Attachment A – Examples of high-performance development standards and related policies

Proposed Category	#	Area of Focus/Metric	Rationale	Existing Policies within Waterloo Region	Existing Policies within Other Ontario Municipalities
Built Environment Promotes safe, inclusive, and accessible spaces that address the inequities that serve as barriers to inclusive communities	B1	EV Parking and Charging Infrastructure	• Anticipate future needs for the community and the necessary infrastructure • Prioritize more sustainable modes of transport	**KITCHENER** requires electric vehicle charging stations and shared parking. **WATERLOO** requires a minimum number of EV parking spaces.	**OTTAWA**, **CALEDON**, and **TORONTO** have rates for parking and charging for various land uses.
	B2	Active and Public Transportation	• Support shift away from single-occupancy vehicles	**ALL (the Region, municipalities, and townships)** have existing policies relating to transportation-oriented development, transportation demand management, on-site amenities (benches, trash bins, etc.), pedestrian level infrastructure (bike racks), and overall, encourage walking and cycling as a mode of transport.	**OTTAWA**, **CALEDON**, and **TORONTO** outline requirements for pedestrian amenities and cycling amenities (parking, storage, and shower and change facilities) to make alternative modes of transport more convenient and easily accessible.
	B3	Exterior Lighting	• Prioritize visibility and sense of security for pedestrians • Minimize light pollution	**ALL** have policies or guidelines pertaining to lighting to prioritize pedestrian safety and to minimize light pollution.	**OTTAWA**, **CALEDON**, and **TORONTO** require exterior lighting in pedestrian spaces to prioritize visibility and safety and minimize light pollution.
	B4	Resilience	• Prioritize preparedness for residents and buildings by addressing a future with more severe climate related weather impacts (extreme heat, flooding) such as increased shade structures, mechanical cooling and/or internal room temperature monitoring and controls, etc.)	The **REGION**, **KITCHENER,** and **WATERLOO** encourage resiliency through design. **WILMOT** highlights the identification of efficiency opportunities and **CAMBRIDGE** encourages appropriate stormwater management to minimize flood risks. The **REGION** further encourages the commitment to adaptation through water supply and efficiency, air quality improvement, energy conservation, waste reduction and management, and ecological restoration.	**OTTAWA** outlines strategies to support extreme wind and snow loading. **CALEDON** requires that at least one feature be introduced to improve building resilience (with a focus on wind resilience, flood-proofing, and backup energy), a backup generator for three or more building systems, and a refuge area (with heating, cooling, lighting, potable water, and power).

Energy Efficiency Encourages energy conscience, resilient, and efficient developments and buildings.	E1	Embodied Carbon	• Prioritize adaptive reuse of existing buildings and consider whole-life cycle carbon impacts of building materials	**ALL** highlight heritage conservation efforts and encourage appropriate disposal of construction related waste.	**OTTAWA** encourages a commitment to construction waste tracking through a downloadable Excel template. **TORONTO** encourages low embodied emissions materials through its (optional) tier 2 and 3 standards and requires for the management of construction and demolition waste in accordance with provincial regulations, which encourages the reduction of waste produced.
	E2	Energy Efficiency	• Minimize building heat loss and prioritize more efficient buildings • Allow for monitoring and assessment (e.g. modelling and reporting)	The **REGION**, **KITCHENER**, **WILMOT**, and **WOOLWICH** aim to be an energy-efficient, resilient, and low-carbon communities. **WATERLOO** requires an Energy Study which includes various energy conservation measures. The **REGION** introduces the idea of a High-Performance Development Standard that will require the submission of an Energy Modelling Report. Energy studies may be required for a complete application by **KITCHENER**.	**OTTAWA** indicates that buildings shall be designed to meet or exceed one of the following: Total Energy Use Intensity (TEUI), Thermal Energy Demand Intensity (TEDI) and Greenhouse Gas Emissions Intensity (GHGI) targets or the Ontario Building Code, SB-10, carbon emission efficiency improvements. **TORONTO** requires that the building demonstrate alignment to the annual GHGI limits or with the TEUI and TEDI targets or go above the Ontario Building Code, SB-10.
	E3	District Energy	• Reduce the cost of energy • Support the shift away from non-renewable resources	The **REGION** aims to be an energy-efficient, resilient, and low-carbon community. **KITCHENER** and **NORTH DUMFRIES** encourage district energy to address energy consumption.	**OTTAWA** requires that district energy connects to an existing district energy system, demonstrates less GHG emissions than the district referenced case, or that a system is not feasible. In a previous version of the TGS, **TORONTO** specified that buildings should be designed to be district energy-ready.
	E4	Renewable Energy	• Support the shift away from fossil fuels	**ALL** promote the use of renewable energy systems in policies.	Renewable energy is encouraged by **OTTAWA** to minimize building's annual energy consumption.

Natural Environment Recognizes the importance of the natural environment, encourages mindful consumption and resource use to minimize the contributions to GHG emissions	N1	Trees and Plants (Biodiversity)	• Minimize the urban heat island effect and risk of soil stacking/compaction • Provide shading through canopies • Support the landscape, ecosystem diversity, and air quality	**ALL** encourage native species for conservation, shade, and to support clean air. The **REGION** and **KITCHENER** discourage the removal of topsoil or extraction of peat. **WATERLOO** aims to prevent soil compaction.	**OTTAWA** and **TORONTO** encourage the introduction of tree planting and native plant species to provide canopy cover and vegetated buffers. **CALEDON** has a similar approach and uses a Green Factor Tool.
	N2	Waste	• Ensure appropriate storage and sorting of waste • Minimize inappropriate disposal of items	The **REGION**, **KITCHENER**, **WATERLOO**, **WILMOT**, and **NORTH DUMFRIES** encourage appropriate management and maintenance of waste and encourage reductions.	**OTTAWA** and **TORONTO** demonstrate a commitment to appropriate waste storage through designated waste streams and containers.
	N3	Water Efficiency	• Reduce water consumption and support more efficient use	The **REGION** has a Water Efficiency Master Plan and **KITCHENER** supports water efficiency measures. **WATERLOO** requires a Sustainable Development Report for certain applications and noted energy efficiency as a potential initiative.	**TORONTO** encourages the installation of water fixtures of the use of non-potable water sources.
	N4	Local Food	• Reduce the urban heat island effect • Encourage local food systems • Support biodiversity	**KITCHENER**, **CAMBRIDGE**, and **WATERLOO** promote local food systems.	N/A
	N5	Bird Friendly Design	• Prevent collisions of birds and buildings	**KITCHENER** encourages the consideration to bird friendly development in the urban design manual.	**OTTAWA** and **TORONTO** outline specific protection measures (e.g. window glazing) to minimize fly-through effects.
	N6	Education	• Encourage awareness and support education to ensure appropriate use and planning of buildings long-term	N/A	**CALEDON** prioritizes education towards homeowners and tenants through signage or informational materials.
	N7	Stormwater	• Reduce the urban heat island effect • Support good water retention and drainage	**KITCHENER** has a stormwater management master plan that outlines how stormwater will be managed over the next 15 years.	**TORONTO** has green infrastructure standards that pertain to the capture and control of stormwater runoff from new streets. They also encourage site design that achieves water balance, water

				KITCHENER, **WATERLOO**, and **CAMBRIDGE** outline recommendations for landscaping around parking and laneways, and pedestrian walkways to reduce visual impact and the urban heat island effect.	quality, and water quantity control targets.