SUSTAINABLE NEW COMMUNITIES PROGRAM

Guidebook

BRAMPTON

MARKHAM

Richmond Hill

VAUGHAN

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Over the last decades, cities and towns across the Greater Toronto and Hamilton Area (GTHA) have experienced significant and rapid growth. Municipalities play a pivotal role in responsibly managing growth and facilitating the development of communities that are environmentally, social, and economically sustainable.

To foster more sustainable new communities the Cities of Brampton, Vaughan, Richmond Hill, and Markham collaboratively offer a set of tools to evaluate and score the sustainability performance of development proposals, and encourage builders/developers to achieve a minimum level of performance. This includes:

a) **Sustainability Metrics (Metrics):**
A set of measures to encourage and evaluate the sustainability performance of new development, organized around the categories of Built Environment, Mobility, Natural Environment and Open Space, and Infrastructure and Building. Each of the over 120 Sustainability Metrics available to choose from are assigned a point value, and the combination of Metrics achieved in a development proposal results in a *Sustainability Score (Score)*. Development proponents are able to select a combination of Metrics to achieve the minimum required Score. This enables the proponent to choose Metrics that best suit their individual property, project, and level of sustainability aspiration.

b) **Sustainability Assessment Tool (SAT):**
A digital tool that development proponents use to calculate the Sustainability Score by identifying the Metrics achieved in their development proposal.

c) **Sustainability Score Thresholds (Thresholds):**
Performance levels achieved by the Sustainability Scores of a development proposal, and categorized as Bronze, Silver, or Gold.

The Sustainable New Communities Program (SNCP) is an important instrument to help implement both Provincial and Municipal land use planning, sustainability, and climate change goals and objectives. It facilitates creating healthy, complete, and sustainable communities that support quality of life for residents of all ages and abilities, energy efficiency and lower Greenhouse Gas (GHG) emissions, more efficient use of land and infrastructure, local economic development, and cultural and natural heritage conservation. The Program offers flexibility that enables development proponents to choose the sustainability approaches that best suits their project. It also aligns with the Region of Peel's Healthy Development Framework and associated Healthy Development Assessment.

This Sustainable New Communities Program Guidebook is a living document that will be updated from time to time. Please refer to the Program webpage of the respective municipality for the latest version.

SUBMISSION REQUIREMENTS

As part of a complete planning application submission, applicable development proposals are required to achieve a minimum Bronze Sustainability Score. In addition, as of January 1, 2023, development proposals must achieve the "Good" level of building energy and GHG emissions performance of Metric IB-12.

WHAT TYPE OF APPLICATIONS REQUIRED A SUSTAINABILITY SCORE?

- All Block Plans/Precinct Plans
- Plans of Subdivision of 10 more residential units
- "Full" Site Plans
- Zoning By-law amendments to facilitate any of the above

WHAT TYPE OF APPLICATIONS ARE EXEMPT?

- Plans of Subdivision of 9 residential units or less
- "Limited" and "Basic" Site Plans
- Plans of Subdivision for the purpose of subdividing large blocks of land for the sole purpose of creating lots for future employment, industrial, commercial, or institutional development, and which will require subsequent Site Plan approval.

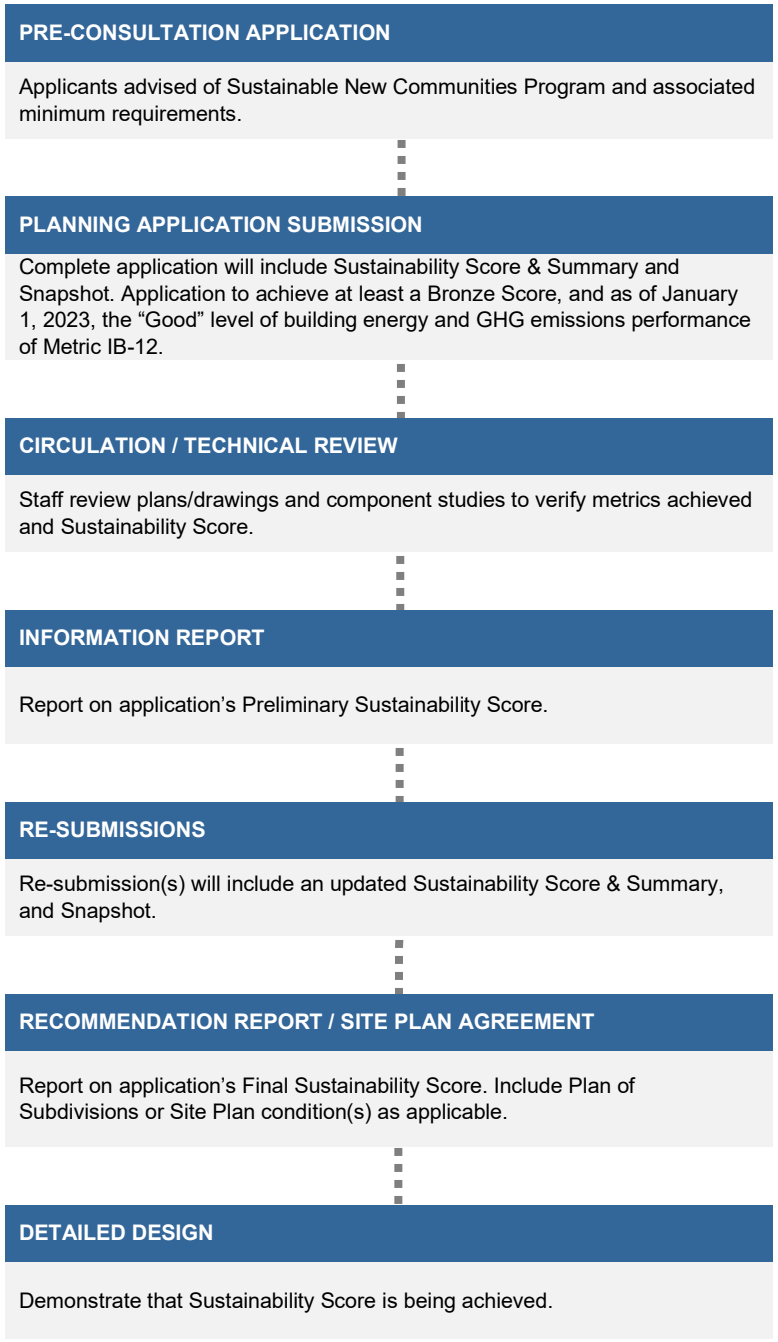
DOES IT APPLY TO ZONING BY-LAW AMENDMENTS?

Yes. The Sustainability Score will be based on the preliminary information available at the Zoning By-law amendment stage. The score will then be refined when more details become available as part of the associated Plan of Subdivision and/or Site Plan applications.

IS THERE A MINIMUM REQUIRED SCORE?

Yes. Applications must achieve, at minimum, a Score that falls within the Bronze Threshold. In addition, as of January 1, 2023, development proposals must also achieve the "Good" level of building energy and GHG emissions performance of Metric IB-12.

	Bronze	Silver	Gold
Site Plan	**41** - 61	62 - 75	76 - 241
Draft Plan	**27** - 40	41 - 49	50 - 194
Block Plan	**14** - 20	21 - 25	26 - 76



The Sustainability Metrics are organized into four main categories: Built Environment, Mobility, Natural Environment and Parks, Infrastructure and Buildings. A new category, Innovation, has also been added.

Built Environment (BE)

The indicators for Built Environment speak to how we inform places and connections within the development. The intensity and diversity of land uses influences decisions on where we live, work, and how we move around the community. A mix of housing types, amenities, and employment and live-work opportunities located within walking distance provides the opportunity for residents to meet their day-to-day needs without reliance on the private automobile. Further provision for life-cycle housing and accessible buildings allows residents to establish and remain in their communities throughout the various periods of their lives.

Mobility (MB)

The indicators of Mobility identify how a variety of transportation options must be available to residents to carry out their daily lives within and beyond the community. A sustainable community is one that encourages physical activity, facilitates active transportation, and supports public transit in place of automobile dependence. The most vulnerable population groups (children, elderly, disabled, and low income individuals) are the most affected by choices available to them for mobility and access to services and amenities. Designing a safe, convenient, and accessible environment for walking and cycling encourages these modes of transportation. Emphasis on mobility and active transportation not only reduces energy use and GHG emissions, but contributes directly to improving public health and the quality of life of residents as well.

Natural Environment and Parks (NE)

The natural heritage, urban forest, and the open space system are essential components of a healthy, sustainable community. The preservation and enhancement of the natural heritage system ensures the health of the environment and supports recreational and cultural opportunities, as well as climate change mitigation and adaptation in a community. Secondly, ensuring residents have convenient access to a connected and diverse range of natural heritage features, parks, and open space offers opportunities for improved public health and connections within the community.

Infrastructure and Buildings (IB)

The Infrastructure and Buildings indicators identify the means to maximize energy and water conservation, improve energy efficiency, and minimize GHG emissions and the consumption of non-renewable resources. New buildings and communities should be designed with a focus on reducing water, waste, and energy use. Since human activity is the principal cause of elevated levels of greenhouse gases and demands on energy, water, and waste systems, the measures focus on means of reducing this impact on both the built and natural environments.

Innovation (IN)

The Innovation indicator is intended to encourage true innovation resulting in significant sustainability benefit. This new theme allows flexibility to propose innovative sustainability measures that are not specifically captured but which provide a measurable sustainability benefit. This flexibility is intended to allow users to think progressively and outside of the box when proposing sustainability measures for their development proposals.

Indicators

The following are the performance indicators organized by category. Each performance indicator has associated Metrics that are allocated a point value. The Metrics reflect characteristics of a sustainable community and are designed to outline the required measures or standards for each category to ensure that the overall objectives of the Sustainability Metrics are achieved.

BUILT ENVIRONMENT	MOBILITY	NATURAL ENVIRONMENT AND PARKS
• BE-1: Proximity to Amenities • BE-2: Mixed-Use Development • BE-3: Housing Diversity • BE-4: Community and Neighbourhood Scale • BE-5: Cultural Heritage Conservation • BE-6: Urban Tree Canopy and Shaded Walkways/Sidewalks • BE-7: Salt Management • BE-8:Carshare and Carpool Parking • BE-9: Surface Parking Footprint • BE-10: Electric Vehicle Charging Stations	• MB-1: Block Length • MB-2: School Proximity to Transit and Cycling Network • MB-3: Intersection Density • MB-4: Walkable Streets • MB-5: Pedestrian Amenities • MB-6: Bicycle Parking • MB-7: Trails and Cycling Infrastructure • MB-8: Active Transportation Network • MB-9: Distance to Public Transit • MB-10: Traffic Calming	• NE-1: Tree Conservation • NE-2: Soil Quantity & Quality for New Trees • NE-3: Healthy Soils • NE-4: Natural Heritage Connections • NE-5: Natural Heritage System Enhancements • NE-6: Supporting Pollinators • NE-7: Dedicated Fruit/Vegetable Garden Space • NE-8: Park Access • NE-9: Stormwater Quantity • NE-10: Stormwater Quality • NE-11: Potable Water Use • NE-12: Multi-purpose Stormwater Management

INFRASTRUCTURE AND BUILDINGS	INNOVATION
• IB-1: Buildings Designed/Certified Under Green Rating System • IB-2: Accessibility for Multi-Unit Dwellings • IB-3: Building Accessibility (Barrier Free Entry/Egress) • IB-4: Embodied Carbon of Building Materials: Supplementary Cementitious Materials • IB-5: Embodied Carbon of Building Materials: Life Cycle Assessment • IB-6: Embodied Carbon of Building Materials: Material Efficient Framing • IB-7: Heat Island Reduction: Non-Roof • IB-8: Heat Island Reduction: Roof • IB-9: Solar Gain Control • IB-10: Solar Readiness • IB-11: Energy Strategy • IB-12: Building Energy Efficiency, GHG Reduction, and Resilience • IB-13: Rainwater and Greywater Use • IB-14: Back-Up Power • IB-15: Extreme Wind Protection for Ground Oriented Development • IB-16: Sub-Metering of Thermal Energy and Water • IB-17: Light Pollution Reduction • IB-18: Bird-Friendly Design • IB-19: Solid Waste	• IN-1: Innovation

BUILT ENVIRONMENT

<table>
<tr><th colspan="5">BE-1: PROXIMITY TO AMENITIES</th></tr>
<tr><td>Intent:</td><td colspan="4">To encourage development within and near existing amenities, create more walkable communities, and reduce auto dependency.</td></tr>
<tr><td rowspan="2">Applicable to:</td><td colspan="2">☒ Block Plan</td><td>☒ Draft Plan of Subdivision</td><td>☒ Site Plan</td></tr>
<tr><td colspan="2">☒ Residential</td><td>☒ Mixed Use</td><td>☒ Industrial, Commercial, Institutional</td></tr>
<tr><td></td><td>Points</td><td colspan="2">Requirement</td><td>Documentation</td></tr>
<tr><td>Good:</td><td>1 point</td><td colspan="2">3 or more amenities are within 800 meters (equivalent to a 10 minute walk) of 75% of dwelling units.</td><td rowspan="2">In the Community Design Guidelines (Block Plan), Community Design Guidelines/ Urban Design Brief (Draft Plan), or Amenities Context Map (Site Plan), provide a map of the subject site with the proposed development overlaid and:
Highlight the area that accounts for 75% of the Dwelling Units (DU).
Identify the approximate geographic center of the development, and the 800 meter and/or 400 meter radius from it.
Identify the amenities within 800 meters and/or 400 meters radius from the geographic center.
Note:
Amenities include: library, public park and outdoor recreational facility, public community/recreation centre, general retail, bank, place of worship, convenience store, restaurant, food retail (grocery store, supermarket), licensed adult/senior care, licensed child care, theatre, salon/barber shop, hardware store, laundromat, medical office, dental office, post office, pharmacy, school, fitness center, and museum.
Other amenities not specifically listed above may also be considered, where permitted by the municipality, provided that they meet the intent of the metric.
One building can be considered to host multiple amenities (e.g. pharmacy included in a grocery store).
If amenities are included in the proposed development but have yet to be defined, use the zoning by-law coupled with best judgment (based on size, location and planning allocations) to assume the expected end-use of the planned amenity.</td></tr>
<tr><td>Great:</td><td>+2 additional points (total 3 points)</td><td colspan="2">3 or more amenities are within 400 meters (equivalent to a 5 minute walk) of 75% of dwelling units.</td></tr>
<tr><td>References:</td><td colspan="4">Thinking Green (2018): 20, 21, 22 (Draft Plan of Subdivision)
LEED ND (v4) SLL: Housing and Jobs Proximity
LEED ND (v4) NPD: Mixed-Use Neighborhoods; NPD: Access to Civic and Public Space; NPD: Access to Recreation Facilities; NPD: Neighborhood Schools
Community Wellbeing Framework (2018): Economic Domain, Complete Community 2A
Whitby Green Standard v1 (2020): HH.V.3 (Site Plan)</td></tr>
</table>

BE-2: MIXED-USE DEVELOPMENT			
Intent:	To support locating housing, services, recreation, schools, shopping, jobs, work space, and other amenities on the same lot or block to facilitate wise use of land, make it easier for people to walk or cycle to these destinations, and reduce auto dependency.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☐ Residential	**☒ Mixed Use**	☐ Industrial, Commercial, Institutional

	Points	Requirement	Documentation
Good:	1 point	A mix of uses is provided on the same lot or block.	On the Block Plan, Draft Plan, or Site Plan Drawing identify: • The mix of uses within the proposed development.
References:	• LEED ND (v4) NPD: Mixed-Use Neighborhoods; NPD: Compact Development • Community Wellbeing Framework (2018): Economic Domain, Local Economy 4A		

BE-3: HOUSING DIVERSITY			
Intent:	To encourage a range of housing options and facilitate aging in place.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	☐ Industrial, Commercial, Institutional

	Points	Requirement	Documentation
Good (*):	**Ownership Type**		In the Block Plan, Draft Plan, or Site Plan Drawing identify: • The percent (%) of the Ownership Type, Housing Type, and/or Accommodation Type included in the proposed development. • The total percent (%) by category should each add up to 100%. On the Block Plan, Draft Plan, or Site Plan Drawing identify: • Ownership Types • Housing Types, and/or • Accommodation Types Note: • (*) Good level metric under Ownership is not applicable for Block Plans. • For the definition of affordable housing, refer to the applicable Regional Official Plan, Municipal Official Plan, or Provincial Policy. • Where there is a conflict between Provincial Policy and a municipal Official Plan, Provincial policy takes precedence.
	2 points	At least 10% of affordable/low income or purpose-built rental housing is provided.	
Good:	**Housing Type**		
	1 point	Two of the housing typologies listed below are provided: • Single detached, • Semi detached, • Townhouse, • Mid-rise, • High-rise, and/or • Additional dwelling unit within a single detached, semi detached or townhouse dwelling (e.g. second unit, secondary suite).	
Great:	+1 additional point (total 2 points)	Three of the housing typologies listed below are provided: • Single detached, • Semi detached,	

		• Townhouse, • Mid-rise, • High-rise, and/or Additional dwelling unit within a single detached, semi detached or townhouse dwelling (e.g. second unit, secondary suite).
Excellent:	+ 1 additional point (total 3 points)	Four or more of the housing typologies listed below are provided: • Single detached, • Semi detached, • Townhouse, • Mid-rise, • High-rise, and/or • Additional dwelling unit within a single detached, semi detached or townhouse dwelling (e.g. second unit, secondary suite).
	Accommodation Type	
Good:	1 point	Two accommodation types listed below are provided: • Live-work, • Purpose-built rental, • Studio, • 1 bedroom, and/or • 2 or more bedrooms.
Great:	+1 additional point (total 2 points)	More than two accommodation types below are provided: • Live-work, • Purpose-built rental, • Studio, • 1 bedroom, and/or • 2 or more bedrooms.
References:	• Thinking Green(2018): 29 (Draft Plan of Subdivision); 33 (Site Plan) • LEED ND (v4) NPD: Housing Types and Affordability • Community Wellbeing Framework (2018): Economic Domain, Affordability 1A • Whitby Green Standard v1 (2020): ELE1.1, ELE.V.1, ELE.V.2 (Draft Plan of Subdivision); ELE1.1, ELE 1.2, ELE.V.1, ELE.V.2 (Site Plan)	

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<tr><th colspan="5">BE-4: COMMUNITY AND NEIGHBOURHOOD SCALE</th></tr>
<tr><td>Intent:</td><td colspan="4">To focus retail, personal, and community services within community core areas (neighbourhood centre and mixed-use node) so that people can meet their daily needs within their communities.</td></tr>
<tr><td rowspan="2">Applicable to:</td><td colspan="2">☒ Block Plan</td><td>☒ Draft Plan of Subdivision</td><td>☐ Site Plan</td></tr>
<tr><td colspan="2">☒ Residential</td><td>☒ Mixed Use</td><td>☐ Industrial, Commercial, Institutional</td></tr>
<tr><td></td><td>Points</td><td colspan="2">Requirement</td><td>Documentation</td></tr>
<tr><td rowspan="2">Excellent:</td><td>3 points</td><td colspan="2">The proposed community form is based on the hierarchy listed below:
Community: contains a mixed use node central to the cluster of neighbourhoods that should include higher residential densities, retail, and employment opportunities, and served by public transit.</td><td rowspan="2">In the Community Design Guidelines (Block Plan) or Community Design Guidelines/ Urban Design Brief (Draft Plan) include a figure of the proposed development and its surrounding area that identifies the:
Community mixed use node and the cluster of surrounding neighbourhoods.
Uses and densities within the mixed use node.
Neighbourhood Centre and 400 meter radius.
Uses and densities within the Neighbourhood Centre.</td></tr>
<tr><td>3 points</td><td colspan="2">The proposed community form is structured to contain:
Neighbourhood(s): defined by 400 meter radius (5 minute walk) from the neighbourhood centre to the neighbourhood perimeter with a distinct edge or boundary defined by other neighbourhoods or larger open spaces.
AND
Neighbourhood Centre(s): a distinct centre with a compatible mix of uses that should include a neighbourhood park, high or medium residential densities, and retail or community facilities (e.g. school, library).</td></tr>
<tr><td>References:</td><td colspan="4">Region of Peel, Health Background Study Development of a Health Background Study Framework, May 2011.
Whitby Green Standard v1 (2020): TT.V.3 (Draft Plan of Subdivision).</td></tr>
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BE-5: CULTURAL HERITAGE CONSERVATION			
Intent:	To conserve cultural heritage resources, including built heritage resources (listed or designated), cultural heritage landscapes (listed or designated), and archaeological resources.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Excellent:	3 points	The cultural heritage resource is conserved, and no elements that contribute to its cultural heritage value are demolished, removed, or relocated (excluding temporary removal for restoration purposes).	In the Cultural Heritage Impact Assessment, Heritage Conservation Plan and/or other documents acceptable to the municipality, provide: • An outline of the cultural heritage attributes that contribute to the cultural heritage value and confirm that no portions of the resource that contribute to its cultural heritage value are to be demolished, removed, or relocated. Note: For the purposes of this metric, “conserved” means: • The identification, protection, management and use of cultural heritage resources in a manner that ensures their cultural heritage value or interest is retained under the Ontario Heritage Act. • This may be achieved by the implementation of recommendations set out in a Cultural Heritage Impact Assessment, Heritage Conservation Plan, Archaeological Assessment, and/or other documentation accepted by the municipality. • Mitigated measures and/or alternative development approaches can be included in these plans and assessments. Conservation and conserve have corresponding meanings. • The Standards and Guidelines is the guiding document for the conservation of cultural heritage resources in Canada.
Great (*):	2 points	A portion of the cultural heritage resource is retained, and the integrity of the cultural heritage resource is conserved.	In the Cultural Heritage Impact Assessment, Heritage Conservation Plan, and/or other document accepted by the municipality, provide: • An outline of the attributes that contribute to the cultural heritage value, identification of the portion(s) of the cultural heritage resource to be conserved, and rationale demonstrating that the integrity of the cultural heritage resource is being conserved. Note: • (*) This metric is not applicable for Block Plans. For the purposes of this metric, “integrity” means: • A measure of its wholeness and intactness of the cultural heritage values and attributes. • Examining the conditions of integrity requires assessing the extent to which the property/cultural heritage resource includes all elements necessary to express its cultural heritage value; is of adequate size to ensure the complete representation of the features and processes that convey the cultural heritage resource’s significance; and the extent to which it suffers from adverse affects of development and/or neglect.

			• Integrity should be assessed within the Cultural Heritage Impact Assessment, or other documentation accepted by the municipality.
Good:	1 point	Where a cultural heritage resource is being relocated, it is being moved to a visually prominent location within the proposed development.	In the Cultural Heritage Impact Assessment, Heritage Conservation Plan and/or other documents acceptable to the, identify: • The proposed location of the cultural heritage resource that ensures its visual prominence.
Good (*):	1 point	Where reusable materials from a cultural heritage resource is being removed, a portion is being salvaged and reused within the proposed development.	In the Cultural Heritage Impact Assessment, Heritage Conservation Plan and/or other documents acceptable to the municipality identify: • The materials that will be salvaged and how they will be reused on site. Note: • (*) This metric is not applicable for Block Plans. • The reuse of the salvaged materials should also be demonstrated in appropriate supporting documents (e.g. site plan drawings, landscape plan).
References:	• Community Wellbeing Framework (2018): Cultural Domain, Cultural Vitality 1B, Sense of Belonging 2B • Whitby Green Standard v1 (2020): CC1.2 (Draft Plan of Subdivision), CC1.3 (Site Plan) • LEED ND v4 GIB: Historic Resource Preservation and Adaptive Reuse • Thinking Green (2018): 31 (Draft Plan of Subdivision); 36 (Site Plan)		

BE-6: URBAN TREE CANOPY AND SHADED WALKWAYS/SIDEWALKS			
Intent:	To provide street trees that create a more pleasant pedestrian environment and mitigate the urban heat island effect. Street trees provide ecosystem services and health benefits.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	Trees will shade at least 50% of the walkway/sidewalk lengths within 10 years.	On the Landscape Plan identify: • The total length of existing and or planned sidewalk in the proposed development, and the total length of existing and or planned sidewalk with trees abutting the sidewalk, measured as a percentage of sidewalk length. Note: • New trees will be selected in accordance with the applicable municipal guidelines and standards (e.g. species, size, diameter breast height, etc.).
Great:	+1 additional point (total 2 points)	Trees will shade at least 75% of the walkway/sidewalk lengths within 10 years.	
Great:	2 points	Trees will shade at least 50% of parking areas within 10 years.	On the Landscape Plan identify: • The total parking area, and the parking area that will be shaded by the tree canopy and quantified as a percentage.

Good:	1 point	Street trees are provided on both sides of street at intervals averaging no more than 9 metres, where supported by the municipality.	On the Landscape Plan identify: • The distance of intervals between street trees.
Excellent:	+ 2 additional points (total 3 points)	Street trees are provided on both side of streets within the project at distance intervals averaging 8 metres or less, where supported by the municipality.	
References:	• LEED ND (v4) NPD: Tree-Lined and Shaded Streetscapes • Toronto Green Standard v3 Tier I: Ecology (EC1.3) (CF, LR, MHR); Tier II: Ecology (EC1.5) (LR, MHR)		

BE-7: SALT MANAGEMENT			
Intent:	To reduce the use of salt and its negative impacts on water bodies, soils, vegetation, wildlife, buildings, and vehicles.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	2 points	Two of the following measures are provided: • 2 to 4% grade throughout all outdoor parking lots to ensure proper drainage and limit refreezing. • Use of salt-tolerant species of vegetation in areas that will receive meltwater. • Use of trees as windbreaks around the site perimeter. • Heated or covered walkways near building entrances. **AND** • Well-planned, designated snow storage area(s) is being provided to ensure meltwater drains as intended in the site design.	On the Landscape Plan identify: • The measures being used to promote salt reduction. Note: Landscape Ontario Horticultural Trades Association lists the following as salt tolerant plants: • Sea Thrift - Armeria maritima, • Karl Foerster Reed Grass – Calmagrostis acutifolia 'Karl Foerster', • Helen Allwood Pinks – Dianthus pulminarius x allwoodii, • Blue Lyme Grass – Elymus arenarius, • Fountain Grass – Pennisetum alopecuroides.
References:	• Parking Lot Design Guidelines to Promote Salt Reduction. Lake Simcoe Region Conservation Authority, 2017.		

BE-8: CARSHARE AND CARPOOL PARKING			
Intent:	To encourage carpooling and reduce dependence on single-occupant vehicle trips. Carpooling contributes to GHG emission reduction, less air pollution, less congestion, and improved social connections.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 point	3% of parking spaces on site are dedicated to carpooling and/or carshare/zip car (does not apply to compact cars). Preferred parking for these vehicles is provided by incorporating signage and/or pavement markings.	On the Site Plan Drawing, Traffic Study, or Parking Study identify: • The total number of parking spaces included per building on the site. • The total number parking spaces that are dedicated to carshare/zip car or carpooling. • The percent (%) of parking spaces dedicated to carshare/zip car or carpooling. • The dedicated parking spaces and highlight proximity/preferred location relative to building entry.
Great:	+1 additional point (total 2 points)	5% of parking spaces on site are dedicated to carpooling and/or carshare/zip car (does not apply to compact cars). Preferred parking for these vehicles is provided by incorporating signage and/or pavement markings.	
References:	• Toronto Green Standard v3 Tier I: Air Quality (AQ1.2) (CF, MHR) • LEED ND (v4) LT: Reduced Parking Footprint • LEED BD+C (v4) LT: Reduced Parking Footprint • Whitby Green Standard v1 (2020): TT1.8 (Site Plan) • Thinking Green (2018): 29 (Site Plan)		

BE-9: SURFACE PARKING FOOTPRINT			
Intent:	To promote efficient use of land and support on-street retail and pedestrian-oriented built environments. Surface parking can block access and visibility to homes and businesses. Minimizing or carefully locating surface parking can result in more pedestrian-friendly and valuable streetscapes.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 point	All surface parking on site is located at the side or rear of buildings.	On the Site Plan Drawing identify: • The building frontage and the surface parking location(s). Note: • Should aim for no more than 20% of the total development area dedicated to off-street surface parking facilities, and surface parking lot should not be larger than 2 acres.

Great:	2 points	Less than 15% of the total developable area is provided to parking at grade and is located at the rear or side of buildings.	On the Site Plan Drawing identify: • The building frontage and the surface parking location(s). • The total area dedicated to surface parking/parking facilities and the total area of the proposed development. • The percent (%) of site area allocated to surface/facility parking.
Excellent:	3 points	All new on-site parking is provided below grade or in structured parking, and no surface parking is provided.	On the Site Plan Drawing identify: • The location of all parking. Note: • For this metric, surface parking facilities include ground-level garages unless they are under habitable building space. • Underground or multi-story parking facilities within the habitable building space and on-street parking spaces are exempt from this limitation. • Excludes spaces dedicated to short-term parking and pickup/drop-off.
References:	• LEED ND (v4) LT: Reduced Parking Footprint • LEED BD+C (v4) LT: Reduced Parking Footprint • Whitby Green Standard v1 (2020): TT1.9 (Site Plan) • Thinking Green (2018): 31 (Site Plan)		

BE-10: ELECTRIC VEHICLE CHARGING STATIONS			
Intent:	To facilitate the uptake and use of electric vehicles.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	3 points	Electric vehicle supply equipment (EVSE) is provided to serve 10% of parking spaces.	On the Site Plan Drawing, Traffic Plan, or Parking Study identify: • The number of total parking spaces included per building on the site. • The number of total parking spaces that will be provided with EVSE. • The percentage of parking spaces that will be provided with EVSE. • Signage that will indicate parking spot offers EVSE. For Draft Plan and Site Plan Applications: • A Letter of Commitment signed by a qualified professional (e.g. professional engineer) and the owner/developer/builder confirming the number of EVSE provided and the percent of parking spaces with EVSE. Note: • *Electric vehicle supply equipment (EVSE)* is defined by the Ontario Electrical Safety Code as the complete assembly consisting of cables, connectors, devices, apparatus, and fittings, installed for power transfer and information exchange between the branch circuit and the electric vehicle. For the requirements of this
Great:	+2 additional points (total 5 points)	Electric vehicle supply equipment (EVSE) is provided to serve 20% of parking spaces.	

Excellent:	2 points	At least 50% of the parking spaces are designed and constructed to permit future EVSE installation (e.g. rough-in).	metric, applicants are encouraged to consult with the local municipality to determine the appropriate level or equivalent for EVSE. • *Rough-in provisions* are defined as empty raceways starting in a junction box in the electrical room and terminating in a junction box central to each parking floor. Raceways will be empty to accommodate future wiring. • Establishing electric vehicle charging stations are achieved by agreement at the development stage and implementation at the building stage. It is important for developers and builders to agree to install electrical vehicle charging stations prior to commitment.
References:	• Toronto Green Standard v3 Tier I: Air Quality (AQ1.3) (CF, MHR) • Whitby Green Standard v1 (2020): TT1.10 (Draft Plan of Subdivision); TT1.15 (Site Plan) • LEED BD+C v4 LT: Electric Vehicles • Thinking Green (2018): 27 (Draft Plan of Subdivision); 30 (Site Plan)		

MOBILITY

MB-1: BLOCK LENGTH			
Intent:	To develop shorter blocks that increase permeability, offering pedestrians and cyclists multiple routes to reach their destination(s), and to allow blocks with the flexibility to accommodate both residential and commercial lot sizes. Walkable blocks improve connectivity and reduce dependence on vehicles.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	☐ Site Plan
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 point	75% of block lengths do not exceed 250 meters.	On the Block Plan or Draft Plan Drawing identify: • Measurement of the block lengths for all blocks included in the proposed development. • The percentage (%) of block lengths that are less than 250 meters. Note: • Blocks are determined by roads/streets, and not pathways or trails.
Great:	+1 additional point (total 2 points)	All block lengths do not exceed 250 meters.	
Excellent:	+1 additional point (total 3 points)	All blocks do not exceed 80 meters by 150 meters in size.	On the Block Plan or Draft Plan Drawing identify: • Measurement of the block sizes in meters. Note: • Blocks are determined by roads/streets, and not pathways or trails.
References:	• Thinking Green (2018): 19 (Draft Plan of Subdivision) • Region of Peel, Health Background Study (2011), Core Element 4: Street Connectivity • Whitby Green Standard v1 (2020): TT1.7 (Draft Plan of Subdivision)		

MB-2: SCHOOL PROXIMITY TO TRANSIT AND CYCLING NETWORK			
Intent:	To encourage students to walk, cycle, and/or take transit to school to reduce vehicle use, and decrease traffic congestion at school sites. Walking, cycling, and transit use result in GHG emissions savings and less air pollution. Walking and cycle also provide health benefits.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	☐ Site Plan
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 point	All public schools are located within a 400 meter walking distance to transit routes and/or dedicated cycle network.	In the Community Design Guidelines (Block Plan) or Community Design Guidelines/ Urban Design Brief (Draft Plan) provide a map that identifies: • Radial circles to illustrate 400 meters and 200 meters from each school, • Locations of the proposed development, • Existing or planned public school(s), • Existing or planned transit stops, and • Existing or planned dedicated cycle network(s).
Great:	+1 additional point (total 2 points)	All public schools are located within a 200 meter walking distance to transit routes and/or dedicated cycle networks.	

References:	• Region of Peel, Healthy Background Study Framework (2011) • Whitby Green Standard v1 (2020): TT.V.3 (Draft Plan of Subdivision)

MB-3: INTERSECTION DENSITY			
Intent:	To encourage shorter blocks and increase permeability and connectivity offering pedestrians and cyclists multiple routes to reach their destination(s). Walkable blocks improve connectivity and reduce dependence on vehicles.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	☐ Site Plan
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	40-50 multi-use trails, paths, and/or streets intersections are provided per square kilometer (sq. km.).	In the Community Design Guidelines (Block Plan) or Community Design Guidelines/ Urban Design Brief (Draft Plan) provide a map that identifies: • The eligible intersections. • Each square kilometers. • The number of eligible intersections within the proposed development per square kilometer. Note: • Eligible intersections include: Multi-use trails, cycling paths, walking paths, publicly accessible streets, laneways, and transit right-of-ways. • Non-Eligible intersections generally include intersections where you must enter and leave an area through the same intersection, for example, cul-de-sacs and gated street entrances. • Square kilometre is defined as the total area of land available for development, similar to the net developable area, and its calculation excludes water bodies, parks larger than 0.2 hectares, natural heritage system lands, public facility campuses, airports, existing and proposed 400-series highways, and rail yards.
Great:	+1 additional point (total 2 points)	51-60 multi-use trials, paths, and/or streets intersections are provided per square kilometer (sq. km.).	
Excellent:	+2 additional points (total 4 points)	61 multi-use trails, paths, and/or streets intersections are provided per square kilometer (sq. km.).	
References:	• LEED ND (v4) NPD: Connected and Open Community • Whitby Green Standard v1 (2020): TT.V.1 (Draft Plan of Subdivision)		

MB-4: WALKABLE STREETS			
Intent:	To encourage walking through the provision of safe and comfortable street environments. Walkable streets reduce the dependence on vehicles, improve safety, enhance connectivity, and are an important component for healthy and complete communities.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	2 points	Where not a mandatory requirement, and where supported by the municipality, continuous sidewalks or multi-use trails are provided on both sides of public and private roads/streets.	On the Block Plan, Draft Plan or Site Plan Drawing identify: • Continuous sidewalk or multi-use trail on both sides of public and private roads/streets. • How sidewalks comply with Municipal Standards.
References:	• LEED (v4) ND NPD: Walkable Streets • Whitby Green Standard v1 (2020): TT1.5 (Draft Plan of Subdivision); TT1.6 (Site Plan) • Thinking Green (2018): 23 (Draft Plan of Subdivision, Site Plan)		

MB-5: PEDESTRIAN AMENITIES			
Intent:	To promote amenities that contribute to a positive pedestrian experience and ensure destinations in communities are connected through convenient, safe, and accessible pedestrian connections. Walkable connections can contribute to the wellbeing of residents of all ages and abilities, help to reduce dependence on vehicles and limit air pollution and GHG emissions.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	Pedestrian connections are provided between building entry and other destinations on the site and to destinations on adjacent properties. **AND** 1 type of pedestrian amenity is consistently provided along on-site connections.	On the Landscape Plan identify: • The pedestrian connections that link a building entry to destinations on site and to destinations on adjacent properties. • The pedestrian amenities provided along the pedestrian connections. Note: • Amenities include: benches, pedestrian oriented lighting, waste receptacles, public art, map stands, interpretive/commemorative signage, and weather shelters. • Destinations include: walkways, transit stops, parking areas (vehicle and bicycle), existing trails or pathways, schools, community centres, and commercial areas. • Pedestrian connections are only required to be built to the site boundary and not beyond (to establish future connection possibilities). • Privately owned public spaces (POPs) would incorporate multiple pedestrian amenities and can be a proposal considered under the Innovation metric.
Great:	+1 additional point (total 2 points)	More than 1 type of pedestrian amenity is consistently provided along on-site connections and between the site and adjacent destinations.	
References:	• Toronto Green Standard v3 Tier I: Air Quality (AQ3.1) (CF, MHR)		

MB-6: BICYCLE PARKING			
Intent:	To facilitate cycling and reduce dependence on vehicle use.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	Bicycle parking spaces are provided at a rate 20% higher than municipal standards/guidelines.	On the Site Plan Drawing and/or Floor Plan identify: • Building types included in the proposed development (e.g. mixed-use, residential, commercial, retail, and institutional). • Location of bicycle parking. • Total number of bicycle parking spaces required by the municipal standard/guideline. • Total number of bicycle parking spaces provided per building. • Percent of total bicycle parking provided relative to the municipal standard/guideline. • Distance of bicycle parking to building entrances and exists. • Weather protection provided for bicycle parking area, where applicable. • For additional guidance, refer to Brampton's SNCP Active Transportation Guidelines which includes Bicycle Parking rates.
Great:	+1 additional point (total 2 points)	Bicycle parking spaces are provided at a rate 50% higher than municipal standards/guidelines.	
Excellent:	2 points	Bicycle parking is located in close proximity to building entrances. Short-term bicycle parking is located within 25 meters of a building entrance if outdoors. Long-term bicycle parking is located within 50 meters of a building exit or entrance. **AND** All bicycle parking is weather protected.	
Excellent	1 point	1 shower and change room are provided (for men and women) per 30 bicycle parking spaces associated with non-residential development.	Letter of Commitment with an accompanying Floor Plan signed by the architect and the owner/developer/builder confirming the number of showers and changes rooms that will be provided in the development.
References:	• Community Wellbeing Framework (2018): Environment Domain, Mobility 3B • Whitby Green Standard v1 (2020): TT1.2, TT1.12, TT1.13 (Site Plan) • Thinking Green Item (2018): 25 (Site Plan) • Toronto Green Standard v3 Tier I: Air Quality (AQ2.2, AQ2.3, AQ2.4) (CF, MHR); Tier II: Air Quality (AQ2.5) (MHR)		

MB-7: TRAILS AND CYCLING INFRASTRUCTURE			
Intent:	To implement pedestrian and cycling infrastructure that further promotes active forms of transportation. Walking and cycling results in GHG emissions savings and less air pollution, as well as health benefits.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	The objectives/actions of the municipal Active Transportation Master Plan and/or Trails/Pathways Master Plan are being implemented.	In the Community Design Guidelines (Block Plan), Community Design Guidelines/ Urban Design Brief (Draft Plan), or Active Transportation Context Map (Site Plan) identify: • Existing or planned multi-use trails and/or bicycled lanes located in the proposed development. • If applicable, the multi-use trails and/or bicycle lanes that comply with the municipal active transportation/trails master plan. • If applicable, additional features that will advance the objectives and/or actions of the active transportation/trails master plan (e.g. trailheads, trail signs, information signage, and/or seating areas). • For additional guidance, refer to Brampton's SNCP Active Transportation Guidelines.
References:	• Community Wellbeing Framework (2018): Environment Domain, Mobility 3B • Whitby Green Standard v1 (2020): TT1.2 (Draft Plan of Subdivision, Site Plan) • Thinking Green (2018): 25 (Draft Plan of Subdivision); 26 (Site Plan)		

MB-8: ACTIVE TRANSPORTATION NETWORK			
Intent:	To promote active transportation through the provision of public multi-purpose trails/paths and cycling infrastructure. Cycling results in less vehicle dependence, and associated reduction in GHG emissions and air pollution. It also provides health benefits.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	2 points	100% of residents/jobs are within 400 meters of: • An existing public multi-use trail or cycling infrastructure; or • A municipally approved public multi-use trail or cycling infrastructure (identified in a Council approved trail/cycling master plan, but not yet constructed); or • A proposed public multi-use trail or cycling infrastructure that is proposed within the development.	In the Community Design Guidelines (Block Plan), Community Design Guidelines/ Urban Design Brief (Draft Plan), Active Transportation Context Map (Site Plan): • Provide a map showing the subject lands, a 400 meter buffer from the boundaries of the subject lands, and any existing or planned cycling networks. • For additional guidance, refer to Brampton's SNCP Active Transportation Guidelines. Note: • These points are only awarded if a cycling network is included in the project boundary.
References:	• Community Wellbeing Framework (2018): Environment Domain, Mobility 3B		

MB-9: DISTANCE TO PUBLIC TRANSIT			
Intent:	To promote and support alternative transportation modes to personal automotive vehicle use. Transit-oriented communities reduce vehicle-kilometres traveled and associated emissions, have reduced traffic casualty rates, and support walking and cycling which improves community health.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	The site is within 800 meters walking distance to an existing or planned commuter rail, light rail, bus rapid transit or subway with frequent stops. **OR** The site is within 400 meters walking distance to 1 or more existing or planned bus stops with frequent service.	In the Community Design Guidelines/Urban Design Brief (Draft Plan) or Public Transit Context Map (Site Plan): • Include a map that shows the 200 meter, 400 meter, and/or 800 meter radius and the existing or planned commuter rail, subway, light rail, and bus stops with frequent service. • For additional guidance, refer to Brampton's SNCP Active Transportation Guidelines.

Great:	+1 additional point (total 2 points)	The site is within 400 meters walking distance to an existing or planned commuter rail, light rail, bus rapid transit, or subway with frequent stops. **OR** The site is within 200 meters walking distance to 1 or more bus stops with frequent service.	Note: • *Frequent Service* is defined as transit with trips in intervals no greater than 30 minutes during peak times per line per direction and available during hours of typical building operation.
References:	• LEED ND (v4) LT: Access to Quality Transit • Community Wellbeing Framework (2018): Environment Domain, Mobility 3B • Whitby Green Standard v1 (2020): TT.V.3, TT1.6 (Draft Plan of Subdivision); TT.V.3, TT1.7 (Site Plan) • Thinking Green (2018): 26 (Draft Plan of Subdivision); 27 (Site Plan)		

MB-10: TRAFFIC CALMING			
Intent:	To encourage active transportation through the provision of safe, walkable streets by reducing car speeds. Walkable streets and traffic calming measures can provide a safer and more comfortable streetscape to cyclists and pedestrians, and help to reduce traffic speeds, volumes, and related emissions.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional (*)**
	Points	**Requirement**	**Documentation**

Good:	1 point	75% of local streets/roads are designed with traffic calming strategies.	In the Traffic Calming Plan:
			• Highlight the residential-only streets and non-residential/mixed-use streets in the proposed development, as applicable.
			• Identify the percentage (%) of street length (broken out by residential only and non-residential/mixed use) that includes street calming strategies developed in consultation with municipal transportation planning staff.
			• Provide a drawing identifying the traffic calming strategies that will be provided.
			
			Note:
			• (*) The Good and Great metrics related to local streets/roads does not apply to Industrial, Commercial, Institutional development.
			• Traffic calming strategies include but are not limited to:
			  ◦ Neckdowns,
			  ◦ Centre island narrowing,
			  ◦ Raised crosswalks,
			  ◦ Traffic circles and roundabouts,
			  ◦ Speed display boards/vehicle activated traffic calming signs (VATCS).

Great:	+2 additional points (total 3 points)	100% of local streets/roads are designed with traffic calming strategies.	
Good:	1 point	50% of non-residential and/or mixed-use streets are designed with traffic calming strategies.	
Great:	+2 additional points (total 3 points)	75% of new non-residential and/or mixed-use streets are designed with traffic calming strategies.	
References:	• Whitby Green Standard v1 (2020): TT1.4 (Draft Plan of Subdivision, Site Plan)		

NATURAL ENVIRONMENT & PARKS

NE-1: TREE CONSERVATION			
Intent:	To support the conservation of healthy mature trees and the associated ecological, economic, and healthy benefits. Preserving trees can be a cost-effective method to improve the overall appearance of a community while providing ecological and climate change benefits.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	3 points	Preserve 25% of healthy, mature tableland trees in situ.	In the Vegetation Assessment (Block Plan) or Tree Evaluation Report (Draft Plan and Site Plan): • Identify all tableland trees as per municipal standards. • Label all the healthy mature tableland trees, including hedgerows, on the subject site, as well as the trees that will be protected, moved, or removed as per municipal standards. • Provide the percent (%) of healthy tableland trees that will be protected in situ. Note: This metric applies to tableland trees on the developable portion of the site (e.g. not in the protected natural heritage system). • Healthy mature trees include those evaluated as being fair or above by a certified Arborist and at least 15 cm DBH (diameter at breast height).
Great:	+2 additional points (total 5 points)	Preserve 50% of healthy, mature tableland trees in situ or preserve 100% of healthy hedgerows in situ.	
References:	• Town of Whitby Green Standard v1 (2020): LUN1.4 (Draft Plan of Subdivision, Site Plan)		

NE-2: SOIL QUANTITY AND QUALITY FOR NEW TREES			
Intent:	To provide soil quantity and quality that enables new trees to thrive. Higher amounts of good quality soil help ensure the success of vegetation.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	2 points	A minimum of 30 cubic meters (m^3) of soil and a minimum of 100 centimeters uncompact soil depth is provided for each new tree. Where there is a grouping of trees, a minimum of 20 cubic meters (m^3) of soil and minimum of 100 centimeters of uncompact soil depth is provided for each new tree.	On the Landscape Plan identify: • The tree planting locations, soil volume, soil depth, and soil quality that will be provided for each tree. Note: • If the initial submission of the Draft Plan of Subdivision is too early in the development application review process to provide the aforementioned details, provide a Letter of Commitment signed by a landscape architect and the
Great:	+2 additional points (total 4 points)	25% more total soil volume than required municipal standard is provided for each new tree.	

Excellent	2 points	Uncompact topsoil layer of tree pits, trenches, or planting beds with the following properties is provided for each new tree: • Organic matter content of 10 to 15% by dry weight and a pH of 6.0 to 8.0. • A minimum depth of 100 centimeters, or in accordance with municipal standards, whichever is greater. • Adequate drainage.	owner/developer/builder confirming that the metric requirement(s) will be achieved, and that the details will be provided in the Landscape Plan during subsequent submissions.
References:	• TRCA (2012) Preserving and Restoring Healthy Soils Best Practice Guide for Urban Construction • Credit Valley Conservation (2017) Healthy Soils Guideline for the Natural Heritage System • Vineland Research (2019) Ontario Landscape Tree Planting Guide • Sustainable Technologies Evaluation Program (STEP) (2017) Compost Amended Planting Soil Specifications • Community Wellbeing Framework (2018): Environment Domain, Natural Systems 2A • Toronto Green Standard v3 Tier I: Ecology (EC1.1, EC1.2) (CF, LR, MHR); Tier II: Ecology (EC1.6) (LR, MHR)		

NE-3: HEALTHY SOILS			
Intent:	To ensure that new development contains healthy soil quality and quantity to help restore the natural functions of soils and vegetation and to help ensure the soil is appropriate for the proposed plantings. To reduce disturbance of healthy soil to protect soil horizons and maintain soil structure, as well as to support biological communities (above-ground and below-ground).		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	A minimum topsoil depth of 200 millimetres is provided across the entire site (excluding paved surfaces).	On the Landscape Plan: • Identify the minimum topsoil depth that is provided across the entire site.
Great:	+1 additional point (total 2 points)	A minimum topsoil depth of 300 millimetres is provided across the entire site (excluding paved surfaces).	
References:	• TRCA Preserving and Restoring Healthy Soils Best Practice Guide for Urban Construction • CVC's Healthy Soil Guidelines for Natural Heritage System • Sustainable Technologies Evaluation Program (STEP) (2017) Compost Amended Planting Soil Specifications • Thinking Green (2018): 5 (Draft Plan of Subdivision, Site Plan)		

NE-4: NATURAL HERITAGE CONNECTIONS			
Intent:	To provide connections to nature and green spaces to benefit human health through proximity or access, and to minimize the amount of the natural heritage that is backlotted by residential development.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	2 points	Physical public connections (such as public access blocks, single loaded roads, parks, sidewalks, etc.) is provide for 25% of the length of the natural heritage system that abuts the proposed development (interface between development and natural heritage systems).	In the Community Design Guidelines (Block Plan) or Landscape Plan (Draft Plan and Site Plan) identify: • The natural heritage features within the proposed development. • All roads, sidewalks, pathways, and parks adjacent to any natural heritage features, and include the length of each that directly abuts the natural heritage feature. • The length of natural heritage system (all natural heritage features) within the site. • The percentage (%) of the natural heritage system with potential access to the site has been provided with physical public connections. Note: • Percentage (%) of the natural heritage system (NHS) is determined by the length of the NHS perimeter. • Private yards (e.g. backlotting) and parking lots will not be counted as part of the physical public connection border.
Great:	+2 additional points (total 4 points)	Physical public connections (such as public access blocks, single loaded roads, parks, sidewalks, etc.) is provided for 50% or more of the length of the natural heritage system that abuts the proposed development (interface between development and natural heritage systems).	
References:	• Thinking Green Item (2018): 2 (Draft Plan of Subdivision, Site Plan)		

NE-5: NATURAL HERITAGE SYSTEM ENHANCEMENTS			
Intent:	To improve natural heritage system, particularly with respect to wildlife habitat and/or ecological functions.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good (*):	1 point	A Woodland Management Plan is provided and implementation will be commenced, where not already required by the municipality.	Woodland Management Plan in accordance with the municipal Terms of Reference. Note: • (*) This metric is not applicable for Block Plans.
Good (*):	1 point	An Invasive Species Management Plan is provided and implementation will be commenced for a natural heritage feature, where not already required by the municipality.	Invasive Species Management Plan in accordance with the municipal Terms of Reference. Note: • (*) This metric is not applicable for Block Plans.

Good (*):	1 point	Habitat structure(s) for species at risk, such as bird structures, butterfly boxes, and hibernaculum is provided.	In the Environmental Implementation Report/Environmental Impact Study: • Outline the design and ecological function of the habitat structure(s). • Provide a figure illustrating the proposed locations of the habitat structure(s). • Provide a design specification for the habitat structure(s). Note: • (*) This metric is not applicable for Block Plans.
Great	2 points	Natural heritage restoration/enhancement that results in a net ecological gain, above municipal requirements, is provided.	In the Environmental Implementation Report/Environmental Impact Study: • Outline the natural heritage restoration/enhancement, its ecological function(s), and how it achieves a net ecological gain above municipal requirements. • Provide a figure illustrating the proposed location(s) of the natural heritage restoration/enhancement. • Provide a design specification for the natural heritage restoration/enhancement.
Excellent	5 points	A linear continuous/uninterrupted naturalized corridor, not already identified as a natural heritage feature in the Official Plan or through technical studies, that creates a functional linkage between at least two natural heritage features is provided.	In the Environmental Implementation Report/Environmental Impact Study: • Outline the design and ecological function (e.g. wildlife corridor, amphibian passage, and meadow-way/grassland) of the linkage. • Provide a plan/figure illustrating the proposed linkage including dimensions, landscape treatment, and the natural heritage features it will be connecting, which will be used to inform detailed design.
References:	• TRCA, Invasive Plant List • Credit Valley Conservation, Native Plants for Pollinators • Toronto Pollinator Protection Strategy, City of Toronto • Community Wellbeing Framework (2018): Environment Domain, Natural Systems 2A • Whitby Green Standard v1 (2020): LUN1.8, LUN1.9, LUN.V.1, LUN.V.2 (Draft Plan of Subdivision); LUN1.10, LUN1.11, LUN.V.2, LUN.V.3, LUN.V.4 (Site Plan) • Thinking Green Item (2018): 1 (Draft Plan of Subdivision, Site Plan)		

NE-6: SUPPORTING POLLINATORS			
Intent:	To provide landscape materials that support and provide habitat for pollinators (e.g. birds, bees, butterflies). Without pollinators, much of the food we eat and the natural habitats we enjoy would not exist. Pollinators are under increasing stress due to habitat loss, invasive species, diseases, pesticides, and climate change.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	Native plants that support pollinators make up 25% of total quantity of plants proposed on the landscape plan.	On the Landscape Plan identify: • Native plant species that support pollinators (as per approved lists below) and their quantities. • Percentage of native pollinator plants relative to all plants proposed within the Landscape Plan.

Great:	+1 additional point (total 2 points)	Native plants that support pollinators make up 50% of the total quantity of plants proposed on the landscape plan.	Note: • Pollinator plant species must be selected from the Credit Valley Conservation "Native Plants for Pollinators", Toronto and Region Conservation Authority "Maintaining Your Pollinator Habitat" or alternative list approved by the municipality.
References:	• Credit Valley Conservation, Native Plants for Pollinators, https://cvc.ca/wp-content/uploads/2017/04/17-uo-nativeplantsforpollinators-booklet-v8-web.pdf • Toronto Pollinator Protection Strategy, City of Toronto, https://www.toronto.ca/wp-content/uploads/2018/05/9676-A1802734_pollinator-protection-strategy-booklet.pdf • TRCA, Maintaining Your Pollinator Habitat, https://trca.ca/app/uploads/2016/04/PollinatorMaintenanceGuide_WEB.pdf • TRCA, Creating Habitat, https://trca.ca/app/uploads/2016/04/2602-Stewardship_Habitat-SinglePg_PRESS.pdf • Community Wellbeing Framework (2018): Environment Domain, Natural Systems 2A • Whitby Green Standard v1 (2020): LUN1.7 (Draft Plan of Subdivision); LUN1.8, LUN1.9 (Site Plan) • Toronto Green Standard v3 Tier I: Ecology (EC3.1) (CF, LR, MHR)		

NE-7: DEDICATED FRUIT/VEGETABLE GARDEN SPACE			
Intent:	To promote locally grown food, improve physical and mental wellbeing, and to encourage social interaction.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	☐ Industrial, Commercial, Institutional
	Points	**Requirement**	**Documentation**
Good:	2 points	For multi-unit residential developments, the following is provided: • Garden space that is equal to 25 square metres (or 250 square feet) of the rooftop or total landscaped site area. • A shed for gardening equipment storage. • A water source for the garden space. For ground-oriented residential developments: *With yards:* • For each residential lot, a raised garden bed that is at least 12 inches tall, 4 feet wide, and 6 feet long is provided. *Without yards:* • For each unit, a container garden that can accommodate 15 gallons of soil and are at least 12 inches deep is provided.	On the Landscape Plan: • Determine the total landscaped area of the project. • Specify the total area of garden space provided. • Identify supportive garden infrastructure (e.g. shed and water source). Note: • Garden space is defined as land and/or an alternative mechanism with a growing medium that will be used to cultivate plants for food. • Garden beds must provide at least 12 inches of garden soil depth (this garden soil will be provide above the standard topsoil). • Achieving this metric for Industrial, Commercial Institutional may be considered under the Innovation indicator.
References:	• Living Community Challenge 1.2, Place: Urban Agriculture • LEED ND (v4) NPD: Local Food Production • Town of Whitby Green Standard v1 (2020): LSF1.1 (Draft Plan of Subdivision); LSF1.1, LSF.V.1 (Site Plan)		

NE-8: PARK ACCESS			
Intent:	To promote visual and physical access to public parks and to make it easier for people of all ages and abilities to integrate physical activity and social interaction into their daily activity.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	3 points	2 road frontages are provided for each park (e.g. urban square, parkette, and neighborhood park).	On the Community Design Guidelines (Block Plan) or Landscape Plan (Draft Plan and Site Plan): • Highlight the urban squares, parkettes, neighborhood parks, and community parks included within the application.
Great:	+3 additional points (total 6 points)	3 or more road frontages are provided for each park.	
References:	• Whitby Green Standard v1 (2020): HH1.2 (Draft Plan of Subdivision, Site Plan)		

NE-9: STORMWATER QUANTITY			
Intent:	To support a treatment-train approach to stormwater management, emphasizing source and conveyance controls to promote infiltration, evaporation, and/or re-use of runoff and/or rainwater. Managing stormwater at the early stages of the treatment-train can provide more resilient communities and reduce risks of downstream flooding and erosion.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	2 points	Retain runoff volume from the 10 millimeter rainfall event on public and private sites.	In the Functional Servicing Report (Block Plan and Draft Plan) or Stormwater Management Plan (Site Plan): • List and describe the design measures used to retain stormwater runoff on-site. Measures could include (but not limited to) Low Impact Development measures, stormwater management ponds. • Highlight the location of design measures on the applicable plan.
Great:	+2 additional points (total 4 points)	Retain runoff volume from the 15 millimeter rainfall event on public and private sites.	

Excellent:	+3 additional points (total 7 points)	Retain runoff volume from the 25 millimeter rainfall event on public and private sites.	• Confirm that the quantity and flood controls are in accordance with applicable municipal and conservation authority requirements. • Calculations and signoff by a qualified professional (e.g. professional engineer) quantifying the amount of runoff that will be retained on site.
References:	• Toronto Green Standard v3 Tier II: Water Balance, Quality, and Efficiency (WQ 2.2) (LR, MHR); Tier III: Water Balance, Quality, and Efficiency (WQ 2.3) (LR, MHR), (WQ 2.1) (CF) • TRCA's Stormwater Management Criteria • TRCA and CVC (2012) Low Impact Development Stormwater Management Planning and Design Guide • Vaughan's Urban Design Guidelines • Whitby Green Standard v1 (2020): SW1.1, SW1.5 (Draft Plan of Subdivision); SW1.1, SW1.6 (Site Plan) • Thinking Green (2018): 8 (Draft Plan of Subdivision); 12 (Site Plan) • LEED ND v4 GIB: Rainwater Management • LEED BD+C v4 SS: Rainwater Management		

NE-10: STORMWATER QUALITY			
Intent:	To protect receiving water bodies from water quality degradation that may result from development and urbanization. Controlling the quality of stormwater can provide for improved quality of receiving water bodies, resulting in fewer algae blooms, longer swimming seasons, and a variety of other ecological benefits.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	80% of Total Suspended Solids (TSS) will be removed from all runoff leaving the site during a 25 millimeter rainfall event (based on the post-development level of imperviousness).	In the Functional Servicing Report (Block Plan and Draft Plan) or Stormwater Management Plan (Site Plan) identify: • A list and description of the filtration measures used to treat the stormwater runoff on-site. • Strategies could include (but are not limited to): stormwater management ponds, oil-grit separators (ETV certified), filters, bioswales. • Highlight the design measures (if any) on a plan. • Quantify the percent (%) of TSS removed from a 25 millimeter rainfall event.
Great:	+4 additional points (total 5 points)	Over 90% of Total Suspended Solids (TSS) will be removed from all runoff leaving the site during a 25 millimeter rainfall event (based on the post-development level of imperviousness).	
References:	• Toronto Green Standard Tier I: Water Balance, Quality & Efficiency (WQ 3.1) (CF, LR) • TRCA Stormwater Management Criteria • TRCA and CVC Low Impact Development Stormwater Management Planning Design (2012) • Whitby Green Standard v1 (2020): SW1.1, SW1.3 (Draft Plan of Subdivision); SW1.1, SW1.4 (Site Plan) • LEED ND v4 GIB: Rainwater Management • LEED BD+C v4 SS: Rainwater Management • Thinking Green (2018): 9 (Draft Plan of Subdivision); 11 (Site Plan)		

NE-11: POTABLE WATER USE			
Intent:	To facilitate the conservation and efficient use of potable water.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation

Good:	2 points	Potable water used for irrigation is reduced by 50%, compared to a mid-summer baseline case.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer, landscape architect) and the owner/developer/builder that confirms:
			• The project will be designed to reduce potable water requirements for irrigation.
			• The percent (%) reduction in potable water used to irrigate, relative to a mid-summer baseline case. For information on how to achieve this credit refer to LEED v4 BD+C WE Credit: Outdoor Water Use Reduction Option 2 and use the calculation tool to demonstrate.
			• The strategies used to reduce potable water demands. Strategies include:
			  • Drought tolerant, native/ or adaptive vegetation that requires little to no water in the local climate.
			  • Use of high-efficiency irrigation, such as drip irrigation.
			  • Use of captured rainwater for irrigation.
			  • If captured rainwater is used, provide a Letter from a qualified professional (e.g. professional engineer) confirming the proposed cistern size and the calculations to demonstrate the volume of captured water expected.

Great:	+4 additional points (total 6 points)	No potable water is used for irrigation.	• Provide the documentation as requested for “Good”, unless no irrigation is being installed. • In the case where no irrigation is installed, provide a Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer, landscape architect) and owner/builder/developer confirming that no irrigation will be installed past the establishment period and that sod will be allowed to go dormant and brown in off-season months.
References:	• LEED ND (v4) WE: Indoor Water Use Reduction; WE: Outdoor Water Use Reduction • LEED BD+C (v4.1) WE : Outdoor water use reduction • Toronto Green Standard v3 Tier II: Water Balance, Quality & Efficiency (WQ 4.3) (CF, LR, MHR) • Community Wellbeing Framework (2018): Environment Domain, Natural Systems 2C • Whitby Green Standard v1 (2020): SW1.7 (Site Plan)		

NE-12: MULTI-PURPOSE STORMWATER MANAGEMENT			
Intent:	To enhance the public use value of stormwater management ponds.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	Introduce beatification measures/amenities that beautify stormwater management ponds (e.g. public art, interpretive signage) are provided.	In the Functional Servicing Report (Block Plan and Draft Plan) or Stormwater Management Plan (Site Plan): • Identify beautification measures (public art, interpretative signage, visually pleasing infrastructure, etc.) included within the proposed development that are above and beyond City's landscape specifications and applicable standards. Note: • Any proposed measure will not reduce the performance function of the stormwater management pond. • Fountains are not acceptable beautification measures.
References:	• Appendix E - Stormwater Management Pond Design Guidance of TRCA SWM Criteria document (2012)		

INFRASTRUCTURE & BUILDINGS

IB-1: BUILDINGS DESIGNED/CERTIFIED UNDER ACCREDITED "GREEN" RATING SYSTEM			
Intent:	To recognize leadership and efforts to achieve independent third-party green certification systems that demonstrates high sustainability performance.Sustainability certification systems provide recognizable and verified certifications demonstrating to the public a high degree of sustainability performance is being achieved.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 to 7 points (1 point per building, total 7 points available)	One or more buildings on site will be enrolled in a third-party green certification system.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer, LEED professional) and the owner/developer/builder that: • Identifies the green rating system that will be achieved and certified for the building(s). • Confirms registration for the third-party green rating system (e.g. receipt of the registration fees). Note: • Acceptable third-party accredited green rating systems include: • LEEDv4 or LEEDv4.1 (not including LEED for Commercial Interiors) • Certified Passive House Building • Living Building Challenge 4.0 • CaGBC Zero Carbon Building Design Standard Version 2 (March 2020) • Energy Star Canada • One Planet Living • LEED ND v4
Excellent:	1 additional point per building	One or more buildings on site will be enrolled in multiple third-party green certification systems.	
Good:	2 points	The development will achieve LEED ND v4 (or equivalent).	
Excellent:	4 points	The development will achieve One Planet Living rating (or equivalent).	
References:	• Sustainable Design and Construction Policy for Municipal Buildings • Canada Green Building Council Zero Carbon Building Design Standard Version 2, March 2020 • York Region Sustainable Development through LEED Incentive Program • Thinking Green (2018): 12 (Draft Plan of Subdivision); 15 (Site Plan)		

IB-2: ACCESSIBILITY FOR MULTI-UNIT DWELLINGS			
Intent:	To enable a wide spectrum of people to live within and access new buildings, regardless of ability. To provide accessibility to occupants beyond the Ontario Building Code (OBC), which mandates a barrier-free path of travel in 15% of Multi-Residential Units.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	☐ Industrial, Commercial, Institutional

	Points	Requirement	Documentation
Good:	2 points	For multi unit-residential buildings a minimum of 25% of the Dwelling Units (DU) achieve accessibility features required in the Ontario Building Code.	Letter of Commitment signed by an accredited professional (e.g. architect, professional engineer, accessibility consultant) and the owner/builder/developer confirming the percentage of Dwelling Units that will achieve accessibility requirements and the accessibility measure that will be implemented. On the Site Plan Drawing: • Identify the total number of units, the number of units that achieve the accessibility features required in the Ontario Building Code, and the total percentage of units that achieve the accessibility features required in the Ontario Building Code.
Great:	+1 additional point (total 3 points)	For multi unit-residential buildings, a minimum of 35% of the Dwelling Units (DU) achieve accessibility features required in the Ontario Building Code.	
References:	• LEED ND (v4) NPD: Visitability and Universal Design • Whitby Green Standard v1 (2020): ELE.V.3 (Site Plan) • Thinking Green (2018): 32 (Site Plan)		

IB-3: BUILDING ACCESSIBILITY (BARRIER FREE ENTRY/EGRESS)			
Intent:	To enable a wide spectrum of people and access new buildings, regardless of age or ability. Inclusive buildings and neighborhoods expand the number of potential users, thereby increasing value. They also enable more diversity in age of occupants and visitors.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 point	50% of emergency exits above the Ontario Building Code requirements are designed to be barrier free.	Letter of Commitment signed by an accredited professional (e.g. architect, professional engineer, accessibility consultant) and the owner/builder/developer confirming the percentage emergency exits above the Ontario Building Code requirements designed to be barrier free. Include with the letter a Site Plan drawing: • Identify all building entrances and exits. • Identify and quantify as a percentage (%) all building entrances and exits that will be barrier free as per the Ontario Building Code.
Great:	+1 additional point (total 2 points)	100% of all entries and exits above the Ontario Building Code requirements are designed to be barrier free.	
References:	N/A		

IB-4: EMBODIED CARBON OF BUILDING MATERIALS: SUPPLEMENTARY CEMENTITIOUS MATERIALS			
Intent:	To increase the growing awareness of the importance of addressing the embodied carbon and other GHG emissions associated with building materials. Materials can account for significant impact from their production, and reductions are available through selection and design. Often, lower impact materials are also more cost-effective.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	1 point	All concrete on site has a minimum of 20% Supplementary Cementitious Materials (SCMs).	Letter of Commitment signed by a qualified professional (e.g. professional engineer or architect) and the owner/builder/developer declaring the percent of Supplementary Cementitious Materials that will be used in all concrete on site. Note: • Supplementary cementing materials (SCMs) contribute to the properties of hardened concrete through hydraulic or pozzolanic activity. Examples include fly ashes, slag cement (ground, granulated blast-furnace slag) and silica fume. They can be used individually with Portland or blended cement or in different combinations. SCMs are often added to concrete to make concrete mixtures more economical, reduce permeability, increase strength, or influence other concrete properties.
Great	+1 additional point (total 2 points)	All concrete on site has a minimum of 40% Supplementary Cementitious Materials (SCMs).	
References:	N/A		

IB-5: EMBODIED CARBON OF BUILDING MATERIALS: LIFE CYCLE ASSESSMENT			
Intent:	To increase the growing awareness of the importance of addressing the embodied carbon and other GHG emissions associated with building materials. Materials can account for significant GHG emissions from their production, and reductions are available through careful selection and design. Lower impact materials can also more cost-effective.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Great:	1 point	Embodied carbon emissions for the structural and envelope materials for every Part 3 buildings on site is being reported using a lifecycle assessment software, such as Athena Impact Estimator for Buildings Life Cycle Assessment (LCA) software or equivalent. Consider three methods to reduce the embodied carbon content of each building reviewed.	Letter of Commitment signed by a qualified professional (e.g. professional engineer or architect) and the owner/builder/developer declaring the three methods being considered to reduce the embodied carbon content of each building, and append to the letter the LCA report outlining the materials that are anticipated to be used for the structure and envelope and the estimated total embodied carbon emissions of these materials. Athena Impact Estimator for Buildings Life Cycle: • Impact Estimator for Buildings

		Note: • Part 3 residential buildings are large and complex buildings, four storeys and taller, and greater than 600 square metres in building area.	• Impact Estimator Software Refer to the Zero Carbon Building Standard for further guidelines on LCA assessments.
Excellent:	+4 additional points (total 5 points)	One or more carbon reduction strategies that would result in a 10% reduction in embodied carbon of the design is being employed.	In addition to the documentation requirements noted for the Great level, provide a Letter of Commitment singed by a qualified professional (e.g. professional engineer or architect) and the owner/builder/developer identifying the carbon reduction strategies that will be undertaken and the associated reduction in embodied carbon.
References:	• Canada Green Building Council, Net Zero Carbon Building Standard Version 2. March, 2020 • Athena Sustainable Materials Institute (September 2019) http://www.athenasmi.org/wp-content/uploads/2019/09/About_WBLCA.pdf		

IB-6: EMBODIED CARBON OF BUILDING MATERIALS: MATERIAL EFFICIENT FRAMING			
Intent:	To increase awareness of the importance of addressing the embodied carbon and other GHG emissions associated with building materials.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Great:	3 points	For all low rise wood-framed construction, at least 3 of the following advanced framing measures is utilized: • Pre-cut framing packages, • Engineered Floor Joist, • Single Top-Plates, • Two Stud Corners, • Stud spacing greater than 406 mm (16”) on any storey, • Ceiling joist spacing greater than 406 mm (16”) on any storey, • Floor joist spacing greater than 406 mm (16”) on any storey. All corners have no more than 2 studs.	Letter of Commitment signed by a qualified professional (e.g. architect or professional engineer) and the owner/developer/builder committing to practice material efficient framing and listing the measures that will be employed from the provided eligible measures. Note: • Embodied carbon can be defined as the lifetime greenhouse gas (GHG) emissions associated with material. It is life cycle thinking applied to a product, and includes GHG’s associated with the manufacture, transportation and installation of a product, any GHG’s related to product maintenance and renewal, and GHG’s associated with the end of life of the product. • Modular construction approach can assist in confirming these requirements.
References:	• Athena Sustainable Materials Institute (September 2019) http://www.athenasmi.org/wp-content/uploads/2019/09/About_WBLCA.pdf		

<table>
<tr><th colspan="4">IB-7: HEAT ISLAND REDUCTION: NON-ROOF</th></tr>
<tr><td>Intent:</td><td colspan="3">To reduce ambient surface temperatures and reduce the urban heat island effect.</td></tr>
<tr><td rowspan="2">Applicable to:</td><td>☐ Block Plan</td><td>☐ Draft Plan of Subdivision</td><td>☒ Site Plan</td></tr>
<tr><td>☒ Residential</td><td>☒ Mixed Use</td><td>☒ Industrial, Commercial, Institutional</td></tr>
<tr><td></td><td>Points</td><td>Requirement</td><td>Documentation</td></tr>
<tr><td>Good:</td><td>2 points</td><td>For both residential and non-residential development:
One or more of the following strategies is being used to treat 50% of the site’s non-roof hardscaping:
• High albedo paving materials with an initial solar reflectance of at least 0.33 or SRI of 29.
• Open grid paving with at least 50% perviousness.
• Shade from existing 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.

OR

For non-residential development only:
• A minimum of 75% of at-grade parking spaces is under a cover.</td><td rowspan="2">On the Landscape Plan identify:
• The area of the total hardscape on the site (excluding building footprint)
• The strategies, locations, and size used to reduce heat island from the hardscape area (e.g. underground/covered parking, hardscape shading, hardscape materials with an SRI greater than 29, and open grid pavers with pervious greater than 50%).
The following products have an SRI greater than 29:
◦ White-coated gravel on the built-up roof (SRI 79),
◦ White coating on a metal roof (SRI 82),
◦ White cement tile (SRI 90),
◦ New gray concrete (SRI 35).
• For unit pavers and open grid/ pervious paving, provide examples of the products that are intended for the design and provide manufacturer’s documentation with the SRI or solar reflectance value to confirm.
• Determine the percent (%) of the hardscape area that has employed heat island reduction strategies, relative to the total hardscape area.

Note:
• Hardscaping includes driveways, walkways, courtyards, surface parking areas, artificial turf, and other on-site hard surfaces.</td></tr>
<tr><td>Great:</td><td>+1 additional point
(total 3 points)</td><td>One or more of the strategies presented in “Good” level will be used to treat 75% of the site’s non-roof hardscaping.</td></tr>
<tr><td>References:</td><td colspan="3">• Toronto Green Standard v3 Tier I: Air Quality (AQ 2.1) (LR), (AQ4.1)(MHR) ; Tier II: Air Quality (AQ4.3) (MHR); (AQ 2.3) (LR), (AQ 4.1) (CF)
• LEED ND (v4) GIB: Heat Island Reduction
• LEED BD+C (v4) SS: Heat Island Reduction
• Thinking Green (2018): 8 (Site Plan)</td></tr>
</table>

<table>
<tr><th colspan="4">IB-8: HEAT ISLAND REDUCTION: ROOF</th></tr>
<tr><td>Intent:</td><td colspan="3">To reduce ambient surface temperatures and reduce the urban heat island effect.</td></tr>
<tr><td rowspan="2">Applicable to:</td><td>☐ Block Plan</td><td>☐ Draft Plan of Subdivision</td><td>☒ Site Plan</td></tr>
<tr><td>☒ Residential</td><td>☒ Mixed Use</td><td>☒ Industrial, Commercial, Institutional</td></tr>
<tr><td></td><td>Points</td><td>Requirement</td><td>Documentation</td></tr>
<tr><td>Great:</td><td>2 points</td><td>Cool roof is provided for 100% of the available roof space.</td><td rowspan="3">On the Landscape Plan or Roof Plan:
Determine the area of Available Roof Space.
For Cool Roof products provide examples of the products that are intended for the design and provide manufacturer’s documentation with the SRI or solar reflectance value to confirm.
Determine the percent (%) area of roofing surfaces treated with a cool roof, green roof and/or solar PV as a percent (%) of the total available roof space.
Note:
Available roof space for cool roof areas consists of the total roof area of the building or building addition excluding private terraces no greater in area than the floor of the abutting residential unit at the roof level.
Available Roof Space is defined as the total roof area minus the areas designated for renewable energy, residential private terraces, residential outdoor amenity spaces (to a maximum of 2 meter square/unit, and a tower roof on a building with a floor plate less than 750 meter square. The definition is from the City of Toronto Green Roof Bylaw.
Cool roofing materials have a minimum initial reflectance of 0.65 and minimum emittance of 0.90 or a three-year aged SRI value of 64 for a low-sloped roof and a three-year aged SRI of 15 for a steep-sloped roof. Low sloped roofs have a surface slope of less than 1:6 (9.5 degrees) and steeply sloped roofs have a surface slope greater than 1:6 (9.5 degrees).</td></tr>
<tr><td>Great:</td><td>4 points</td><td>Green roof is provided for 50% of the available roof space.</td></tr>
<tr><td>Excellent</td><td>+2 additional points (total 6 points)</td><td>Green roof is provided for 75% of the available roof space.</td></tr>
<tr><td>References:</td><td colspan="3">LEED ND (v4) GIB: Heat Island Reduction
LEED BD+C (v4) SS: Heat Island Reduction
Toronto Green Standard v3, Tier I: Air Quality (AQ4.2) (CF, MHR); (AQ 2.2) (LR)
Whitby Green Standard v1 (2020): LUN1.5, LUN1.8 (Site Plan)
Thinking Green Item (2018): 9 (Site Plan)</td></tr>
</table>

IB-9: SOLAR GAIN CONTROL			
Intent:	To control solar heat gains through east and west facing windows.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional (*)**

	Points	Requirement	Documentation
Good:	1 point	For a low-rise development: Provide exterior shading by planting at least one deciduous tree (50 to 70 millimeter DBH) per lot on the east, west, or south side of each low density residential dwelling.	On the Landscape Plan, identify the new trees to be placed on the west side of each residential dwelling. Note: • (*) This metric is not applicable to Industrial, Commercial, Institutional developments.
Great:	2 points	Exterior shading for all east and west facing windows is provided.	On the Elevation Drawings, identify the exterior shading method that will be used on all east and west facing windows. Note: • Acceptable exterior shading includes operable shutters, overhangs, brise soleil canopy, awnings, solar blinds, screens, horizontal louvers and jalousies.
References:	• Durham Region Climate Resilient Standard for New Houses (Draft 2018), Extreme Heat Protection Measures; Shading, Glazing, and Window Operability #2.		

IB-10: SOLAR READINESS			
Intent:	To encourage the use of renewable energy and reduce reliance on fossil fuel-based energy. Solar energy can provide cost-effective methods to reduce energy use and will have strong climate change benefits.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Great:	3 points	All buildings in the project are designed for solar readiness.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder that confirms all new buildings will be designed for solar readiness. Note: Designing for solar readiness includes: • Designate an area of the roof for future solar PV and/or solar thermal. • Design and build an adequate structural capacity of the roof structure. • Install one or two conduits from the roof to the main electrical or mechanical room (size of conduit to be determined based on maximum potential solar PV or solar thermal system size).

			• Designate a 2 meter by 2 meter wall area in the electrical and mechanical rooms for future solar electrical/thermal equipment controls and connections (e.g. meters, monitors). • Where possible place the HVAC or other rooftop equipment on the north side of the roof to prevent future shading. • For more guidance on solar readiness, or to access a Solar Readiness Checklist, consult with NRCan Solar Ready Guidelines. Applicants are also encouraged to consult the National Renewable Energy Laboratory's Solar Ready Buildings Planning Guide for additional considerations for PV-ready provisions.

Great:	2 points	In the project, 1% of the total energy is generated on-site by renewable energy sources.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder to confirm the percent (%) of renewable energy will be generated on-site.
			
			The percent (%) of renewable energy generated can be quantified by the following steps:
			• List the types of building(s) (office, commercial, retail, residential multi-unit and/or single-unit).
			• Determine the total Gross Floor Area (GFA) for each building type and list the expected/approximate energy use intensities (EUIs) for each building type.
			• Determine the total building annual energy use for the site.
			• List the renewable energy technologies being considered for the site.
			• Determine the expected annual energy generated from renewable technologies and the percent (%) of annual energy generated on-site, relative to the total energy consumed.
			
			Note:
			• Allowable forms of renewable energy systems include the following:
			  ◦ Solar photovoltaics (PV) technologies (e.g. solar panel, solar shingles),
			  ◦ Solar thermal,
			  ◦ Biogas and biofuel,
			  ◦ Wind-based systems.
			• For greater clarity, it should be noted that geo-exchange systems (e.g. ground-source heat pumps) are considered a building energy efficiency measure, as opposed to a form of renewable energy generation. As such, these systems cannot be used for the on-site renewable energy requirement, but can instead be utilized to meet the energy efficiency targets.
			• The renewable energy calculations can be conducted either within the whole-building energy modelling software or through recognized third-party energy modelling tools such as RETScreen Expert or PVSyst.
			• Off-site solutions such as renewable energy certificates (RECs), carbon offsets, or power purchasing agreements (PPA) with renewable energy generators are not permitted to satisfy this measure unless otherwise approved by the City.

Excellent	+1 additional point per percent (%) increase up to 5 points (total 7 points)	In the project, more than 1% of the total energy is generated on-site by renewable energy sources, up to 5%.	
Good Target (Draft Plan Only)	3 points	For greenfield sites that provide ground-oriented development, 100% of dwellings in the project are designed for solar readiness.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder confirming that all dwellings in the project will be designed for solar readiness, and the measure that will be taking to facilitate this. Note:

			• This metric is not applicable to Industrial, Commercial, Institutional developments.
References:	• NRCAN Solar Ready Guidelines • Toronto Green Standard v3 Tier II: Energy Efficiency, GHG & Resilience (GHG 2.1) (CF, MHR), (GHG 2.2) (LR) • Whitby Green Standard v1 (2020): ECC1.2, ECC.V.1 (Draft Plan of Subdivision); ECC1.2, ECC.V.1, ECC.V.2, ECC.V.3 (Site Plan) • Thinking Green Item (2018): 13 (Draft Plan of Subdivision); 16 (Site Plan)		

IB-11: ENERGY STRATEGY			
Intent:	To encourage the early consideration and incorporation of sustainable design features in the planning process relating to improved building energy efficiency, carbon reduction, and resilience, as well as to take advantage of district-scale opportunities in the case of multi-building developments.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Great:	3 points	An Energy Strategy is provided for the proposed development that includes the following, as applicable: • High-level energy analysis using archetype modelling or benchmarking data to estimate the overall energy consumption and GHG emissions associated with the development. • Identify and evaluate opportunities to reduce energy use intensity (EUI) and greenhouse gas emissions (GHG) intensity down to a net-zero ready level of performance through various measures, such as more efficient building form and massing, orientation, improved building envelope performance, highly efficient HVAC systems, heat recovery, and lighting solutions. • Analysis of low-carbon energy solutions and on-site renewable energy generation potential that can be incorporated into the development, such as rooftop photovoltaic (PV), geo-exchange systems, high-efficiency combined heat and power (CHP), thermal energy stores, and sewer water heat recovery. • Identify and evaluate opportunities for backing power systems and passive design features that will improve the resilience of buildings to area-wide power outages. For multi-unit development, also conduct the following: • In the case of multi-building development proposals or in intensification areas identified by the municipality, investigate the feasibility of shared energy solutions, such as the development of low-	Energy Strategy Report developed in accordance with the municipal's Terms of Reference, and at a minimum, includes the following information: • Executive Summary, • Energy calculations, including data and assumptions, • Graphs of expected energy performance, • Conclusions / Recommendations, • Appendices: supporting documentation, references, etc.

		carbon thermal energy networks or connection to planned or existing district energy systems, and identify the required provisions to be district energy-ready.	
Excellent:	+6 additional points (total 9 points)	In addition to developing an Energy Strategy, an energy use intensity (EUI) and greenhouse gas emissions intensity (GHGI) target for the site is being achieved that strives towards a near-net zero emissions level of performance as agreed upon with the City. A zero-carbon transition plan is established that lays out the pathway towards achieving carbon neutrality in the future through a variety of design measures, such as providing the necessary infrastructure for full building electrification and avoidance of on-site combustion of fossil fuels.	Energy Strategy Report, as well as Letter of Commitment signed by the owners/developers/builders and qualified professional (e.g. professional engineer) indicating commitment to meet a development-wide energy use intensity and greenhouse gas emissions intensity targets, as well as a zero-carbon transition plan that lays out specific design measures that will be incorporated to facilitate achievement of carbon neutrality in the future (for example, providing electrical infrastructure provisions to allow for full building electrification).
References:	• City of Toronto Energy Strategy Report - Terms of Reference		

IB-12: BUILDING ENERGY EFFICIENCY, GREENHOUSE GAS REDUCTION, AND RESILIENCE			
Intent:	To promote buildings that are designed to be energy-efficient with reduced operating costs and greenhouse gas emissions associated with building operations, while improving the thermal comfort of occupants and enhancing building resilience. Well-designed buildings that are energy-efficient can improve indoor and outdoor air quality and reduce greenhouse gas emissions.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good: **(Mandatory as of January 1, 2023)**	3 points	**Part 9 Residential Buildings (3 storeys or less and less than 600 m² in gross floor area).** Design building(s) to achieve ENERGY STAR® for New Homes version 17.1, R-2000® requirements, or equivalent. **Part 3 Buildings – Multi-Unit Residential, Office and Retail (more than 3 storeys or more than 600 m² in gross floor area).** Develop a whole-building energy model, and design and construct the building to achieve the following whole-building performance metrics: • Total Energy Use Intensity (TEUI): 170 kWh/m²/yr • Thermal Energy Demand Intensity (TEDI): 70 kWh/m²/yr • Greenhouse Gas Emissions Intensity (GHGI): 20 kgCO2/m²/yr. **All Other Part 3 Buildings** Develop a whole-building energy model, and design and construct the building to achieve at least a 15% improvement in energy efficiency over the Ontario Building Code (OBC) SB-10, Division 3 (2017) reference building.	**For Part 9 Residential Buildings:** • Letter of Commitment signed by the owner/developer/builder and an NRCan-registered Energy Advisor that confirms an Energy Advisor has been retained for the development, and that outlines the minimum requirement and selected Compliance Options (e.g. Builder Option Package) that will be achieved. As-Build Documentation Requirements (for Great, Excellent, Exceptional levels) • Proof of certification from third-party verifier (e.g. EnerQuality, Passive House Canada) **For Part 3 Buildings:** Energy Model Documentation Requirements: • Energy Model Report summarizing key modelling inputs, outputs, and assumptions, signed by a licensed professional. • Working Energy Model Simulation Files. • Mechanical and Electrical Design Brief. • Related supporting drawings and calculations done externally from the energy modelling software (for example, thermal bridging calculations). As-Built Energy Model Documentation Requirements (for Great, Excellent, Exceptional levels): • Updated Energy Model Report. • Working Energy Model Simulation Files. • Mechanical and Electrical Design Brief. • Modelling Note: General, Building Level, Plant Level, System Level, Occupancy and Minimum Outdoor Air Rates, Warnings and Errors. • Take-off Calculations (Modeller's external calculations to support the model inputs). If applicable, the calculation for model workarounds, exceptions, process energy savings, renewable energy systems, district energy systems, or other required calculations. • Zoning Diagrams. • Outdoor Air Calculation Spreadsheets. • Architectural Drawings and Specifications (issued for construction/as-built).

Great:	+4 additional points (total 7 points)	**Part 9 Residential Buildings (3 storeys or less and less than 600 m² in gross floor area).** Design, construct, and label the building(s) to achieve ENERGY STAR® for New Homes version 17.1, R-2000® requirements, or equivalent. **Part 3 Buildings – Multi-Unit Residential, Office and Retail (more than 3 storeys or more than 600 m² in gross floor area).** Develop a whole-building energy model, and design and construct the building to achieve the following whole-building performance metrics: • Total Energy Use Intensity (TEUI): 135 kWh/m2/yr • Thermal Energy Demand Intensity (TEDI): 50 kWh/m2/yr • Greenhouse Gas Emissions Intensity (GHGI): 15 kgCO2/m2/yr **All Other Part 3 Buildings** Develop a whole-building energy model, and design and construct the building to achieve at least a 25% improvement in energy efficiency over the Ontario Building Code (OBC) SB-10, Division 3 (2017) reference building.	• Mechanical Drawings and Specifications (issued for construction/as-built). • Electrical Drawings and Specifications (issued for construction/as-built). Note: For guidance on calculating TEUI, TEDI, and GHGI, please refer to the Energy Efficiency Report Submission & Modelling Guidelines for the Toronto Green Standards.
Excellent:	+6 additional Points (total 13 points)	**Part 9 Residential Buildings (3 storeys or less and less than 600 m² in gross floor area).** Design and construct the building(s) to be Net Zero ready in accordance with the CHBA Net Zero Home Labelling Program, or equivalent. **Part 3 Buildings – Multi-Unit Residential, Office and Retail (more than 3 storeys or more than 600 m² in gross floor area).** Develop a whole-building energy model and design the building to achieve the following whole-building performance metrics associated with a near-net zero emissions level of performance: • Total Energy Unit Intensity (TEUI): 100 kWh/m²/yr • Thermal Energy Demand Intensity (TEDI): 30 kWh/m²/yr • Greenhouse Gas Emissions Intensity (GHGI): 10 kgCO2/m²/yr	

		All Other Part 3 Buildings Develop a whole-building energy model and design the building to achieve at least a 37% improvement in energy efficiency over the Ontario Building Code (OBC) SB-10, Division 3 (2017) reference building.	
Exceptional	+8 additional points (total 21 points)	**Part 9 Residential Buildings (3 storeys or less and less than 600 m^2 in gross floor area).** Design and construct the building(s) in accordance with the CHBA Net Zero Homes Labelling Program, or Passive House standards, or equivalent. **Part 3 Buildings – Multi-Unit Residential, Office and Retail (more than 3 storeys or more than 600 m^2 in gross floor area).** Develop a whole-building energy model and design the building to achieve the following whole-building performance metrics associated with a near-net zero emissions level of performance: • Total Energy Unit Intensity (TEUI): 75 kWh/m^2/yr • Thermal Energy Demand Intensity (TEDI): 15 kWh/m^2/yr • Greenhouse Gas Emissions Intensity (GHGI): 5 kgCO2/m^2/yr **All Other Part 3 Buildings** Develop a whole-building energy model and design the building to achieve at least a 50% improvement in energy efficiency over the Ontario Building Code (OBC) SB-10, Division 3 (2017) reference building.	
Good:	3 points	**Metering** Install electricity and/or thermal sub-meters for all energy end-uses that represent more than 10% of the building's total energy consumption, following the requirements laid out in LEED v4 Reference Guide Advanced Energy Metering credit. For buildings with multiple tenants, provide energy sub-metering for each commercial/institutional tenant, and per residential suite.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder identifying sub-metering that will be provided, accompanied by electrical and mechanical single line diagrams that indicate the provision of electricity and thermal sub-meters. A metering plan listing all meters along with type, energy source metered, diagrams, and/or references to design documentation.

Great:	3 points	**Building Commissioning** Conduct best practice commissioning, per the requirements referenced in LEED BD+C v4 Fundamental Commissioning and Verification pre-requisite. (Building commissioning is a systematic process of verifying that the various building sub-systems such as building envelope, mechanical (HVAC), plumbing and lighting systems are constructed and operational per the project requirements and design intent.)	Letter of Commitment signed by the owner/developer/builder confirming that building commissioning will be carried out per the requirements of LEED v4 BD+C Fundamental Commissioning and Verification pre-requisite.
Excellent:	4 points	**Airtightness Testing** Conduct a whole-building air leakage test to improve the quality and airtightness of the building envelope.	Letter of Commitment signed by the owner/developer/builder that an airtightness testing provider will be retained to conduct a whole-building air leakage test. Note: • It is recommended that applicants follow ASTM WK35913 Standard Test Method for Determining the Air Leakage Rate of Large or Multi-zone Buildings or US Army Corps of Engineers (USACE) Air Leakage Test Protocol. • Projects will conduct an operational envelope airtightness test under negative pressure producing a multi-point regression. However, projects are permitted to pursue negative and positive pressure testing and produce a building envelope test where HVAC-related openings are excluded as in the Passive House standard. • Projects will target a test pressure of 75Pa. Projects unable to achieve 75Pa must follow either ASTM W35913 alternative test methods; Repeated Single-Point Test or a Repeated Two-Point test and demonstrate compliance using projected curves for airtightness at 75Pa. • If the whole building cannot be tested as one zone, it is acceptable to test a zone that can be partitioned temporarily with adjacent zones “Guarded” as buffer zones using blower door equipment. Note that the air leakage rate should be normalized to the exterior surface area and not include the guarded surface areas. • All materials, assemblies, and systems that form the continuous air barriers systems must be installed including any HVAC equipment, ducts, and fittings included in the test boundary. • Upon completion, the applicant shall provide a completed airtightness testing report to City officials. • For low-rise developments, conduct airtightness testing for 15 percent of the dwellings.
References:	• Toronto Green Standard v3: Energy Efficiency, GHG & Resilience (CF, LR, MHR) • Whitby Green Standard v1 (2020): ECC1.4, ECC1.5, ECC1.6, ECC1.7, ECC.V.4, ECC.V.6 • Thinking Green Item (2018): 13 (Site Plan)		

IB-13: RAINWATER AND GREYWATER USE			
Intent:	To reduce potable water use for interior building functions.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 point	Rainwater or greywater is captured on-site and used for exterior uses (e.g. landscape irrigation). Buildings are designed for rainwater and/or greywater use readiness (e.g. plumbing infrastructure rough-ins or dedicated cistern space for rainwater or greywater use or greywater irrigation that may be connected in the future are included in the building).	Rainwater Use for Exterior Functions: • On the Landscape Plan identify the type and location of rainwater capture/use infrastructure. Greywater Use for Exterior Functions: • On the Landscape Plan identify the type and location of greywater capture/use infrastructure. Greywater and/or Rainwater Use for Interior: • Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder committing that the project will either be designed to provide greywater and/or rainwater use for internal functions, specifying which internal functions and the potential technology/infrastructure that will be used. Note: • Greywater is wastewater generated from dish washing, hand washing, laundry, bathing and showering. • All Greywater and Rainwater use must comply with Ontario Building Code.
Great:	+3 additional points (total 4 points)	Greywater Use for Interior Functions: Greywater is captured on site, treated, and used for toilet and urinal flushing, as well as priming flood drains within a home. **OR** Rainwater Use for Interior Functions: Rainwater is captured on site and used for toilet and urinal flushing.	
References	• Thinking Green (2018): 19 (Site Plan)		

IB-14: BACK-UP POWER			
Intent:	To encourage the provision of back-up power that enables the functioning of key utilities/building functions during power failures resulting from extreme weather events.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional (*)**

	Points	Requirement	Documentation
Good:	1 point	Rough-ins to allow for the installation of external generators/auxiliary power supply at a later date are provided.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder stating that all residential dwellings will be provided rough-ins to allow for the installation of external generators/auxiliary power supply at a later date. Note:

			• Applies to all residential building types.
Good	1 point	For mid-rise and high-rise buildings, a refuge area with heating, cooling, lighting, potable water, and power available for 72 hours is provided.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder stating that the refuge area will be provided and supplied with heating, cooling, lighting, potable water, and power available for 72 hours. On the Floor Plans, identify the common refuge area. Note: • (*) This metric is not applicable to Industrial, Commercial, Institutional developments. • Applies to residential buildings that contain central amenity/lobby space. A refuge area should be a minimum size of 93 square meters (1000 square feet) and/or 0.5 square meters per occupant, and may act as building amenity space during normal operations. • Common refuge areas are temporarily shared, lit spaces where vulnerable residents can gather to stay warm or cool, charge cell phones and access the internet, safely store medicine, refrigerate basic food necessities, access potable water and toilets, and perhaps prepare food.
Great	3 points	72 hours of back-up power to essential building systems is provided.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder stating that at least 72 hours of back-up power to essential building systems will be provided. Note: • Provide a 72 hour minimum back-up power system, preferably using a non-fossil fuel source, to ensure power is provided to the refuge area, 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. • Applies to multi-unit residential buildings only.
References:	• Durham Region Climate Resilient Standard for New Houses (Draft 2018), Basement Flood Protection Measures; Enhanced Protection #18 • Toronto Green Standard v3 Tier II: Energy Efficiency, GHG & Resilience (GHG 5.2) (CF, MHR) • City of Toronto. Minimum Backup Power Guidelines for MURBs, Voluntary Performance Standards for Existing and New Buildings (2016). • City of Brampton. Emergency Preparedness Guide. • Whitby Green Standard v1 (2020): ECC.V.7 (Site Plan)		

IB-15: EXTREME WIND PROTECTION FOR GROUND-ORIENTED DEVELOPMENT			
Metric Intent:	To increase the resistance of homes to the impacts of high wind events, and make them more resilience to the impacts of climate change.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	2 points	Roof to Wall Connections: • Roof rafters, roof trusses or roof joists are tied to load-bearing wall framing in a manner that will resist a factored uplift load of 3 kN. This measure requires adequate connection of the top plate to the supporting wall studs, combined with adequate continuous vertical load path. If continuous structural wall sheathing (see Measure A.2.3) is not applied, then a top-to-bottom inspection to address all potential weak links in the continuous vertical load path using additional tires, straps or related measures should be applied. **AND** • When engineered connectors are used, truss manufacturers will be requested to supply appropriate roof-to-wall connections along with trusses. Stud to Sill Plate Connection: • Metal straps or connectors are used to connect lower storey wall studs to the sill plate.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder stating that roof to wall and stud to sill plate connections will be provided as specified in this metric. Note: • Builders should request that truss manufacturers supply appropriate roof-to-wall connectors along with trusses.
References:	• Institute for Catastrophic Loss Reduction, Increasing High Wind Safety for Canadian Homes: A Foundational Document for Low-Rise Residential and Small Buildings (2019) • Sandink, D., et al. Increasing High Wind Safety for Canadian Homes: A Foundational Document for Low-Rise Residential and Small Buildings. (April 2019) • Whitby Green Standard v1 (2020): ECC1.8 (Site Plan)		

IB-16: SUB-METERING OF THERMAL ENERGY AND WATER			
Metric Intent:	To include sub-metering that allows measurement of individual unit consumption, which helps residents understand how their behaviour drives energy costs, and motivates change in behaviour, often resulting in reductions in energy consumption.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	2 points	Buildings are designed to include thermal energy meters for each tenant in multi-tenant residential, commercial/retail buildings.	Letter of Commitment signed by a qualified professional (e.g. architect, professional engineer) and the owner/developer/builder to confirm that all buildings will be designed and constructed to include thermal energy and/or water meters for each unit.
Good	2 points	Buildings are designed to include water meters for each tenant in multi-tenant residential, commercial/retail buildings.	
References:	• Toronto Green Standards v3 Tier II: Energy Efficiency, GHG & Resilience (GHG 4.4) (CF, MHR) • Whitby Green Standard v1 (2020): SW.V.1, ECC.V.4 (Site Plan) • LEED BD+C (v4) WE: Water Metering, EA: Advanced Energy Metering • Thinking Green 2018): 20 (Site Plan)		

IB-17: LIGHT POLLUTION REDUCTION			
Intent:	To reduce nighttime glare and light trespass from the building and the site. Light pollution can be perceived as an inefficient use of energy in addition to its negative impacts on neighbors and night time animals.		
Applicable to:	☐ Block Plan	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	Requirement	Documentation
Good:	1 point	All exterior fixtures are Dark Sky Compliant	Letter of Commitment from a qualified professional (e.g. architect, professional engineer), and the owner/developer/builder confirming that all fixtures intended for exterior lighting will be Dark Sky Compliant. Note: • Dark Sky Compliant fixture must have the Dark Sky Fixture Seal of Approval which provides objective, third-party certification for lighting that minimizes glare, reduces light trespass and doesn't pollute the night sky. • 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. • Rooftop and exterior facade architectural illumination must be directed downward and turned off between the hours of 10 p.m. and 6 a.m.

			• All exterior light fixtures should be efficient while providing minimum illumination levels sufficient for personal safety and security. • Efficient exterior lighting is defined as 60 Lumens/Watt minimum system efficiency. • Safety and security lighting should minimize glare and/or light trespass. • For more information see the Best Practices for Effective Lighting.
References:	• LEED ND (v4) GIB: Light Pollution Reduction • LEED BD+C (v4.1) SS: Light Pollution Reduction • Toronto Green Standard v3 Tier I: Ecology (EC5.1) (CF, LR, MHR) • City of Vaughan Urban Design Guidelines • City of Markham Bird Friendly Guidelines		

IB-18: BIRD-FRIENDLY DESIGN			
Intent:	To reduce the incidents of bird collisions and provide an urban environment where birds can thrive. The built environment can have strong negative impacts on birds. Design and system selection can result in fewer bird collisions and deaths.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**
	Points	**Requirement**	**Documentation**
Good:	2 points	A combination of Bird-Friendly Design strategies are applied to at least 85% of contiguous glass area greater than 2 square meters (m^2) within the first 16 meters of the building above-grade (including interior courtyards) and above green roofs. **AND** The remaining 15% of glazed windows do not need to be treated unless the glazing is larger than 2 square meters (m^2) or in close proximity to open spaces, a green roof or a natural heritage feature. Bird-Friendly Design Strategies may include: • Visual patterns on glass, • Visual markers provided on the glass of proposed buildings with spacing no greater than 50 millimeters by 50 millimeters., • Window films, • Fenestration patterns, • Angled glass downwards, • Reducing night sky lighting.	On the building Elevation drawings: • Highlight and declare the total area of contiguous glass below 16 meters above grade that is greater than 2 square meters. • Indicate the areas treated with bird friendly design strategies, noting which strategies are being used. • Confirm that the visual markers on the glass have spacing no greater than 50 millimeters by 50 millimeters. • Quantify the total area of continuous glass that has been treated by bird-friendly design strategies and confirm that it is at least 85%. Complete and include the accompanying Brampton SNCP IB-18 Excel Sheet as part of the submission documentation.

Good:	2 points	Bird-Friendly Design strategies are applied to ground-oriented residential development that is adjacent to the natural heritage system, parks and other open spaces.	
References:	• City of Vaughan: Urban Design Guidelines. • City of Markham Bird Friendly Guidelines • Whitby Green Standard v1 (2020): LUN1.7 (Site Plan) • Toronto Green Standard v3 Tier I: Ecology (EC4.1) (CF, LR, MHR); Tier II: Ecology (EC4.3) (LR), (EC4.4) (MHR) • Thinking Green Item (2018): 10 (Site Plan)		

IB-19: SOLID WASTE			
Intent:	To promote waste reduction and diversion of materials from landfills. A reduction in waste can be a very cost-effective method for material savings and results in fewer contributions to landfills and lower carbon emissions due to savings in materials.		
Applicable to:	☐ Block Plan	☐ Draft Plan of Subdivision	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional (*)**
	Points	**Requirement**	**Documentation**
Good:	1 point	For multi-unit residential development, provide a waste sorting system for garbage, recycling, and organics. If a building has 31 units or more or is more than 5 storeys, provide three separate chutes for garbage, recycling, and organics collection on all floors.	On the Site Plan Drawing and/or Floor Plans identify: • The waste sorting systems for garbage, recycling, and organic waste.
Good:	1 point	For Residential: Accessible waste storage room with minimum 25 square meters (m^2) floor space for the first 50 units, plus an additional 13 square meters (m^2) for each additional 50 Units to accommodate containers and compactor units is provided. For Non-residential: Provide a fully enclosed waste storage space to accommodate garbage and materials diversion of recycling and organics.	On the Site Plan Drawing and/or Floor Plans identify: • The waste storage areas. Determine the floor area provided for the waste storage space and identify the separate garbage storage, recycling storage, and organics storage, • (Residential only): the waste storage area required based on the number of dwelling units and declare on Floor Plans/Site Plan drawing.
Good:	1 point	A minimum of 10 square meters (m^2) for bulky items and items eligible for special collection services is provided.	On the Site Plan Drawing and/ or Floor Plans identify: • The storage for bulky items and declare the area. The 10m2 may not be shared with other purposes and must be solely dedicated to bulky waste, although it may be in the same room as other waste storage. • Bulky items are household items greater than 1.2 meters in any one dimension or weigh more than 20 kilograms (including furniture).

Great:	1 point	For Residential only: Provide a dedicated collection area or room for the collection of household hazardous waste and/or electronic waste.	On the Site Plan Drawing and/ or Floor Plans identify: • A dedicated collection area or room for the collection of household hazardous waste and/or electronic waste. Note: • (*) This metric is not applicable to Industrial, Commercial, Institutional developments. • Household Hazardous Waste (HHW) includes car products, motor oil, windshield fluid; household cleaning products; paint, glue, primers, stains; pesticides and garden products; cooking oil; batteries; propane tanks; CFLs, syringes, medical sharps; medication; air fresheners, swimming pool chemicals.
References:	• Toronto Green Standard v3 Tier I: Solid Waste (SW1.1, SW1.2, SW1.3) (MHR); Tier II: Solid Waste (SW1.6) (MHR), (SW 1.2) (LR) • Whitby Green Standard v1 (2020): ZW1.1, ZW1.2 (Site Plan) • Thinking Green (2018): 34 (Site Plan)		

INNOVATION

I-1: INNOVATION			
Intent:	To encourage applicants to achieve innovative performance. Innovation strategies must demonstrate a comprehensive approach, have significant, measurable environmental benefits, and be better than standard practice.		
Applicable to:	**☒ Block Plan**	**☒ Draft Plan of Subdivision**	**☒ Site Plan**
	☒ Residential	**☒ Mixed Use**	**☒ Industrial, Commercial, Institutional**

	Points	**Requirement & Documentation**
Exceptional:	Up to a total of 10 points based on the measurable sustainability benefit provided (additional points be awarded at the discretion of the municipality)	The proposed Innovation metric must demonstrate a quantitative improvement in sustainable performance by identifying or establishing a baseline of standard performance, and comparing that benchmark with the final design performance. Should this Innovation metric be pursued by an applicant, as part of first submission, the applicant must provide a high-level concept of the proposed Innovation metric for review by the municipality. This concept should include a description of the sustainability benefit being pursued and the proposed point allocation. As part of the application review process of the first submission, the municipality will then provide a response as to whether the applicant's proposal will be considered further. Should the applicant's proposal be considered acceptable by the municipality to pursue further, applicants will be required to demonstrate the following as part of the second submission, to the satisfaction of the municipality. The applicant must explain in detail the benefit of the proposed Innovation metric and submit: • The intent of the proposed innovation metric, • The proposed requirements for compliance, • The proposed submittals to demonstrate compliance, • The design approach to strategies used to meet the requirements. Innovation points will only be considered for strategies not already identified in the menu of existing metric options. Innovation points are not awarded for the use of a particular product or design strategy if the technology fulfills achievement of an existing metric, even if the project is not attempting to earn that metric. Corporate strategies are not considered innovative. Applicants may choose to explore innovative measures listed in the Innovation Library as detailed below: *The Innovation Library* • Provide a Tall Wood Building, an exemplary performance of in the intent behind Embodied Carbon metric and a demonstration of leadership in tall wood construction. A tall wood building is defined as a building over 6 storeys that uses wood for its structural system and is built using mass timber construction. Tall wood building projects with mass timber requires Alternative Solutions for approval under Ontario Building Code (OBC). Ontario's Tall Wood Building Reference (2017) is a technical resource to help applicants with how tall wood buildings can be designed as alternative solutions in a way that achieves the level of performance required by the Ontario Building Code. • Plan, design, and construct neighbourhoods whereby multiple buildings rely on a District Energy Systems for thermal energy needs. • Plan, design, and construct low-density residential areas such that they do not require retail natural gas service. Low-density residential dwellings will not rely on natural gas or other fossil fuel for any energy and heating source. Note: • Development proponent can also request to meet with the municipality to discuss a potential innovation metric prior to the Pre-Consultation submission.
References:	• LEED ND (v4) IN: Innovation • LEED BD+C (v4) IN: Innovation • Whitby Green Standard v1 (2020): Tier II: Innovation (Draft Plan of Subdivision, Site Plan)	

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