on the different types of "cool roof" that would be accepted.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
64.	Low-Rise Residential	Energy & Resilience	Passive Solar Orientation	<p>How would this be reviewed and accepted?</p> <p>With today's density requirements this may impact that by orientation and not using the available land in the most efficient way increasing the cost and affecting feasibility of developments in a negative way.</p> <p>Perhaps the natural orientation lends itself to study and find the best way to utilize solar with in the natural orientation and rough it into match? (Roof loads, conduits etc.)</p>
65.	Low-Rise Residential	Energy & Resilience	Renewable Energy	<p>Does this have to be solar ready? there are other renewable energy items (rough ins and more that could be added to this for a list of selections to choose form for example: Grey water recovery rough, Additional.</p>
66.	Low-Rise Residential	Energy & Resilience	Building Resilience	<p>What would be the review process and measure of these items. More information is required.</p>
67.	Low-Rise Residential	Land & Nature	Topsoil	<p>The only problem with adding more topsoil is the amount of settlement in years to come.</p>
68.	Low-Rise Residential	Land & Nature	Light Pollution Reduction	<p>This does not differ from general planning and engineering requirements for developments. With high density sites wall packs are used. This may not always meet this standard.</p>

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
69.	Low-Rise Residential	Land & Nature	Tree Preservation and Removal Compensation	How does this differ from current industry standards? What is the compensation ratio?
70.	Low-Rise Residential	Land & Nature	Healthy Street Trees	What happens in the case you have dual frontage units on a streetscape? This rule could not work. When you have standard 6m towns standard of not more than 8 m would not work with driveways, it would have to be greater distance for this to work. What happens in cases where boulevard communication and hydro infrastructure exist? Does this differ from Standard Subdivision?
71.	Low-Rise Residential	Land & Nature	Natural Heritage Features and Open Space Enhancement	How would this be reviewed and measured?
72.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	How would this be reviewed and measured? Perhaps a standardized list of items could be used to pull from.
73.	Low-Rise Residential	Material & Products	Material Recycled Content	How would this be reviewed and measured? Perhaps a standardized list of items could be used to pull from.
74.	Low-Rise Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	Define rough in?

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
75.	Low-Rise Residential	Waste Management	Construction Waste Reduction	How would this be reviewed and measured?
76.	Mid to High-Rise Residential & Non-Residential	Energy & Resilience	Heat Island Reduction	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
77.	Mid to High-Rise Residential & Non-Residential	Energy & Resilience	Building Energy Performance and Emissions	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
78.	Mid to High-Rise Residential &	Neighbourhood	Wayfinding Signage	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
	Non-Residential			of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
79.	Mid to High-Rise Residential & Non-Residential	Neighbourhood	Community Safety	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
80.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Bird Friendly Design	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
81.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Healthy Street Trees	How does this work with Mid-rise blocks with minimal area to plant?
82.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Common Outdoor Amenity Space	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
83.	Mid to High-Rise Residential & Non-Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				that incentive, but the municipality cannot pass a by-law that supersedes the code.
84.	Mid to High-Rise Residential & Non-Residential	Transportation	Bicycle Parking and Storage Facilities	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
85.	Mid to High-Rise Residential & Non-Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
86.	Mid to High-Rise Residential &	Water	Building Water Efficiency	The building code act actually prohibits the municipality from passing any by-law that supersedes the requirements

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
	Non-Residential			of the building code. If the municipality did pass a by-law as you mentioned, it could not be enforced under the code. There are some options as was mentioned earlier through incentives to try and get builders to move away from shingled roofs to another form of roofing by providing them that incentive, but the municipality cannot pass a by-law that supersedes the code.
87.	Mid to High-Rise Residential & Non-Residential	Education	Resident Education	Will there be a terms of reference to specify what the required educational package is to include/consist of?
88.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Healthy Street Trees	How does this measure differ from the standard Subdivision/Site Plan maintenance requirements?
89.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Common Outdoor Amenity Space	We suggest that requirement of 4.0 square metres of common outdoor amenity space is too onerous and that a reduced requirement should be implemented. Is this to be codified through an associated Zoning By-law Amendment?
90.	Mid to High-Rise Residential & Non-Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	How is this to be quantified? For example, we note that many landscape pavers consist of recycled/reused materials, but may only comprise a small proportion of the paver itself. Would such a material be considered to satisfy the measure in this circumstance?

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
91.	Mid to High-Rise Residential & Non-Residential	Transportation	Bicycle Parking and Storage Facilities	Is this to be codified through an associated Zoning By-law Amendment?
92.	Mid to High-Rise Residential & Non-Residential	Transportation	Bicycle Parking and Storage Facilities	What is the required rate for long term bicycle parking spaces?
93.	Mid to High-Rise Residential & Non-Residential	Transportation	Bicycle Parking and Storage Facilities	Does the minimum requirement for a shower and change room apply to long term or short term bicycle parking spaces?
94.	Mid to High-Rise Residential & Non-Residential	Waste Management	Construction Waste Reduction	Such aspects are not typically known or determined during the planning/development approvals phase. Accordingly, we are uncertain how this measure could be quantified or enforced.
95.	Mid to High-Rise Residential & Non-Residential	Energy & Resilience	Building Energy Performance and Emissions	On the mid-to-high rise ER2, the checklist doesn't specify which TEDI, TEUI and GHGI targets need to be met. The companion User Guide includes core and optional levels (based on TGS V3 Tier 1 and 2), and I'm assuming the checklists ER2 Tier 2 is referencing the optional targets. But this should be cleared up, either by including the specific targets in the checklist, or clearly stating that it's the "optional" targets outlined in the user guide. And/or eliminate the 'core' targets in the user guide, since

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				these aren't provided as a compliance option.
96.	Low-Rise Residential	Education	Resident Education	City staff to prepare sample write-ups for waste collection and other related topics to be used as samples in the User Guide which builders can pull from.
97.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	Provide clarification around 'roof type' (slope roof vs. flat roof, roof patio vs. non roof patio). Define 'available roof area' and 'cool roof' and provide more detail in User Guide.
98.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	Add non-roof 'material type' examples to User Guide.
99.	Low-Rise Residential	Energy & Resilience	Passive Solar Orientation	Analyze if credit should be in Tier 1 as the language sounds voluntary. Consider mandating builder to provide memo or diagram to demonstrate how orientation has been considered/implemented OR move requirement to Tier 2 Optional.
100.	Low-Rise Residential	Energy & Resilience	Passive Solar Orientation	Add more options, if orientation is not feasible, for example: providing external shade, deep overhang, triple glazed windows etc.
101.	Low-Rise Residential	Energy & Resilience	Renewable Energy	Consider adding a minimum roof area needed to implement future PV systems.
102.	Low-Rise Residential	Energy & Resilience	Renewable Energy	Consider defining minimum performance requirement for

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				“solar ready” (ex: 75% of external lighting must be PV).
103.	Low-Rise Residential	Energy & Resilience	Building Resilience	Add two mandatory primary measures and two optional secondary measures to checklist from Durham Region Standard.
104.	Low-Rise Residential	Land & Nature	Healthy Street Trees	Define ‘Caliper’ in User Guide if landscapers are not familiar with this term.
105.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	Look to LEED or other municipalities for methodology on determining % of recycled materials.
106.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	Provide clarification on what distinguishes MP1 from MP2 (materials used outside the building vs. building materials).
107.	Low-Rise Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	Define ‘rough in’ – definition may be different based on project type or if the building is sub metered.
108.	Low-Rise Residential	Waste Management	Construction Waste Reduction	Suggested to change this requirement to more of a commitment, rather than providing documentation to the city at a site plan level.
109.	Low-Rise Residential	Waste Management	Stormwater Management	Change Central Lake Ontario Source Protection Plan to Credit Valley-Toronto and Region-Central Lake Ontario (CTC) Source Protection Plan.
110.	Low-Rise Residential	Water	Water Efficiency	Move WaterSense labeled appliances over to Tier 1. Move some items from Tier 2 into Tier 1 to create a standardized list.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				Consider adding grey water recovery as part of Tier 2.
111.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	Add Cool roof or shingles with low SRI.
112.	Low-Rise Residential	Energy & Resilience	Building Energy Performance and Emissions	Tier 1 addition: ANSI/RESNET/ICC 301-2019
113.	Low-Rise Residential	Energy & Resilience	Building Energy Performance and Emissions	Change Tier 2 to 20% OBC 2024 moving to NBC 9.36 Tier 3 or 20% Suggest 20% better or NBC Tier 4 or ASHRAE 90.2 Zone 6
114.	Low-Rise Residential	Water	Water Efficiency	Under documentation, third party verification. Add: ANSI 850
115.	Mid to High-Rise Residential & Non-Residential	Water	Stormwater Management	Consider adding different Tier 1 mandatory requirements by project type to help accommodate for site limitations.
116.	Mid to High-Rise Residential & Non-Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	City to decide if adding car share spaces can be considered as an option towards fulfillment of the EV requirement.
117.	Mid to High-Rise Residential & Non-Residential	Transportation	Bicycle Parking and Storage Facilities	Consider reducing number of parking spots required to meet this requirement (especially Tier 2).
118.	Mid to High-Rise Residential &	Energy & Resilience	Heat Island Reduction	For non-roof areas we have run into issues where there is outdoor parking (typically to support our retail), our request

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
	Non-Residential			would be to consider lowering the 50% at the Tier 1 level.
119.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Topsoil	This is typically a tough standard to achieve without the use of raised planters, we would request to look at a lower threshold.
120.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Tree Preservation and Removal Compensation	15 cm is a low threshold for Tier 1, City of Toronto is 30 cm. We would request to increase this number.
121.	Mid to High-Rise Residential & Non-Residential	Land & Nature	Common Outdoor Amenity Space	This is twice the City Centre by-law requirement, we are requesting the Tier 1 be maintained at 2 square metres per residential unit.
122.	Mid to High-Rise Residential & Non-Residential	Transportation	Electric Vehicles Including plug-in hybrid vehicles	50% is a high number, we would request the city to look at a lower tier 1 requirement.
123.	Mid to High-Rise Residential & Non-Residential	Water	Stormwater Management	5 mm is significant to accommodate on urban sites, the city should look for alternative standards based on the size and previous use (i.e., a site that use to be a parking lot and did not previously meet this standard should not be requested to achieve this upon redevelopment).
124.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	Roof – Vegetated roof not feasible in many situations. PV not always reasonable on low rise and we have grid connection issues (Cherrywood).

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
				What do you mean by Cool Roof – explain this further.
125.	Low-Rise Residential	Energy & Resilience	Urban Heat Island Reduction	Non Roof- provide examples of what you mean here in the User Guide or in the checklist.
126.	Low-Rise Residential	Energy & Resilience	Renewable Energy	HEMS is not as easy to do or need to identify what the appropriate service/system is. Clarify in the User Manual what exactly is needed.
127.	Low-Rise Residential	Energy & Resilience	Building Resilience	Reference the Durham Region document in the User Guide or give examples.
128.	Low-Rise Residential	Land & Nature	Light Pollution Reduction	Does this impact street lighting? Clarify that street lighting has its own guide through engineering.
129.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	This could be misinterpreted to mean 25% for infrastructure and 25% for landscaping materials OR it could mean 25% for both as an accumulation. Provide examples in the User Guide of what you mean by infrastructure. Would this be in the Subdivision Agreement?
130.	Low-Rise Residential	Material & Products	Recycled/ Reclaimed/ Reused Materials	TACC said they may have examples they can provide to supplement this list. FSC and SFI wood is extremely expensive. There are supply shortages as well for all lumber.
131.	Low-Rise Residential	Transportation	Electric Vehicles including plug-in hybrid vehicles	Can the grid handle a conversion to EV's. Discussion will need to occur with Elexicon.

ISDS Development Community Comments

Comment Number	Checklist (Low-Rise Residential or Mid-High Rise)	Principle	Development Feature Name	Comment
132.	Low-Rise Residential	Transportation	Electric Vehicles including plug-in hybrid vehicles	Suggest that Tier 2 also include communal based EV charging opportunities in the neighbourhood area such as was done in Mattamy's Bloom neighbourhood.
133.	Low-Rise Residential	Water	Stormwater Management	Although discussion occurred as to if the City would consider alternatives to Stormwater Management Ponds such as storage tanks. The matter was discussed with Engineering and at this point that is not being considered

From: [Whitaker, Chantal](#)
To: [Whitaker, Chantal](#)
Subject: FW: Waste Comments: Draft Pickering's draft sustainable development standards
Date: Friday, July 29, 2022 12:40:26 PM
Attachments: [image005.png](#)
[image009.png](#)
[image010.jpg](#)
[image012.jpg](#)
[image013.png](#)
[image014.png](#)
[image015.png](#)
[image016.jpg](#)
[image017.png](#)
[image004.png](#)
[image006.png](#)
[image007.png](#)
[image008.png](#)
[image019.png](#)

From: Laura Malyjasiak <Laura.Malyjasiak@Durham.ca>
Sent: June 21, 2022 1:27 PM
To: Ian McVey <Ian.McVey@durham.ca>
Cc: Angela Porteous <Angela.Porteous@durham.ca>; Carol Slaughter <Carol.Slaughter@Durham.ca>
Subject: RE: Waste Comments: Draft Pickering's draft sustainable development standards

Hi Ian-

Thanks for passing the question along! Please see below for some background on the concerns and suggested wording.

Laura

As background:

The road widths on private roads to accommodate collection vehicles are outlined in Regional Waste Bylaw 46-2011. Road widths are a factor for low rise residential but storage for the actual containers is a factor as well. Often in low-rise stacked townhouses or more traditional townhouses there is no logical place for residents to store 2 blue boxes and a curbside green bin and a garbage container. Developers that don't have extensive experience in Durham Region may not be aware that Durham has a two stream recycling system. Residents understandably do not want containers stored at their front doors/on porches and property standards by condominium corporations and municipalities may not allow the bins to remain on porches permanently although there may not be adequate space elsewhere. Also, for townhome developments that don't use a common waste collection room or building, there needs to be a defined set out location for each unit such that garbage bag limits and contamination issues can be addressed with individual residents.

Suggested wording for the checklist:

Ensure a common waste collection room has adequate storage capacity for the waste and diversion materials generated. In the absence of a common collection room (such as condominium townhome developments) ensure adequate storage capacity within each unit for storage of diversion containers and an appropriate curbside set out location for each unit.

From: Ian McVey <Ian.McVey@durham.ca>
Sent: June 21, 2022 9:47 AM
To: Laura Malyjasiak <Laura.Malyjasiak@Durham.ca>
Cc: Angela Porteous <Angela.Porteous@durham.ca>; Carol Slaughter <Carol.Slaughter@Durham.ca>
Subject: FW: Waste Comments: Draft Pickering's draft sustainable development standards

Hi Laura – please see Pickering's response and questions below. Let me know what you guys think.

Thanks!

Ian

From: McGregor, Grant <gmcgregor@pickering.ca>
Sent: June 21, 2022 9:09 AM
To: Ian McVey <Ian.McVey@durham.ca>
Cc: Whitaker, Chantal <cwhitaker@pickering.ca>
Subject: RE: Waste Comments: Draft Pickering's draft sustainable development standards

Hi Ian,

Can your Waste Division staff provide wording for the low rise residential checklist respecting household waste. Are they interested in road widths to accommodate trucks for waste pick-up?

Thanks

Grant

Grant McGregor
Project Manager, Strategic Initiatives, Sustainability | City Development Department
905.420.4660 ext. 1845 | 1.866.683.2760
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From: Laura Malyjasiak <Laura.Malyjasiak@Durham.ca>
Sent: June 17, 2022 11:56 AM
To: Ian McVey <Ian.McVey@durham.ca>
Cc: Angela Porteous <Angela.Porteous@durham.ca>; Carol Slaughter <Carol.Slaughter@Durham.ca>
Subject: Waste Comments: Draft Pickering's draft sustainable development standards

Hello Ian-

Sorry for the delayed response on this review.

On the ISDS checklists, the two types of development would benefit from the same waste management requirements to provide adequate storage for waste and recycling between collection days and be designed to minimize pests and litter. That requirement is included in the mid to high rise development design standards but not in the low rise. The low rise standard is silent on any resident waste management amenities, only mentions construction waste.

Another consideration for mid to high rise developments is storage capacity and accessibility for other diversion programs such as textiles, batteries and electronics that the Region supports but many existing buildings don't have adequate storage space to implement. A dedicated space or common room for these materials is suggested as well.

Please let me know if there are any questions or more detail is needed.

Laura

Laura Malyjasiak | Waste Management Technician
The Regional Municipality of Durham
Laura.Malyjasiak@durham.ca | 905-668-7711 extension 3013 | durham.ca/waste
My pronouns are she/her

From: Angela Porteous <Angela.Porteous@durham.ca>
Sent: May 28, 2022 12:22 PM
To: Laura Malyjasiak <Laura.Malyjasiak@Durham.ca>
Subject: Fwd: Draft Pickering's draft sustainable development standards

Please see below.

Angie

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From: Ian McVey <Ian.McVey@durham.ca>
Sent: Friday, May 27, 2022 10:01:15 AM
To: Colleen Goodchild <Colleen.Goodchild@Durham.ca>; Amanda Bathe <Amanda.Bathe@durham.ca>; Aneesah Luqman <Aneesah.Luqman@durham.ca>; Greg Pereira <Greg.Pereira@durham.ca>; Mani Rajendran <Mani.Rajendran@Durham.ca>; Paul Gillespie <Paul.Gillespie@Durham.ca>; Angela Porteous <Angela.Porteous@durham.ca>; Jacek Sochacki <Jacek.Sochacki@durham.ca>
Cc: McGregor, Grant <gmcgregor@pickering.ca>; Chantal Whitaker (cwhitaker@pickering.ca) <cwhitaker@pickering.ca>; Kilbourne, Kristy <kkilbourne@pickering.ca>; Melanie Edmond <medmond@pickering.ca>; Sandra Austin <Sandra.Austin@durham.ca>; Melanie Kawalec <Melanie.Kawalec@durham.ca>
Subject: FW: Draft Pickering's draft sustainable development standards

Dear Colleagues – on behalf of our colleagues at the City of Pickering I am sharing Draft #2 of their Integrated Sustainable Design Standards. This draft reflects input from Durham staff compiled in late March/early April. Please take a look, and provide any additional feedback that you might have by June 9th.

Cheers,
Ian

Ian McVey | Manager of Sustainability
The Regional Municipality of Durham
Office of the Chief Administrative Office, Strategic Initiatives Division
ian.mcvey@durham.ca | 905-668-7711 extension 3803 | durham.ca
My pronouns are he / him

From: [Whitaker, Chantal](#)
To: [Whitaker, Chantal](#)
Subject: FW: Comment on Draft 2 from FLAP FW: Sustainable Development Guidelines 2nd Draft
Date: Friday, July 29, 2022 12:35:57 PM
Attachments: [image003.jpg](#)
[image004.png](#)
Importance: High

From: Michael Measure <executivedirector@flap.org>
Sent: Tuesday, June 21, 2022 11:09 AM
To: Standards <Standards@pickering.ca>
Subject: Sustainable Development Guidelines 2nd Draft

To whom it may concern,

I would like to offer my comments to the 2nd draft of your *Integrated Sustainable Design Standards* under LN2. They are as follows:

- **Low-rise Residential - recommend including bird-friendly for low-rise residential! The Town of Ajax include low-rise residential developments in their bird-friendly requirements.**
- **Mid to High-rise Residential - be sure to comply with CSA A460:19 Bird-Friendly Building Design standard.**

Mandatory

For residential and non-residential buildings, use a combination of bird friendly design treatments for a minimum of **90%** of all exterior glazing within the first **16 m** of the building above grade or the height of the mature tree canopy, **whichever is greater** (including all balcony railings, clear glass corners, parallel glass and glazing surrounding interior courtyards and other glass surfaces).

Optional – would recommend removing optional. Toronto removed their Bird-Friendly Tier 2 Optional because no one ever adopted it.

- **Documentation – be sure to comply with CSA A460:19 Bird-Friendly Building Design standard**
- **Building Green - User Guide**

Appendix A. Glossary re *Bird Friendly Design Guidelines* – **best to instead point to** [CSA A460:19 Bird-Friendly Building Design standard](#).

I hope you find this information useful. Please do not hesitate to contact me directly should you have any questions or concerns regarding my recommendations.

Respectfully,
Michael



Michael Measure

Executive Director | Cofounder |
BirdSafe® Building Consultant
FLAP Canada
31 Adelaide St E, PO Box 430
Toronto, ON CANADA M5C 2J5
T: 416-366-3527
C: 905-649-9223
executivedirector@flap.org

flap.org | birdsafeca.com | birdmapper.org/app | globalbirdrescue.org | flapapp.ca | twitter.com/birdcrash_bot



No building is truly 'green' unless it's bird-safe.



June 14, 2021

BY E-MAIL ONLY (gmcgregor@pickering.ca)

Grant McGregor
Project Manager, Strategic Initiatives, Sustainability
City Development Department
One The Esplanade
Pickering, ON L1V 6K7

Dear Mr. McGregor:

Re: City of Pickering Draft 2 Integrated Sustainable Design Standards

Toronto and Region Conservation Authority (TRCA) appreciates the opportunity to continue to provide feedback on the City of Pickering’s Integrated Sustainable Design Standards (ISDS) Checklists. We understand that this material was created to assist in evaluating development applications through best practices and green design technologies. TRCA staff commends the City for this initiative in pursuit of a more sustainable and resilient community.

TRCA staff provide our comments as a public commenting body under the *Planning Act* delegated to represent the provincial interest in natural hazards, a watershed-based resource management agency, and as a service provider to our municipal partners in accordance with memorandums of understanding. In these roles, and as stated in “A Made-In-Ontario Environment Plan,” we work in collaboration with municipalities and stakeholders to protect people and property from flooding and other natural hazards, and to conserve natural resources.

GENERAL COMMENTS

Overall, the ISDS checklists are comprehensive and encapsulate good targets to ensure a healthy and thriving natural environment. We appreciate creation of two separate checklists for low-rise projects and mid- to high-rise residential and non-residential projects as this recognizes how impacts may vary depending on the type and scale of built form. Further, we appreciate inclusion of a User Guide providing additional context and an overview on how to read the checklists.

We note that some categories that were featured in the first draft checklist (e.g., Equity and Local Economy, Travel and Transportation, etc.) appear to have been removed from the second draft. Some targets under these categories would provide important goals and we suggest the City consider including them.

DETAILED COMMENTS

Low Rise Residential

Energy and Resilience (ER)

1. ER5 (Building Resilience) – We appreciate the mandatory requirement to address flooding in Tier 1. However, we suggest providing additional details or examples of what these requirements might be. For instance, raising new openings (e.g., doors, windows, walkouts, etc.) above the regulatory flood elevation, installation of backwater valve or sump pump, etc. TRCA staff would be happy to assist in this regard.

Land and Nature (LN)

2. LN3 (Planting of Native or Non-Invasive Species) – We suggest distinguishing between areas within the vegetation protection zone / buffer of natural heritage systems / features where planting of 100% native species should be required (as demonstrated through landscape/planting plans), and areas outside these setbacks where a 50% target of native or non-invasive species is required.
3. LN5 (Tree Preservation and Removal Compensation) - Restoration/replacement should represent a net gain. Seeding/planting does not guarantee tree survival, so a higher ratio, e.g. 3:1 should be sought. For more information on compensation strategies, we recommend referring to [TRCA's Guideline for Determining Ecosystem Compensation](#). At a minimum, Tier 1 should represent no net loss, and Tier 2 should be a net gain.
4. LN7 (Natural Heritage Feature and Open Space Enhancement) - We appreciate the modifications to this item. However, to strengthen this goal, we suggest including associated setbacks/buffers in addition to key natural heritage features (KNHFs) and key hydrological features (KHF).
 - a. Tier 1 – We support the goal of protecting KNHFs/HSFs but note that provincial policy requires protection of these features. As worded, the alternative option to compensate for the loss of ecosystem functions due to development impacts may unintentionally promote this option. If compensation is to be considered, the checklist should stress that it *may* be considered as a last resort. We invite the City to reference TRCA's Guideline for Determining Ecosystem Compensation as linked above.

Water (W)

5. W1 (Stormwater Management) – This should read, CTC Source Protection Plan. The wording could also be revised, e.g., "Demonstrate applicable groundwater recharge targets are met based on site-specific water balance/budget studies, in accordance with the CTC Source Protection Plan."

Mid-to High-Rise Residential & Non-Residential

Land and Nature

6. LN4 (Planting of Native and Non-Invasive Species) - We suggest making a clear distinction between areas near natural heritage systems and other areas as landscape plans for natural areas should require 100% native species.
7. LN6 (Tree Preservation and Removal Compensation) - Restoration/replacement should represent a net gain. Seeding/planting does not guarantee tree survival, so a higher ratio, e.g. 3:1 should be sought. For more information on compensation strategies, we recommend referring to [TRCA's Guideline for Determining Ecosystem Compensation](#). At a minimum, Tier 1 should represent no net loss, and Tier 2 should be a net gain.
8. LN9 (Natural Heritage Features and Open Space Enhancement) – We appreciate the modifications to this item. In order to strengthen this overall goal, we suggest including associated setback/buffers in addition to key natural heritage and key hydrological features.

- a. Tier 1 - This is already required by provincial policy and may have the unintended consequence of seeming to invite development and site alteration within KNHFs/HSFs. If compensation is to be considered, it must be stressed as a last resort, and would benefit from referencing [TRCA's Guideline for Determining Ecosystem Compensation](#).

Water (W)

9. W1 (Stormwater Management – This should read, CTC Source Protection Plan. The wording could also be revised, e.g., "Demonstrate applicable groundwater recharge targets are met based on-site specific water balance/budget studies, in accordance with the CTC Source Protection Plan."
10. W1 (Stormwater Management) – While we staff appreciate the optional (Tier 2) requirement to replicate natural site hydrology processes, we note that section 11.73 i) of the City's Official Plan (OP) includes requirements for a feature-based water balance study in support of subdivision or site plan approval demonstrating that negative impacts are minimized. Additionally, the City's SWM Design Guidelines (4.3) encourage the maintenance of natural water balance where soil conditions permit. It would be our preference that the City include a Tier 1 requirement for addressing feature-based water balance to be aligned with the OP policy and avoid impacts to hydrologic functions. TRCA developed guidelines to help assess the need for water balance studies and protect the hydrology of natural features such as wetlands, (e.g., Wetland Water Balance Risk Evaluation, Water Balance for Protection of Natural Features). These guidelines could help inform ISDS requirements and be references, as appropriate. For more information on feature-based water balance, please see TRCA's website or contact the undersigned.

We trust these comments to be of assistance. Should you have any questions or require any clarifications, please contact the undersigned by email at jeff.thompson@trca.ca or by telephone at (437) 880-2327.

Sincerely,



Jeff Thompson, M. Pl., MCIP, RPP
Senior Planner, Policy

Cc:

Steve Heuchert, Associate Director, Development Planning and Permits, TRCA
Mary-Ann Burns, Senior Manager, Provincial and Regional Policy, TRCA
Sharon Lingertat, Senior Manager, Infrastructure Planning and Permits, TRCA
Brad Stephens, Senior Manager, Planning Ecology, TRCA
Dan Hipple, Senior Manager, Water Resources Engineering, TRCA

Sent Via email to:
Susan Cassel, City Clerk
scassel@pickering.ca



June 28, 2022
Mayor David Ryan and Council
City of Pickering
1 The Esplanade S
Pickering, ON
L1V 6K7

Dear Mayor and Council:

RE: Proposed Pickering Integrated Sustainable Design Standards

The Regional Municipality of Durham

Office of the Regional Chair and Chief Administrative Officer

605 Rossland Rd. E.
Level 5
PO Box 623
Whitby, ON L1N 6A3
Canada

905-668-7711
1-800-372-1102

durham.ca

John Henry
Regional Chair and CEO

Elaine Baxter-Trahair
Chief Administrative Officer

We are pleased to provide this letter in support of the City of Pickering's proposed Integrated Sustainable Design Standards. Incorporating energy efficiency and environmental performance measures into the design of new buildings is a prime opportunity to address climate change while re-building our local economy.

As you know, Durham Regional Council endorsed the Durham Community Energy Plan (DCEP) in April 2019. The DCEP maps out a Low Carbon Pathway to accelerate the transition to a clean energy economy, while simultaneously achieving multiple economic, environmental, and social benefits. The Low Carbon Pathway scenario is composed of 22 ambitious actions through six detailed implementation strategies, designed to achieve Durham Region's community GHG reduction target of 80% by 2050. These actions include new building energy efficiency standards, extensive building retrofit programs, installation of heat pumps, photovoltaic and wind generation, energy storage, electrification of personal, commercial and transit vehicles, land-use changes and industrial efficiencies.

A key implementation strategy is the development of a Durham Green Standard to enhance the environmental performance of new buildings.

Through technology and market advancement, it is now possible and financially feasible to construct buildings and communities that generate as much energy as they use (i.e. net zero energy). As Pickering and Durham Region are projected to experience significant housing growth by 2050, now is the time for municipalities to lead by example.

Simply put, we will not achieve our collective greenhouse gas reduction targets or broader sustainability objectives through business-as-usual approaches to new development. Measures such as Pickering's proposed sustainable design standards will help increase energy efficiency, enhance community resiliency, stimulate innovative clean technology, and support the reduction in GHG emissions.

As we turn our attention to post-COVID recovery with a focus on rebuilding an environmentally and socially sustainable economy, we commend the City of Pickering for their proactive leadership with the development of the Sustainable Design Standards and are pleased to offer our support.

Sincerely,



John Henry
Regional Chair and CEO



Elaine Baxter-Trahair
Chief Administrative Officer



Town of Whitby
Office of the Mayor
575 Rossland Road East
Whitby, ON L1N 2M8
whitby.ca

Don Mitchell
Mayor
905.430.4300 x2203
mayor@whitby.ca



May 27, 2022

Mayor Dave Ryan and Pickering City Council
City of Pickering
1 The Esplanade
Pickering, ON L1V 6K7

Re: Pickering Sustainable Development Standards

Dear Mayor Ryan and Members of Pickering City Council,

The Town of Whitby is writing to express its support for the proposed Pickering Sustainable Development Standards.

As experienced through the Whitby Green Standard, we can attest that green development standards are instrumental in ensuring that developers provide sufficient, appropriate, and efficient infrastructure to meet the unique needs of the community, while ensuring an immediate response to the global concern of climate change.

The Town of Whitby particularly wants to congratulate Pickering for proposing a tiered approach within its Sustainable Development Standards. This approach aligns with the work in place as part of the Whitby Green Standard, and it also provides both flexibility for developers and certainty about long-term expectations for advancing building performance.

These criteria were developed in response to the recommendations from the International Panel on Climate Change in relation to global emission reduction. We feel these same targets apply to all municipalities across Canada. Alignment on emissions and energy performance ensures we are on track to meeting climate change targets, and helps the development community with a consistent approach across multiple jurisdictions, making it easier for them to be implemented and therefore successful.

Over the next 30 years, municipalities will be faced with a number of challenges. Most of the buildings that are being built in our communities today, will be here in 2050 and beyond. Through our alignment in implementing green development standards, we will

ensure that Whitby, Ajax and now Pickering are leading by example and responding to climate change while also helping to avoid expensive retrofit costs for residents in the future.

Congratulations to the City of Pickering for developing this tool and improving the quality of living for our residents and the environment for years to come.

Regards,

A handwritten signature in black ink that reads "Don Mitchell". The signature is written in a cursive, flowing style.

Don Mitchell
Mayor, Town of Whitby

cc:
Susan Cassel, City Clerk,
City of Pickering

Chantal Whitaker, Manager, Sustainability & Strategic Environmental Initiatives,
City of Pickering

Grant McGregor, Project Manager, Strategic Initiatives,
City of Pickering

Sarah Klein, Director, Strategic Initiatives,
Town of Whitby

Jade Schofield, Project Manager Sustainability & Climate Change,
Town of Whitby



Pickering City Council,
One the Esplanade,
Pickering, Ontario,
L1V 6K7

June 7th, 2022

Dear Pickering City Council,

We at Clean Air Partnership are writing in support of the City of Pickering's proposed Integrated Sustainable Design Standards.

Clean Air Partnership is a charitable environmental organization that enables municipalities to take bold climate action through network facilitation, research, and action. We have supported many other Ontario municipalities with similar development standards, including Toronto, Vaughan, Brampton, Richmond Hill, Whitby, and Halton Hills, among many others.

In requiring a tiered, mandatory standard, Pickering is joining leading municipalities in demonstrating strong policy innovation that provides a meaningful pathway from climate concern towards tangible outcomes. This is consistent with the recognition of urgency and commitment to address the climate challenge, as declared by the motion to declare a climate emergency in Pickering in December 2019. This action is critical for both ensuring accountability for the City of Pickering and setting a standard for all Ontario municipalities.

Green standards for new developments are a critical implementation and policy tool for municipalities. By using tiered development standards, municipalities can more effectively achieve their Official Plan objectives, their greenhouse gas reduction targets, and population health goals, all while stimulating the local economy.



We are particularly supportive of the tiered approach in the proposed Integrated Design Standards. These standards will reduce utility costs for home and building owners and reduce infrastructure costs for the City. The Integrated Design Standards are an important climate solution and will be critical to meeting the City's climate targets. In addition to the environmental benefits, a tiered approach with mandatory compliance is proven to guarantee minimum standards while also encouraging competition and innovation in the building industry. Furthermore, it will create high quality, energy efficient housing for Pickering residents, especially as the City increases its standards over time.

Congratulations to the City of Pickering for developing its Integrated Sustainable Design Standards and improving the quality of housing and environment outcomes for years to come. We look forward to tracking the results of this program and sharing the lessons learned with many other Ontario municipalities.

Kind regards,

Gabriella Kalapos, Executive Director

Directive Memorandum

May 27, 2022

To: Kyle Bentley
Director, City Development & CBO

From: Susan Cassel
City Clerk

Subject: Direction as per Minutes of the Meeting of City Council held on
May 24, 2022

Feasibility of a Green Roof By-law

Council Decision

Resolution #914/22

WHEREAS in recognition of the growing impacts of climate change, the City of Pickering declared a climate emergency on December 16, 2019;

And Whereas, climate change impacts occur in both the natural environment and the built environment;

And Whereas, climate change impacts can adversely affect the resilience of municipal infrastructure such as roads, sewers and watermains, leading to higher maintenance and/or replacement costs which must be borne by taxpayers;

And Whereas, the challenges posed by climate change on municipal infrastructure requires alternative methods to try and minimize impacts;

And Whereas, green roof technology is a proven, well-established technology that has been implemented by many municipalities as part of a climate change strategy;

And Whereas, green roof technology provides environmental benefits such as reduced flood flows, improved water quality, creation of habitat and reduced 'heat island effect', among others;

And Whereas, green roof technology provides economic benefits such as reduced energy consumption and energy costs for heating and cooling;

And Whereas, the green roof industry is firmly established in the Greater Toronto Area, with readily accessible materials and expertise;

And Whereas, a Green Roof By-law has been successfully implemented by the City of Toronto since 2009, and this By-law has been accepted and adopted by the development industry;

Now therefore be it resolved that the Council of The Corporation of the City of Pickering directs:

That staff are to investigate the feasibility of establishing a by-law requiring the construction of green roofs, or of alternative roof surfaces that achieve similar levels of performance to green roofs, within the City of Pickering, and report back to Council no later than September 6, 2022.

Please take any action deemed necessary.

Susan Cassel

Copy: Chief Administrative Officer

Directive Memorandum

November 26, 2021

To: Kyle Bentley
Director, City Development & CBO

From: Susan Cassel
City Clerk

Subject: Direction as per Minutes of the Meeting of City Council held on
November 22, 2021

Director, City Development & CBO, Report PLN 43-21
Pickering Integrated Sustainable Design Standards
City of Pickering

Council Decision

Resolution #738/21

1. That Council approve the hiring of Urban Equation Corp. to update and convert the 2007 Sustainable Development Guidelines into a tiered Integrated Sustainable Design Standard in accordance with Purchasing Policy 10.03 (c);
2. That the Letter Proposal submitted by Urban Equation Corp. for Professional Consulting Services to prepare a tiered Integrated Sustainable Design Standard for the City in the amount of \$84,850.00 (HST excluded), provided as Appendix I to Report PLN 43-21, be accepted;
3. That the total gross project cost of \$106,604.00 (HST included), and the total net project cost of \$96,000.00 (net of HST rebate) be approved;
4. That Council authorize the Director, Finance & Treasurer to finance the total net project cost from the Consulting & Professional 2021 Council Approved Current Budget Account 502230.10115 as follows:
 - a) The sum of \$86,000.00 from The Atmospheric Fund; and,
 - b) The sum of \$10,000.00 from The Regional Municipality of Durham;
5. That City staff be authorized to sign any agreements between the City and Urban Equation Corp. in a form satisfactory to the Director, City Development; and,
6. That the appropriate staff of the City of Pickering be authorized to take the necessary actions as indicated in this report.

Please take any action deemed necessary.

Susan Cassel

Copy: Chief Administrative Officer
Director, Finance & Treasurer