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

**APPLICANT**

- All applicants complete Checklist Form

**CITY ROLE**

- Collect Data and Monitor Performance

**OUTCOME**

- Increased City knowledge

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**Tier One:**

.Simple Checklist Completion

- Provide information: Green Resource Guide

- Increased industry knowledge

**Tier Two:**

.Pursue Technical Support

- Provide support: Green Building Coordination

- Increased industry capacity

**Tier Three:**

.Pursue Incentives

- Provide incentives: Cash and/or Approvals support

- More green projects. Improved business case for green projects.
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 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

<table>
<thead>
<tr>
<th>Checklist Categories</th>
<th>Checklist Questions</th>
<th>Yes</th>
<th>No</th>
<th>DP/BP</th>
<th>Reference # of submitted Plan / Drawing / Etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Green Building Certifications and Technical Support</strong></td>
<td>Are you planning to certify your project under a recognized green building rating system?</td>
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<td></td>
<td>LEED for Homes (Check level): [ ] Certified [ ] Silver [ ] Gold [ ] Platinum</td>
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<td></td>
<td>BuiltGreen (Check level): [ ] Bronze [ ] Silver [ ] Gold</td>
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<td></td>
<td>Other (please write name of rating system): [ ]</td>
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<tr>
<td><strong>Healthy Ecosystems — Land</strong></td>
<td>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?</td>
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<td>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?</td>
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<td></td>
<td>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</td>
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<tr>
<td><strong>Healthy Ecosystems — Water</strong></td>
<td>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?</td>
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<td></td>
<td>Is the landscaping design and/or irrigation system being designed to reduce irrigation water use?</td>
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<td>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</td>
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<tr>
<td><strong>Energy and Greenhouse Gas Emissions</strong></td>
<td>Are you planning to obtain an EnerGuide for New Homes rating?</td>
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<td>Indicate EnerGuide Rating: [ ] [0-100]</td>
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<td>BP</td>
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<td></td>
<td>Insulation and building envelope Will the building envelope be designed and constructed to an alternate high performance standard? Indicate: [ ] Passivhaus [ ] R-2000</td>
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<td>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?</td>
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<td>Renewable energy Will the building include on-site renewable energy systems?</td>
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<td></td>
<td>If Yes indicate: [ ] Solar heat [ ] Solar electricity [ ] Geo-exchange/ground source [ ] Other (please specify)</td>
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<td>If No indicate: [ ] Solar ready</td>
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<td></td>
<td>Energy efficient appliances Will high efficiency (water &amp; energy) ENERGY STAR appliances be used where applicable? Indicate: [ ] Clothes Washer [ ] Dryer [ ] Dishwasher [ ] Refrigerator</td>
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<tr>
<td><strong>Solid Waste &amp; Materials</strong></td>
<td>Will you utilize material efficient framing and ordering techniques to reduce waste construction materials?</td>
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<td>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?</td>
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<td></td>
<td>Recycled and Reused Materials Will you utilize construction materials with recycled content, or reused construction materials?</td>
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<tr>
<td><strong>Indoor Air Quality</strong></td>
<td>Toxic Emissions Will all interior paints, adhesives and sealants used be low VOC or no VOC?</td>
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<td></td>
<td>Will all interior flooring materials be low VOC or no VOC?</td>
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</tr>
</tbody>
</table>
## Large & Commercial Buildings
### Development Permit and Building Permit

<table>
<thead>
<tr>
<th>Checklist Categories</th>
<th>Checklist Questions</th>
<th>Yes</th>
<th>No</th>
<th>DP/BP</th>
<th>Reference # of submitted Plan / Drawing / Etc.</th>
</tr>
</thead>
</table>

### 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): [ ] Certified [ ] Silver [ ] Gold [ ] Platinum
  - BuiltGreen Multi-Story (MSRT) (Check level): [ ] Bronze [ ] Silver [ ] Gold
  - Other (please write name of rating system): [ ]

### 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?

### Brownfield sites
- If this project is on a brownfield site, are you working with the City of Edmonton’s Brownfield program?

### 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?

**Outdoor water use**
- Will the landscaping design and/or irrigation system be designed to reduce irrigation water use?

**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

### 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?

**Energy Modeling**
- Will whole-building energy modeling be used to optimize energy performance in the design?

**Commissioning**
- Will the building energy systems be commissioned by developing and executing a commissioning plan?

**Passive Design**
- Has the building design taken into account passive solar design or a high performance building envelope to reduce energy consumption?

**Renewable energy**
- Will the building include on-site renewable energy systems?
  - If Yes indicate: [ ] Solar heat [ ] Solar electricity [ ] Geo-exchange/ground source [ ] Other
  - If No indicate: [ ] Solar ready

**Energy efficient appliances**
- Will high efficiency (water & energy) ENERGY STAR appliances be used where applicable?
  - Indicate: [ ] Clothes Washer [ ] Dryer [ ] Dishwasher [ ] Refrigerator

**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?

### Food Systems

**Production**
- Is the project being designed to incorporate food production? If Yes, indicate: [ ] Community gardens
- [ ] Rooftop growing space [ ] Edible landscaping

**Processing and celebration**
- Is the project being designed to incorporate food processing and celebration? If Yes, indicate: [ ] Community kitchen [ ] Outdoor kitchen/gathering space

**Markets**
- Is the project being designed to incorporate space for either [ ] Space for pocket or farmers market, or [ ] Healthy food retail

### 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?

**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?

**Toxic Emissions**
- Will all interior paints, adhesives and sealants used be low VOC?
- Will all interior flooring materials be low VOC or no VOC?