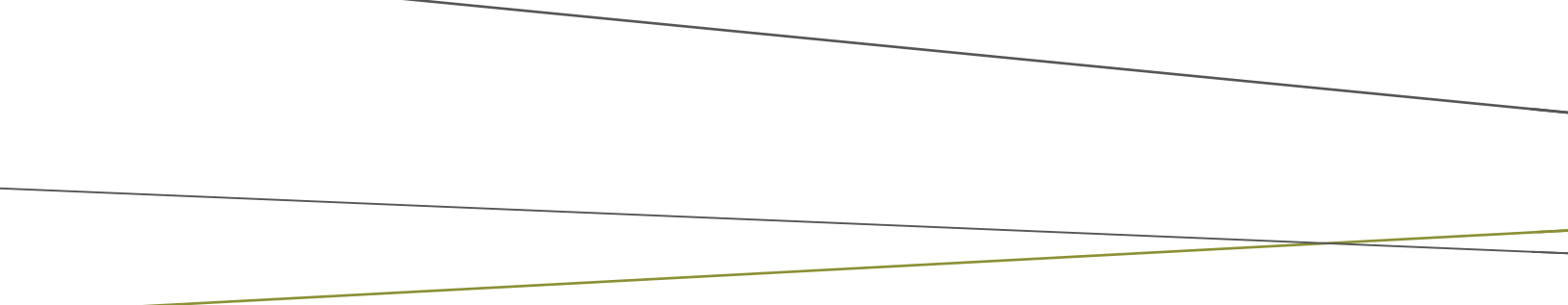


THE WAY WE GREEN

GREEN BUILDING CHECKLIST

THIRD DRAFT - FEBRUARY 2012





1.0 HOW THE PROGRAM WORKS

All Development Permit and Building Permit applicants (new construction) complete and submit a Green Building Checklist with their application. There is a separate checklist for Homes, and for Large & Commercial Buildings.

Key components of the Checklist program:

Baseline Information Gathering: The City will collect and monitor the results of the Checklist. This will allow the City to track green building features and performance in the market.

Green Resource Guide: The Checklist contents will help applicants and staff envision what the elements of a green project are. Also, all applicants will be provided, at minimum, access to a Green Resource Guide. This Guide will help connect developers, builders and their design teams to information on how to make cost-effective green improvements to their current and future projects.

Green Building Coordination: For applicants wanting to make improvements to their projects, a Green Building Coordination office will be able to provide relevant and timely information.

Incentives: For applicants who are able to demonstrate to the satisfaction of the City that they are committed to the highest levels of green building performance, the City will provide access to incentives and/or approvals facilitation.

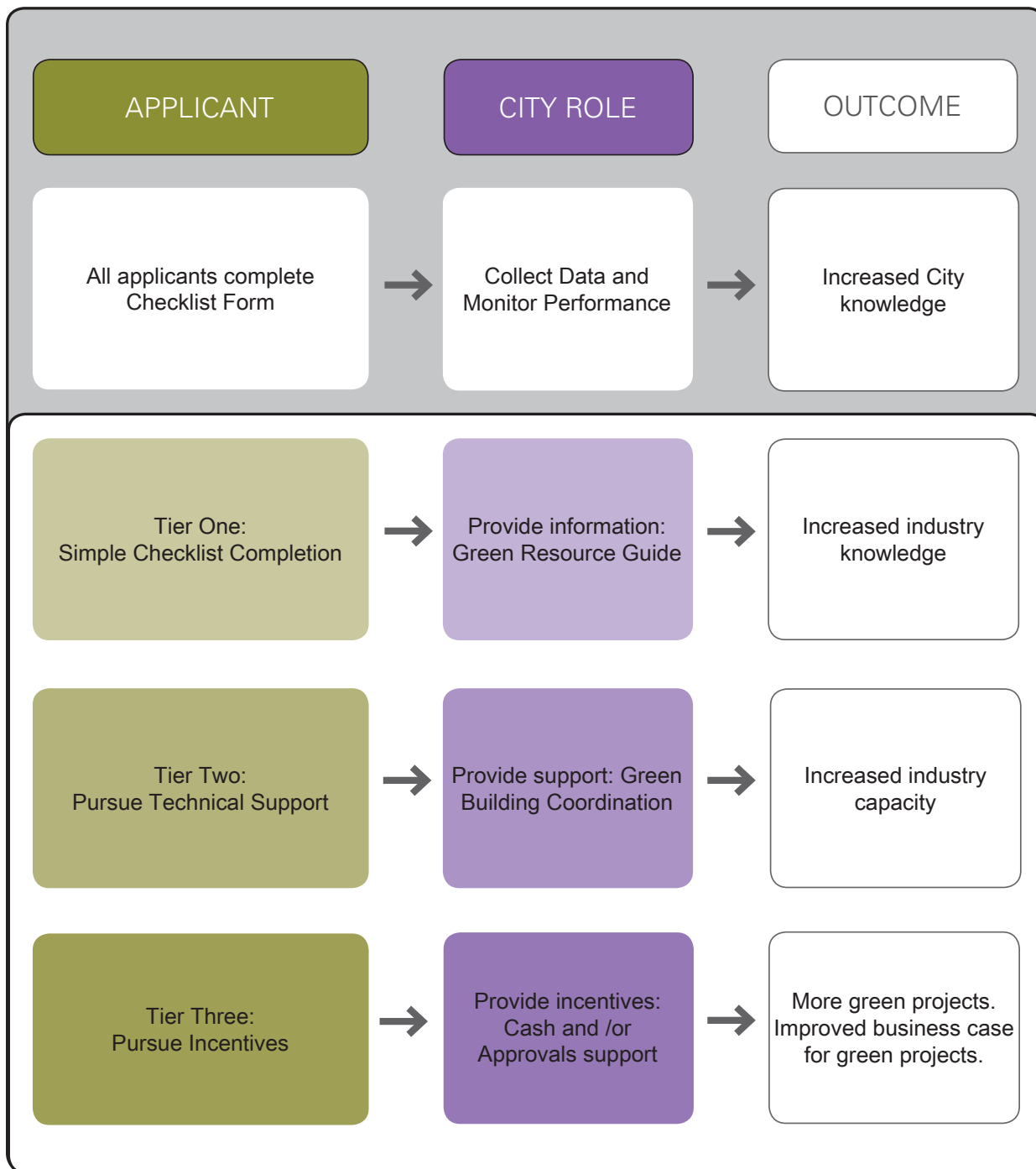
See schematic diagram of how the program has been designed to function on page 5.

2.0 THE CHECKLIST VALUE PROPOSITION

The purpose of the proposed Green Building Checklist is to facilitate market transformation towards green building in Edmonton by:

- Working with industry to help co-define what defines “green” in the Edmonton context
- Helping prepare developers and builders for anticipated changes in future regulation – including energy requirements in the building code, and potential minimum green building requirements from the City in the future
- Reducing exposure of building owners and tenants to risks of increasing energy prices through encouragement of more energy efficient buildings
- Providing opportunities to educate applicants and City staff on the benefits and best practices in green building
- Establishing a framework to assist in standardizing City approvals processes for green components of building
- Assisting in building the capacity of the overall market to provide higher performance buildings in response to increasing demand.
- Improving the City’s ability to facilitate, enable and approve green buildings in a timely fashion
- Creating a platform to provide incentives (financial, process or recognition based) for building green

Green Building Checklist Program



3.0 CHECKLIST OVERVIEW AND INSTRUCTIONS

All Development Permit and Building Permit applications will include a Green Building Checklist that will be mandatory for all applicants to complete.

The following is an overview of what the Checklist contains and user instructions.

Checklist categories. These are based on policy directions established by the the City’s Environmental Strategic Plan *The Way We Green*.

Checklist Questions. The questions set out the specific green building standards and targets that the City is encouraging applicants to meet for their projects. These standards and targets reflect current City policy and/or green building practices considered achievable in Edmonton market context. Applicants should note that not all standards and targets will apply to every project.

Yes/No. Applicants are requested to respond with either “yes” or “no” to each question. If not sure, the applicant should respond with answer more likely.

Reference # of submitted Plan / Drawing / Etc. For all questions answered with “yes”, applicants should provide a reference to any supporting documents submitted as part of the permit application.

Homes Development Permit and Building Permit

Checklist Categories	Checklist Questions	Yes	No	DP/BP	Reference # of submitted Plan / Drawing / Etc.
Green Building Certifications and Technical Support					
Third Party Green Building Certification	Are you planning to certify your project under a recognized green building rating system? LEED for Homes (Check level): <input type="checkbox"/> Certified <input type="checkbox"/> Silver <input type="checkbox"/> Gold <input type="checkbox"/> Platinum BuiltGreen (Check level): <input type="checkbox"/> Bronze <input type="checkbox"/> Silver <input type="checkbox"/> Gold Other (please write name of rating system) []			DP/BP	
Healthy Ecosystems — Land					
Biodiversity	Will you retain all trees on site that are not immediately affected by the building footprint or removed for solar access or safety reasons AND will you offset the loss of any existing trees at a 2:1 ratio?			DP/BP	
	Will you demonstrate in your Landscape Plan that: - at least 80% of the vegetation used in landscaping is native; no invasive species are used, and; the bottom edge of any site fencing is at least 6 inches from the ground to allow for the movement of small mammals?			DP/BP	
	Will you ensure that building design features minimize the risk of migratory bird collisions by: - applying visual markers (an alternative pattern etched into or applied onto the exterior surface of the glass) at a minimum of 28 cm intervals; angling glass down at a minimum angle of 20°, and or; including awnings or sunshades for the first 12m of the building			DP/BP	
Healthy Ecosystems — Water					
Stormwater	Will you use low impact development strategies to promote infiltration, reduce runoff from roof and driveways in order to reduce stormwater flows/volumes, and improve water quality?			DP	
Outdoor water use	Is the landscaping design and/or irrigation system being designed to reduce irrigation water use?			DP/BP	
Indoor water use	Will ONLY high efficiency water fixtures be used, meeting the following requirements? Toilets: 4.8 litres per flush or less (dual flush average flush, or high efficiency) Bathroom faucets: 6.6 litres per minute Showerheads: 7.6 litres per minute			BP	
Energy and Greenhouse Gas Emissions					
Energy Labeling	Are you planning to obtain an Energuide for New Homes rating? Indicate EnerGuide Rating: [] (0-100)			BP	
Insulation and building envelope	Will the building envelope be designed and constructed to an alternate high performance standard? Indicate: <input type="checkbox"/> Passivhaus <input type="checkbox"/> R-2000			BP	
Minimizing air leakage	Will the building be constructed to meet a low level of air leakage (1.5 ACH @ 50 Pa), including utilization of qualified insulation contractors?			BP	
Renewable energy	Will the building include on-site renewable energy systems? If Yes indicate: <input type="checkbox"/> Solar heat <input type="checkbox"/> Solar electricity <input type="checkbox"/> Geo-exchange/ ground source <input type="checkbox"/> Other (please specify) If No indicate: <input type="checkbox"/> Solar ready			BP	
Energy efficient appliances	Will high efficiency (water & energy) ENERGY STAR appliances be used where applicable? Indicate: <input type="checkbox"/> Clothes Washer <input type="checkbox"/> Dryer <input type="checkbox"/> Dishwasher <input type="checkbox"/> Refrigerator			BP	
Solid Waste & Materials					
Construction waste	Will you utilize material efficient framing and ordering techniques to reduce waste construction materials?			BP	
	Will you implement construction waste management practices to reduce and source-separate the building's construction waste, and divert at least 50% from landfill disposal?			BP	
Recycled and Reused Materials	Will you utilize construction materials with recycled content, or reused construction materials?			BP	
Indoor Air Quality					
Toxic Emissions	Will all interior paints, adhesives and sealants used be low VOC or no VOC?			BP	
	Will all interior flooring materials be low VOC or no VOC?			BP	

Large & Commercial Buildings

Development Permit and Building Permit

Checklist Categories	Checklist Questions	Yes	No	DP/BP	Reference # of submitted Plan / Drawing / Etc.
Green Building Certifications and Technical Support					
Third Party Green Building Certification	Are you planning to certify your project under a recognized green building rating system? LEED (Check level): <input type="checkbox"/> Certified <input type="checkbox"/> Silver <input type="checkbox"/> Gold <input type="checkbox"/> Platinum BuiltGreen Multi-Story (MSRT) (Check level): <input type="checkbox"/> Bronze <input type="checkbox"/> Silver <input type="checkbox"/> Gold Other (please write name of rating system) <input type="checkbox"/>			DP/BP	
Healthy Ecosystems — Land					
Biodiversity	Will you retain all trees on site that are not immediately affected by the building footprint or removed for solar access or safety reasons AND demonstrate that you will offset the loss of any existing trees at a 2:1 ratio? Will you demonstrate in your Landscape Plan that: - at least 80% of the vegetation used in landscaping is native; no invasive species are used, and; the bottom edge of any site fencing is at least 6 inches from the ground to allow for the movement of small mammals? Will you ensure that building design features minimize the risk of migratory bird collisions by: - applying visual markers (an alternative pattern etched into or applied onto the exterior surface of the glass) at a minimum of 28 cm intervals; angling glass down at a minimum angle of 20°, and or; including awnings or sunshades for the first 12m of the building Will the development include a) a habitat green roof or b) a living wall? OR Will 60% of the roof area be vegetated, or the structure, membrane and drainage designed to accommodate future planting?			DP/BP	
Brownfield sites	If this project is on a brownfield site, are you working with the City of Edmonton's Brownfield program?			DP/BP	
Light pollution	Will you minimize light pollution in the design, including virtual elimination of light trespass across the property lines?			DP/BP	
Healthy Ecosystems — Water					
Stormwater	Will you use low impact development strategies to promote infiltration, reduce runoff from roof and parking lots in order to reduce stormwater flows/volumes, and improve water quality?			DP/BP	
Outdoor water use	Will the landscaping design and/or irrigation system be designed to reduce irrigation water use?			DP/BP	
Indoor water use	Will all water fixtures (toilets, urinals, faucets, and shower heads) be high efficiency/low flow? Toilets: 4.8 litres per flush or less (dual flush average flush, or high efficiency) Urinals: 3 litres per flush or less Restroom faucets: 6.6 litres per minute Showerheads: 7.6 litres per minute			BP	
Energy and Greenhouse Gas Emissions					
Energy-efficient buildings	Will the building meet energy performance equivalent to 23% improvement over the Model National Energy Code 1997, or 10% improvement over ASHRAE 90.1 2007 ?			BP	
Energy Modeling	Will whole-building energy modeling be used to optimize energy performance in the design?			BP	
Commissioning	Will the building energy systems be commissioned by developing and executing a commissioning plan?			BP	
Passive Design	Has the building design taken into account passive solar design or a high performance building envelope to reduce energy consumption?			DP/BP	
Renewable energy	Will the building include on-site renewable energy systems? If Yes indicate: <input type="checkbox"/> Solar heat <input type="checkbox"/> Solar electricity <input type="checkbox"/> Geo-exchange/ ground source <input type="checkbox"/> Other If No indicate: <input type="checkbox"/> Solar ready			BP	
Energy efficient appliances	Will high efficiency (water & energy) ENERGY STAR appliances be used where applicable? Indicate: <input type="checkbox"/> Clothes Washer <input type="checkbox"/> Dryer <input type="checkbox"/> Dishwasher <input type="checkbox"/> Refrigerator			BP	
Performance monitoring	Will a performance monitoring program be utilized to track and optimize energy and/or green building performance and reduce energy costs after construction?			BP	
Food Systems					
Production	Is the project being designed to incorporate food production? If Yes, indicate: <input type="checkbox"/> Community gardens <input type="checkbox"/> Rooftop growing space <input type="checkbox"/> Edible landscaping			DP/BP	
Processing and celebration	Is the project being designed to incorporate food processing and celebration? If Yes, indicate: <input type="checkbox"/> Community kitchen <input type="checkbox"/> Outdoor kitchen/gathering space <input type="checkbox"/>			DP/BP	
Markets	Is the project being designed to incorporate space for either <input type="checkbox"/> Space for pocket or farmers market, or <input type="checkbox"/> Healthy food retail			DP/BP	
Solid Waste & Materials					
Construction waste	Will you implement construction waste management practices to reduce and source-separate the building's construction waste, and divert at least 50% from landfill disposal?			BP	
Recycled Materials	Will you utilize construction materials with recycled content?				
Indoor Air Quality					
Fresh Air	Will the project be designed to increase and/or improve fresh air ventilation, by meeting the ASHRAE 62.1 2007 standard?			BP	
Toxic Emissions	Will all interior paints, adhesives and sealants used be low VOC? Will all interior flooring materials be low VOC or no VOC?			BP	