

Whitby Green Standard Reference Guide

2025

Whitby

Prepared By:

URBAN EQUATION

The Planning Partnership

For More Information:

Visit: www.whitby.ca/community-and-people/environment-and-sustainability/
Email: info@Whitby.ca
Call: 905-668-5803

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SECTION 1.

OVERVIEW OF WHITBY GREEN STANDARD

In response to the Town of Whitby's declaration of a Climate Emergency in 2019, the Whitby Green Standard (WGS) was introduced in September 2020 to ensure that new development supports the Town's sustainability objectives. This update to Version 2 reinforces the Town's commitment to sustainability and ensures continued alignment with the Climate Emergency Response Plan.

1.1 The Whitby Green Standard

The Whitby Green Standard (WGS) is a set of performance measures developed for the purpose of evaluating the sustainability of new development in the Town of Whitby. This Reference Guide describes the components of the WGS, what it is and how it works. It serves as a comprehensive resource for applicants, providing essential guidance to help ensure that their WGS applications meet the sustainability objectives of the WGS, thereby supporting a more efficient and streamlined application process.

The WGS supports several Town strategic documents including:

- Whitby Official Plan
- Whitby Community Strategic Plan
- Whitby Climate Emergency Response Plan
- Zero Carbon Whitby
- Durham Community Energy Plan
- Durham Community Climate Adaptation Plan

The WGS provides a framework designed to assist the Town in implementing its vision for a sustainable community through the development review process. The WGS will contribute to:

- Building a more resilient building stock
- Mitigating climate change impacts
- Improving energy efficiency
- Using infrastructure efficiently
- Reducing potable water usage
- Lowering greenhouse gas emissions
- Recognizing the positive impact of green space and vegetation

By the Numbers

The WGS is a tiered program designed to tackle upfront emissions caused by construction as well as operating emissions.

37% 37% of global emissions are caused by **constructing** new buildings.



34% 34% of global emissions are caused by **operating** buildings.



Source: UN Global Alliance for Buildings and Construction - Global Status Report (2024)

1.2 Version 1 to Version 2 Update

When the WGS version 1 (v1) was released in 2020, the tiered structure was designed to ensure that the minimum performance requirements increase by one tier every four years. As four years have passed, the WGS has to reflect new policies and plans at both the Town and regional levels, while also aligning with industry best practices in environmental and social sustainability. The WGS update to version 2 was delivered in the following stages:

- Background Research and Analysis
- Stakeholder Engagement
- Update Checklists
- Preparation of Final Documents

Following the release of v1 in 2020, the Town developed a Climate Emergency Response Plan and the Zero Carbon Whitby framework. Both documents leverage the WGS as a key tool to help achieve the Town's goal of net-zero corporate and community emissions by 2045.

As the WGS progresses, it's important to recognize that the industry has also evolved since 2020. Several changes were identified through the WGS update, including:

- Advances in building technology and industry capability
- New standards and industry best practices (e.g. stormwater management, building commissioning)
- Reduced timelines for action (e.g. accelerated carbon targets)
- Ontario legistlation impacting planning review timelines and municipal authority

These trends highlight the ongoing innovation in the industry and underscore the importance of adapting standards to meet emerging challenges and advancing technologies.

Overtime, the Town will continue to refine the WGS to ensure alignment with industry best practices and increase the minimum level of sustainability performance measures, demonstrating its commitment to enhance sustainable development within the Town.



SECTION 2.

USING THE WHITBY GREEN STANDARD

The WGS is a flexible, living document designed to respond to current and emerging climate change challenges.

2.1 Performance Tiers

Version 2 of the WGS has been streamlined to help developers focus on the elements that have the greatest impact on the Town's sustainability and climate change goals. The updated WGS includes three (3) tiers: Tier 1 reflects good performance, Tier 2 reflects better performance, and Tier 3 reflects the highest level of performance, equivalent to net-zero carbon standards (Figure 1).

The criteria within each Tier have been reorganized into three categories: Priority, Site-Specific, and Value-Added.

Priority: There are six (6) criteria that will be required for WGS applicants. Projects aiming to achieve Tier 1 would only have to complete the Priority criteria.

Site-Specific : There are six (6) criteria that will only apply to applications where the criteria are relevant to the development. Applicants aiming to achieve Tier 2 or Tier 3 are only required to complete the site-specific criteria if they are applicable to their project, as determined by the Sustainability Division.

Value-Added: These criteria are encouraged but will not be required.

Note that for some performance measures, there is a stepped increase in performance between tiers. For these performance measures, the applicant must only demonstrate compliance with the tier being pursued.



Figure 1: Tier Performance

2.2 Checklist Anatomy

The following excerpt (Figure 2) illustrates the various components of the checklists: for further information, please refer to the Whitby Green Standard checklist and the glossary at the end of this document.

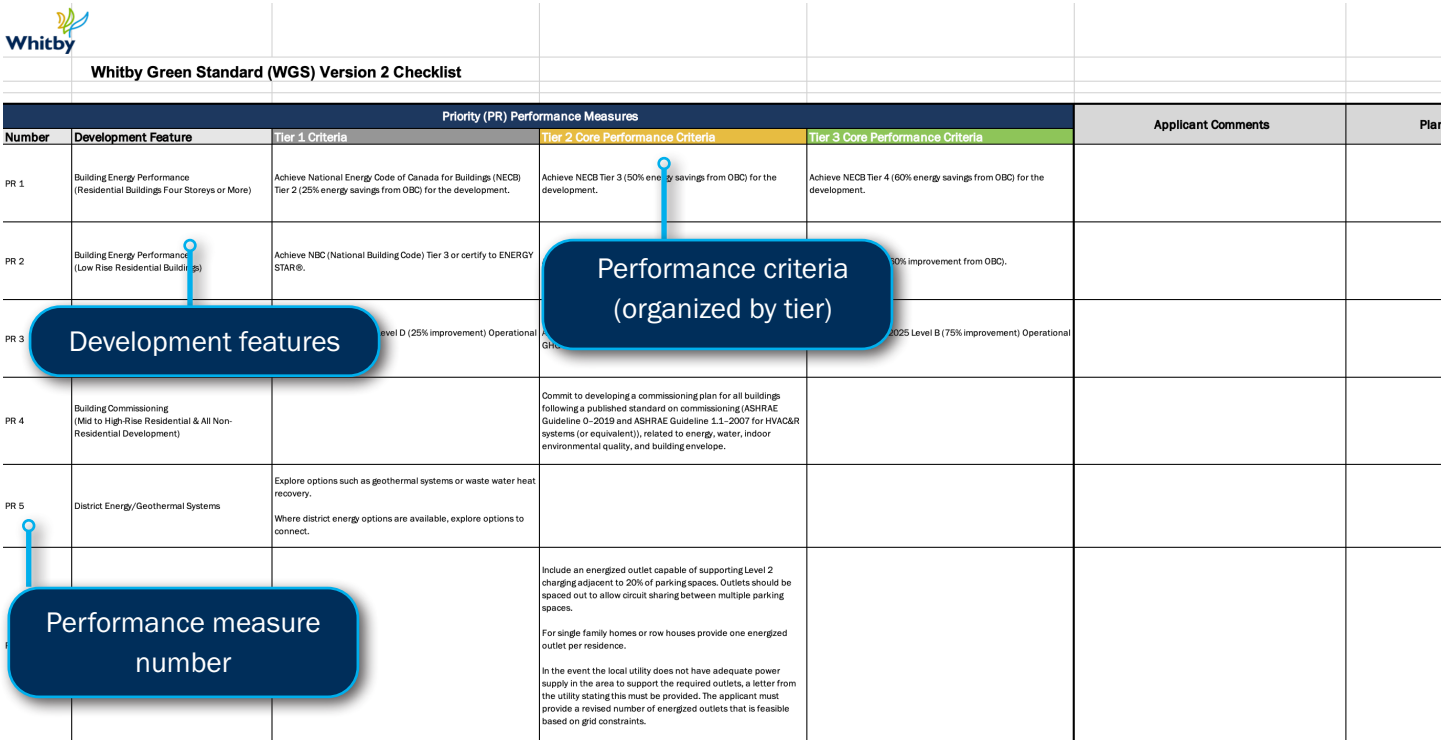


Figure 2: Whitby Green Standard Checklist Excel Template

2.3 Criteria Tables

These criteria tables explain the checklist in greater detail adding information about documents required, what applicant comments are needed and if there are any additional reference resources.

Priority (PR) Performance Measures

Development Feature	Building Energy Performance (for residential buildings four storeys or more)		
Criteria	Tier 1	Tier 2	Tier 3
PR 1	Achieve National Energy Code of Canada for Buildings (NECB) Tier 2 (25% energy savings from OBC) for the development.	Achieve NECB Tier 3 (50% energy savings from OBC) for the development.	Achieve NECB Tier 4 (60% energy savings from OBC) for the development.
Documentation Requirements	Provide an energy model report that demonstrates compliance with the requirements.		
Applicant Comments	Provide energy modelling report with energy savings declaration from energy modeler.		
Resources and Additional Information	User's Guide for the National Energy Code of Canada for Buildings 2020 - National Research Council Data National Energy Code of Canada for Buildings 2020 - National Research Council Canada		
Development Feature	Building Energy Performance (for low-rise residential developments)		
Criteria	Tier 1	Tier 2	Tier 3
PR2	Achieve NBC (National Building Code) Tier 3 or certify to ENERGY STAR®.	Achieve NBC Tier 4 (25% improvement from OBC).	Achieve NBC Tier 5 (60% improvement from OBC).
Documentation Requirements	• An energy model report that demonstrates compliance with the requirements.		
Applicant Comments	Energy Efficiency Design Summary Form with selected model report attached.		
Resources and Additional Information	User's Guide for the National Energy Code of Canada for Buildings 2020 - National Research Council Data National Energy Code of Canada for Buildings 2020 - National Research Council Canada		
Development Feature	Building Emissions Performance		
PR3	Achieve NECB/NBC 2025 Level D (25% improvement) Operational GHG Emissions.	Achieve NECB/NBC 2025 Level C (50% improvement) Operational GHG Emissions.	Achieve NECB/NBC 2025 Level B (75% improvement) Operational GHG Emissions.
Documentation Requirements	Provide • An energy model report that demonstrates compliance with the requirements • Manufacturers information for the chosen heating, cooling, and hot water equipment along with applicant comments describing any combustion equipment used on-site.		
Applicant Comments	Energy modelling report with summary document noting energy savings and emission reductions.		
Resources and Additional Information	The NECB 2025 GHG Emissions Performance Levels can be found in the following report "Operational GHG Emissions Requirements for New Buildings and Energy Efficiency Requirements for Alterations to Existing Buildings"		
Development Feature	Building Commissioning (for mid to high-rise residential & non-residential development)		
Criteria	Tier 1	Tier 2	Tier 3
PR4		Commit to developing a commissioning plan for all buildings following a published standard on commissioning (ASHRAE Guideline 0–2019 and ASHRAE Guideline 1.1–2007 for HVAC&R systems (or equivalent)), related to energy, water, indoor environmental quality, and building envelope.	
Documentation Requirements	Letter of engagement with independent Commissioning authority and declaration from developer to comply with commissioning plan.		
Applicant Comments	Letter of engagement with independent Commissioning authority and declaration from developer to comply with commissioning plan.		
Resources and Additional Information	ASHRAE Guideline 0–2019 and ASHRAE Guideline 1.1–2007 for HVAC&R systems CSA Z5000:18 (R2022) | Product | CSA Group		

Development Feature	District Energy/Geothermal Systems		
Criteria	Tier 1	Tier 2	Tier 3
PR5	Explore options such as geothermal systems or waste water heat recovery. Where district energy options are available, explore options to connect.		
Documentation Requirements	Include proof of correspondence with existing district energy providers, if applicable.		
Applicant Comments	Describe how options were explored and any correspondence with existing district energy providers if applicable.		
Resources and Additional Information	Quest Canada has prepared a District Energy 101 micro-site which contains a district energy 101 primer, case studies, and information on the different technologies available.		
Development Feature	Electric Vehicle Charging Stations		
Criteria	Tier 1	Tier 2	Tier 3
PR6		Include an energized outlet capable of supporting Level 2 charging adjacent to 20% of parking spaces. Outlets should be spaced out to allow circuit sharing between multiple parking spaces. For single family homes or row houses provide one energized outlet per residence. In the event the local utility does not have adequate power supply in the area to support the required outlets, a letter from the utility stating this must be provided. The applicant must provide a revised number of energized outlets that is feasible based on grid	
Documentation Requirements	• Project drawings showing the proposed location of energized outlets - Site Plan Drawings - with project parking statistics include number and location of EV spaces - Notations indicate location of EV spaces, performance level and EVEMS on Parking Plans • Utility correspondence letter if the local utility does not have adequate power supply.		
Applicant Comments	• Provide a summary statement with applicable supporting documentation (with NOTATIONS) to demonstrate the criterion has been met		
Resources and Additional Information	The Clean Air Partnership has released an 'EV Costing Study' which was created to inform local governments, developers, electrical designers, utilities, and other stakeholders, about the costs of making parking in new construction EV Ready and the design strategies that can help minimize these costs.		

Site Specific (SS) Performance Measures

Development Feature	Accessibility		
Criteria	Tier 1	Tier 2	Tier 3
SS1		At least 18% of suites within a multi-unit residential building must be designed with basic accessibility features such as a barrier-free path of travel and doorway into the: • kitchen • bedroom • living room • full bathroom	At least 20% of suites within a multi-unit residential building must be designed with basic accessibility features such as a barrier-free path of travel and doorway into the: • kitchen • bedroom • living room • full bathroom
Documentation Requirements	Create and share a floor plan showing accessible suites.		
Applicant Comments	State the total number of suites, accessible suites and calculate the percentage of accessible suites.		
Resources and Additional Information			
Development Feature	Building Resilience (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
SS2	Provide a refuge area with heating, cooling, lighting, potable water, and power available and 72 hours of back-up power to the refuge area and essential building systems.	Using resources such as Whitby's Climate Emergency Response Program and Climate Insights mapping tool, provide a summary of how the development address key aspects of building resilience.	
Documentation Requirements	Drawings showing the designated spot for a place of refuge.		
Applicant Comments	Summary statement with applicable supporting documentation (with NOTATIONS) to demonstrate the criterion has been met		
Resources and Additional Information	Visit climateinsight.ca for free resources to better understand how to make the development more resilient to the impacts of climate change.		
Development Feature	Tree Canopy and Soil Volume		
Criteria	Tier 1	Tier 2	Tier 3
SS3		A 30% tree canopy for the site area, excluding the building footprint, must be achieved within 15 years of development. Each separate, new, or retained tree planting area must have access to a minimum soil volume of 30 m^3 of uncompacted soil or employ soil cell technologies.	
Documentation Requirements	Landscape plan that indicates species and quantities of planting areas. Tree modeling will be required and calculations showing correct soil volumes		
Applicant Comments	Provide details explaining how criteria will be met.		
Resources and Additional Information	iTreeTools Resources		

Development Feature	Heat Island Effect (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
SS4	Comply with one of the following strategies: Option 1 - Roof: 50% of the available roof area of all new buildings within the project have a minimum solar reflectance index value of 82 (for low-sloped roofs <2.12) or 39 (for steep-sloped roofs >2.12). Option 2 - Non-roof: Provide any combination of the following strategies for 50% of the site hardscape (including roads, sidewalks, courtyards and parking lots): 1. Shade (within 5 years of occupancy) 2. Paving materials with a Solar Reflectance Index (SRI) of at least 29 3. Open grid pavement system		
Documentation Requirements	Roof plan with notation of SRI or annotated plan detailing all hardscapes areas and/or description of strategy used to address site hardscapes.		
Applicant Comments	Summary statement with applicable supporting documentation (with NOTATIONS) to demonstrate the criterion has been met - Roof plan, breakdown of materials of the site hardscape, construction material SRIs.		
Resources and Additional Information	Durham Region's 'Keeping Our Cool – Urban Heat Strategy' provides an overview of urban heat island causes, impacts, high risk areas in Durham, and recommended reduction measures.		
Development Feature	Bird and Bat Friendly Glazing: For residential buildings four storeys or more and non residential buildings		
Criteria	Tier 1	Tier 2	Tier 3
SS5	Treat all glass balcony railings within the first 12 m of the building above grade. Fly-through conditions: Treat glazing at all heights resulting in fly-through conditions with visual markers at a spacing of no greater than 50 mm x 50 mm. Fly through conditions that require treatment include: • Glass corners • Parallel glass • Building integrated or free-standing vertical glass • At-grade glass guardrails • Glass Parapets.	Use a combination of the following strategies to treat a minimum of 95% of all exterior glazing within the greater of the first 12 m of the building above grade or the height of the mature tree canopy (including all balcony railings, clear glass corners, parallel glass and glazing surrounding interior courtyards and other glass surfaces): • Low reflectance, opaque materials. • Visual markers applied to glass with a maximum spacing of 100 mm x 100 mm. • Building-integrated structures to mute reflections on glass surfaces.	
Documentation Requirements	Documents submitted through building permit application - Complete a Bird-Friendly Design Statistics form (refer to Toronto WGS bird-friendly template) - Notations on Elevation Plans include treatment area, and material legend showing type, density and colour of visual markers, and High Hazard Areas		
Applicant Comments	Summary statement of bird friendly design best practices used with applicable supporting documentation (with NOTATIONS) to demonstrate the criterion has been met		
Resources and Additional Information	The City of Toronto's 'Bird Friendly Best Practice – Glass' answers many of the most common questions on bird-friendly design and provides local examples of strategies used.		

Development Feature	Renewable Energy		
Criteria	Tier 1	Tier 2	Tier 3
SS6	Run a protected pathway to the roof to facilitate a future installation of renewable energy equipment.	Size out renewable energy systems for the roof and install appropriately sized conduit to facilitate a future installation of renewable energy equipment.	
Documentation Requirements	• Electric Plans showing conduit locations and sizing.		
Applicant Comments	Summary statement with applicable supporting documentation to demonstrate the criterion has been met.		
Resources and Additional Information	Refer to NRCan Solar Ready Guidelines for more information.		

Value Add (VA) Performance Measures

Development Feature	Ecological Integrity, Restoration of Biodiversity and Pollinator Habitat		
Criteria	Tier 1	Tier 2	Tier 3
VA1	Option 1 - (High Rise Residential and Non Residential) - Provide a minimum of 30% of Available Roof Space as biodiverse green roof to support pollinator species. or Option 2 - Plant 50% (ground area) native plant species, including trees, shrubs and herbaceous plants preferably drought-tolerant and pollinator-friendly outside of the buffer area and within the development limit. Remaining non-native species must be non-invasive.	Option 1 - (High Rise Residential and Non Residential) - Provide a minimum of 50% of Available Roof Space as biodiverse green roof to support pollinator species. or Option 2 - Plant 75% (ground area) native plant species, including trees, shrubs and herbaceous plants preferably drought-tolerant and pollinator-friendly outside of the buffer area and within the development limit. Remaining non-native species must be non-invasive.	Using at least 75% plant species native to southeast Ontario, restore predevelopment native ecological communities, water bodies, or wetlands on the project site in an area equal to or greater than 20% of the development footprint.
Documentation Requirements	Landscape plan with details of chosen plants and their placements.		
Applicant Comments	Provide details explaining how criteria is met.		
Resources and Additional Information	Ontario Trees provides a list of trees and shrubs that are native to Ontario. Refer to Whitby's Landscape Plan Guidelines for Site Plan and Subdivision Developments		
Development Feature	Stormwater Management Quality (private lots/units)		
Criteria	Tier 1	Tier 2	Tier 3
VA2	Provide an enhanced level of protection for water quality through the long-term average removal of 80% of Total Suspended Solids (TSS) on an annual loading basis from all runoff leaving the site.		
Documentation Requirements	• Storm water management report • Landscape plans with location and details of stormwater infrastructure		
Applicant Comments	Provide details explaining how criteria will be met.		
Resources and Additional Information	Low Impact Development guidance.		

Development Feature	Water Balance		
Criteria	Tier 1	Tier 2	Tier 3
VA3		Commit to conducting continuous monitoring for two years after construction to evaluate the success of the mitigation methods (LIDs) to be implemented to maintain water balance within the Site. A monitoring report shall be provided to CLOCA and the Town that outlines the corrective measures to be taken should the LIDs not be functioning as designed. The report shall include reference to party deemed responsible for ongoing monitoring.	Commit to conducting continuous monitoring for five years after construction to evaluate the success of the mitigation methods (LIDs) to be implemented to maintain water balance within the Site. A monitoring report shall be provided to CLOCA and the Town that outlines the corrective measures to be taken should the LIDs not be functioning as designed. The report shall include reference to party deemed responsible for ongoing monitoring.
Documentation Requirements	Storm water management report with a letter of commitment to provide ongoing monitoring		
Applicant Comments	Provide details explaining how criteria will be met.		
Resources and Additional Information	Credit Valley Conservation's Low Impact Development page has a number of resources to guide projects in implementing LIDs. Low Impact Development guidance from Ontario.		
Development Feature	Stormwater Management Quantity		
Criteria	Tier 1	Tier 2	Tier 3
VA4	Employ Best Management Practices that replicate natural site hydrology processes, retain (i.e. infiltrate, evapotranspirate, or collect and reuse) on-site the runoff from the developed site. Reduce the runoff from local rainfall events by an additional 5%, on top of erosion and water balance targets established through applicable Watershed/EA/Stormwater Studies and Geotech/Hydro Reports for this Development, using low-impact development (LID) and green infrastructure (GI) practices.	Employ Best Management Practices that replicate natural site hydrology processes, retain (i.e. infiltrate, evapotranspirate, or collect and reuse) on-site the runoff from the developed site. Reduce the runoff from local rainfall events by an additional 10%, on top of erosion and water balance targets established through applicable Watershed/EA/Stormwater Studies and Geotech/Hydro Reports for this Development, using LID and GI practices.	Employ Best Management Practices that replicate natural site hydrology processes, retain (i.e. infiltrate, evapotranspirate, or collect and reuse) on-site the runoff from the developed site. Reduce the runoff from local rainfall events by an additional 15%, on top of erosion and water balance targets established through applicable Watershed/EA/Stormwater Studies and Geotech/Hydro Reports for this Development, using LID and GI practices.
Documentation Requirements	Storm water management report		
Applicant Comments	Provide details explaining how criteria will be met.		
Resources and Additional Information	Credit Valley Conservation's Low Impact Development page has a number of resources to guide projects in implementing LIDs.		
Development Feature	Potable Water Irrigation for Lots/Units		
Criteria	Tier 1	Tier 2	Tier 3
VA5	Where soft landscaping exists, follow the Outdoor Water Use Reduction credit in LEED Building Design and Construction v4 and achieve a 60% reduction in irrigation use. Low rise residential projects may install rain barrels in lieu of demonstrating a reduction using the LEED methodology.	Where soft landscaping exists, follow the Outdoor Water Use Reduction credit in LEED Building Design and Construction v4 and achieve an 80% reduction in irrigation use. Low rise residential projects may install rain barrels in lieu of demonstrating a reduction using the LEED methodology.	Where soft landscaping exists, follow the Outdoor Water Use Reduction credit in LEED Building Design and Construction v4 and achieve a 100% reduction in irrigation use. Low rise residential projects may install rain barrels in lieu of demonstrating a reduction using the LEED methodology.
Documentation Requirements	• Use Environmental Protection Agency (EPA) WaterSense Water Budget Tool to demonstrate designed reductions; or • Provide Commitment Letter stating chosen rain barrels.		
Applicant Comments	Provide details explaining how criteria is met.		
Resources and Additional Information	The US Environmental Protection Agency (EPA)'s WaterSense Water Budget Tool is used to demonstrate compliance with the reduction in irrigation water use.		

Development Feature	Salt Management		
Criteria	Tier 1	Tier 2	Tier 3
VA6		Provide well-planned, designated snow storage area(s) to ensure meltwater drains as intended in the site design.	
Documentation Requirements	Drawings showing the designated area for snow storage and melting during removal.		
Applicant Comments	Explain the measures chosen, and how they are implemented on the project site.		
Resources and Additional Information			
Development Feature	Waste Collection and Storage (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
VA7	Provide dedicated areas accessible to waste haulers and building occupants for the collection and storage of recyclable and compostable materials for the entire building. Collection and storage areas may be in separate locations. For residential developments, provide a cabinet space in all kitchen suites for the segregated collection of recyclables and garbage. For developments with municipal compost programs, collection space for organics should also be provided.		
Documentation Requirements	• Drawings which show the dedicated areas for the collection and storage of recycling and compostable materials. • For residential projects, applicant comments describing the allowances made for segregated collection within in the suites.		
Applicant Comments	Provide details explaining how criteria is met.		
Resources and Additional Information	Technical and Risk Management Guidelines for Waste Collection Services on Private Residential Property.		
Development Feature	Construction Waste Reduction		
Criteria	Tier 1	Tier 2	Tier 3
VA8	Prepare a construction waste management plan that includes: • A summary of the main types of waste that are expected to be generated on-site. • A description of the waste sorting plans. • A list of the recycling facilities those will be taken to for diversion. A corporate waste management plan may be substituted as long as it provides a list of suitable or regional recycling facilities for each type of waste. Provide a commitment that during construction a monthly report will be submitted to sustainability by the Developer for validation.		
Documentation Requirements	• A letter of commitment stating that waste will be tracked. • Construction Waste Management Plan		
Applicant Comments	Outline the strategies that will be used to reduce waste.		
Resources and Additional Information	The City of Nanaimo, BC has prepared a comprehensive Construction Waste Best Practices Guide. The guide provides strategies for reducing and reusing construction waste.		

Development Feature	Embodied Carbon		
Criteria	Tier 1	Tier 2	Tier 3
VA9		Report embodied carbon of applicable bulk materials based on product specific Environmental Product Declaration (EPD): • concrete • steel • masonry • wallboard • glass • thermal insulation, and • wood Where product specific EPD's are not available, find industry average. OR Commit to a member of project team receiving training on embodied carbon.	Conduct a life-cycle assessment of project for lifecycle phases A1-A3. Low rise residential projects are to use either the BEAM or MCE2 Material Carbon Emissions Estimator methodology, and tools. Achieve an embodied carbon intensity of 250 kg CO2e/m2 (unchanged from Tier 2). Other projects are to use the CAGBC ZCB-Design v4 methodology and achieve an embodied carbon intensity of 250 kg CO2e/m2.
Documentation Requirements	•Low rise residential projects are to submit the completed BEAM or MCE2 spreadsheet tool. •Other projects are to submit a report or printout from the embodied carbon software used showing the total embodied carbon for each lifecycle phase A1-A3. •Team member training certification		
Applicant Comments	Provide details explaining how criteria is met.		
Resources and Additional Information	•The Building for Climate Action 'Building Emissions Accounting for Materials' (BEAM) Tool. •The Natural Resources Canada 'Material Carbon Emissions Estimator' (MCE2) tool. •The Carbon Leadership Forum maintains a list of software that can be used to quantify embodied carbon. •The Carbon Leadership Forum's resource library contains a number of resources to help provide education and benchmarking for embodied carbon in North America. •Canada's National Research Council has prepared a 'Strategies for Low Carbon Concrete' primer which outlines how to reduce the embodied carbon in concrete.		
Development Feature	Functional Entry to the Urban Mobility Network (for residential buildings four storeys or more)		
Criteria	Tier 1	Tier 2	Tier 3
VA10	All new buildings have pedestrian and cyclist connectivity to the active transportation network including sidewalk, multi use pathways, or trails.		
Documentation Requirements	Annotated drawings or maps highlighting paths to active transportation networks.		
Applicant Comments	Provide details explaining how criteria is met.		
Resources and Additional Information			

Development Feature	Bike Storage: Short Term		
Criteria	Tier 1	Tier 2	Tier 3
VA11	All new buildings provide the following short-term bike storage rates: • Non-residential: 2.5% of peak visitors • Multi-unit residential: 2.5% of peak visitors • Retail: 2 spaces for every 465 sqm • Mixed-use: Weighted average as per above requirements Storage should be covered and secure, within line of sight of main entrance.	All new buildings provide the following short term bike storage rates: 1. Non-residential: 5% of peak visitors 2. Multi-unit residential: 5% of peak visitors 3. Retail: 2 spaces for every 465 sqm 4. Mixed-use: Weighted average as per above requirements Storage should be covered and secure, within the line of sight of main entrance.	All new buildings provide the following short term bike storage rates: 1. Non-residential: 7.5% of peak visitors 2. Multi-unit residential: 7.5% of peak visitors 3. Retail: 2 spaces for every 465 sqm 4. Mixed-use: Weighted average as per above requirements Storage should be covered and secure, within the line of sight of main entrance.
Documentation Requirements	Drawings show the location of bicycle parking.		
Applicant Comments	Indicate the occupancy, visitor counts and the number of bicycle parking spaces provided.		
Resources and Additional Information	•Peak visitor totals are to be measured at the moment in a typical 24-hour period when the highest number of visitors are expected to be present. It is meant to be an estimate of a snapshot in time. If peak visitor predictions are too difficult for the applicant, then they may use the prescriptive number of bike storage spaces provided instead. •The Ontario Building Code provides default occupant load values for building projects. Default occupant load values can be used in conjunction with the expected floor area to calculate an estimate of total occupants if expected occupancy is not known.		
Development Feature	Bike Storage: Long Term		
Criteria	Tier 1	Tier 2	Tier 3
VA12		Provide the following long term bike storage rates: 1. Non-residential: 7.5% of peak visitors 2. Multi-unit residential: 30% of all regular building occupants 3. Retail: 7.5% of regular building occupants 4. Mixed-use: Weighted average as per above requirements For non-residential provide at least one on-site shower with changing facility for the first 100 regular building occupants and one additional shower for every 150 regular building occupants thereafter.	Provide the following long term bike storage rates: 1. Non-residential: 10% of peak visitors 2. Multi-unit residential: 30% of all regular building occupants 3. Retail: 10% of regular building occupants 4. Mixed-use: Weighted average as per above requirements For non-residential provide at least one on-site shower with changing facility for the first 100 regular building occupants and one additional shower for every 150 regular building occupants thereafter.
Documentation Requirements	Drawings show the location of bicycle parking.		
Applicant Comments	Indicate the occupancy, visitor counts and the number of bicycle parking spaces provided.		
Resources and Additional Information	The Ontario Building Code provides default occupant load values for building projects. Default occupant load values can be used in conjunction with the expected floor area to calculate an estimate of total occupants if expected occupancy is not known.		

Development Feature	Local Food Production		
Criteria	Tier 1	Tier 2	Tier 3
VA13	Include one of the following in the project: • Food growing space • Urban agriculture • Community gardens • Community kitchen • Food education program • CSA pick up • Tie-up with local grocery • Planter boxes provided to residents		
Documentation Requirements	Indicate where in the plans these amenities are located.		
Applicant Comments	Provide details explaining how criteria is met.		
Resources and Additional Information	*Food growing space:* Space available on-site and for residents to grow food. Urban agriculture: An owner led initiative to grow and distribute food on-site or provide food to local food banks *Community gardens:* Access to a shared communal garden on-site *Community kitchen:* Access to a shared communal kitchen on-site *Food education program:* An education program facilitated by building management that contains regular educational sessions or events focused on food *Community Supported Agriculture (CSA) pick up:* Designated space for weekly farm box delivery and pickup. *Tie-up with local grocery:* A local grocery is available on-site *Farmers market:* Dedicated space to host a local farmers market *Planter boxes provided to residents:* Planter boxes for growing food are given to residents as part of a welcome package.		
Development Feature	Access to Private Parks/Amenity/Landscaped Open Space		
Criteria	Tier 1	Tier 2	Tier 3
VA14	At least 75% of privately owned commercial or residential buildings with a floor area of 10,000 m^2 or more must include a publicly accessible space of at least 186 m^2. This space should be open to the public at all times, except when closed for regular security reasons (like overnight) or during special events.		
Documentation Requirements	Drawings showing where public space is situated and how it is accessed by the public.		
Applicant Comments	Provide details explaining how criteria will be met.		
Resources and Additional Information			
Development Feature	Water Metering (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
VA15	Install permanent water meters that measure the total potable water use for the building and associated grounds. Meter readings can be manual or automated.		
Documentation Requirements	Letter of Commitment to install water meters		
Applicant Comments	Describe metering strategy.		
Resources and Additional Information			

Development Feature	Recycled/ Reclaimed Materials		
Criteria	Tier 1	Tier 2	Tier 3
VA16	At least 20% of base asphalt for the development is comprised of recycled materials.		
Documentation Requirements	Technical sheet from provider that shows material makeup of asphalt.		
Applicant Comments	Describe how criteria is met.		
Resources and Additional Information			
Development Feature	Weather Protection (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
VA17	Provide covered outdoor waiting areas for pedestrian comfort and protection from the sun or inclement weather.		
Documentation Requirements	Use drawings, renders and/or plans to show design of pedestrian level experience.		
Applicant Comments	Provide details explaining how criteria will be met.		
Resources and Additional Information			
Development Feature	Parking Footprint (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
VA18	Locate all new off-street surface parking lots at the side or rear, leaving building frontages facing the circulation network free of surface parking lots (alleys may be exempted).		
Documentation Requirements	Site plan that demonstrates location of surface parking spaces.		
Applicant Comments	Provide details explaining how criteria will be met.		
Resources and Additional Information			
Development Feature	Renewable Energy		
Criteria	Tier 1	Tier 2	Tier 3
VA19	Design on-site renewable energy systems to supply a minimum of 5% of the building's total energy load from solar PV, solar thermal or wind, or 20% from geo-exchange.		
Documentation Requirements	Energy model report to demonstrate compliance with the performance threshold.		
Applicant Comments	Describe renewable energy strategy.		
Resources and Additional Information	PV Watts estimates the energy production of grid-connected photovoltaic (PV) energy systems throughout the world. It allows homeowners, small building owners, installers and manufacturers to easily develop estimates of the performance of potential PV installations.		

Development Feature	Solar Readiness (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
VA20	Design and orient 75% or more of the project's total building floor area (excluding existing buildings) such that one axis of each qualifying building is at least 1.5 times longer than the other, and the longer axis is within 15 degrees of geographical east-west.		
Documentation Requirements	Site plan to demonstrate solar orientation.		
Applicant Comments	Describe solar readiness strategy.		
Resources and Additional Information	The Natural Resources Canada 'Solar Ready Guidelines' specify a number of design considerations and modifications builders can make to new attached and detached homes in preparation for the installation of a future solar thermal system or solar photovoltaic system.		
Development Feature	Submetering (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
VA21	Install energy sub-meters, including electrical, thermal, or gas, for each heating and cooling appliance in all residential units or for each tenant in multi-tenant commercial buildings.		
Documentation Requirements	Provide a commitment letter to install energy sub-meters and community dashboard.		
Applicant Comments	Describe the energy systems that are sub-metered.		
Resources and Additional Information			
Development Feature	Air Tightness Testing (for residential buildings four storeys or more and non residential buildings)		
Criteria	Tier 1	Tier 2	Tier 3
VA22	Submit an authorized contract confirming developer's commitment to performing air tightness testing.		
Documentation Requirements	Contract confirming air tightness testing services have been procured for the project. Price and other sensitive information may be redacted.		
Applicant Comments	Provide details explaining how criteria is met.		
Resources and Additional Information	The City of Toronto has prepared a Whole Building Air Leakage Testing Protocol for large buildings in coordination with WSP Canada, Toronto Metropolitan University, and RDH Building Science.		



APPENDIX A.

GLOSSARY

Best Management Practices (BMPs) for Water Conservation
A practical, affordable approach to conserving water resources without sacrificing productivity.

Biodiverse Green Roof
This type of roof is designed to support a variety of plant life and create a habitat for pollinators.

Commissioning
This is a process that ensures that building systems are designed, installed, and operated to meet performance standards.

Development Feature
The name given to a performance criteria which easily identifies the outcome.

District Energy Systems
These are systems that provide heating, cooling, and hot water to multiple buildings from a central source.

Embodied Carbon
This refers to the greenhouse gas emissions associated with the production, transportation, and installation of building materials.

Geo-exchange
This is a type of heat pump system that uses the ground as a heat source or heat sink. Sometimes referred to as geothermal.

Green Infrastructure (GI)
These are natural or nature-based elements that can be used to manage storm water runoff.

Level 2 Charging
This is a type of electric vehicle charging that uses 240 volts and provides faster charging than a standard outlet.

Life-Cycle Assessment
This is a method of evaluating the environmental impacts of a product or service throughout its entire life cycle. One of the impacts measured is embodied carbon.

Low-Impact Development (LID)
These are design practices that mimic natural processes to manage storm water runoff. They increase the infiltration of storm water into the soil, where it can be filtered and/or absorbed by plants.

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

Peak Visitors
An estimate of the highest number of visitors that are expected at a site at any given time.

Performance Criteria
The requirements that must be met to satisfy the development feature. There may be performance criteria for Tier 1, Tier 2, and Tier 3.

Performance Measure Number
A number assigned to a development feature and performance criteria for easy reference.

Recycled/Reclaimed Materials
Materials that have been used previously and are being reused in a new project.

Refuge Area
A space in a building that is designed to provide protection from natural disasters or other emergencies.

Soil Cell Technology
Purpose-designed urban landscape solutions that provide trees with optimal soil conditions for growth without compromising local underground infrastructure.

Solar PV
This refers to photovoltaic solar energy, which converts sunlight into electricity.

Solar Ready
Solar ready refers to the design and installation of elements in preparation for the installation of a future solar system. Design considerations and modifications include the following elements: roof space, solar domestic hot water systems and solar PV conduits, plumbing connections to an existing hot water heater, an electrical outlet, mechanical room floor space and mechanical / electrical room wall space.

Solar Thermal
This refers to solar energy that is used to heat water or air.

Submetering
This involves installing meters that measure the energy or water consumption of individual building systems.

Total Suspended Solids (TSS)
A measure of the amount of solid material suspended in water.

Urban Mobility Network
An urban mobility network includes roads, sidewalks, etc. – this is intended to be non-auto (i.e. cycling, pedestrians, e-mobility, transit, and assisted mobility devices).

