

MEMORANDUM

TO: Chuck Ahl, City Manager

FROM: Nick Carver, Assistant Building Official
Melinda Coleman, Assistant City Manager

DATE: September 16, 2013

SUBJECT: Approval of Green Building Program Ordinance – Second Reading

Introduction

The City adopted an energy efficiency and conservation strategy in December 2009. The strategy was required as part of the City's energy efficiency conservation block grant. One purpose for the strategy is to help establish policies and priorities to move Maplewood in the direction of improved long-term operational energy efficiency.

Implementation of the strategy includes the adoption of energy policies that will ensure achievement of the City's energy goals. This green building program ordinance will assist in the promotion of green building practices throughout the City. The city of Maplewood will lead by example and provide incentives for others to accomplish similar goals.

Background

Just over three years ago the Maplewood city council approved an exploratory green building program search that would promote a city wide green building program that would be effective and produce efficient results.

After detailed analysis the building inspection division of the community development department partnered with the International Code Council to assist in the development of the National Green Building Standards for residential buildings and the International Green Construction Code for commercial buildings. The city of Maplewood is recognized as a leader in "green building" and bridging the gap for progress.

A seminar was constructed where all the Maplewood Community Boards and the City Council were presented with a complete description of the National Green Building Standards and the International Green Construction Codes including an incentive plan and implementation schedule.

Budget Impact

None

Discussion

On May 01, 2012, the 2012 International Green Construction Code (IgCC) publication was released. The following is a condensed outlined detail of the proposed ordinance and some commonly asked questions.

1. The ordinance should promote green building construction in all property zones.
 - This ordinance will accomplish these goals by including all occupancy groups, construction types and property zones.
2. The green building ordinance is mandatory for all city-owned and city-financed buildings.
 - City-owned buildings and projects are covered as “mandatory” by this ordinance. City-owned existing buildings will be prioritized for compliance with the 2012 IgCC Chapter 10. All city-financed buildings and projects will be considered by the City Manager, or designee, and approved by the city council to determine inclusion in this green building program.
3. How does the ordinance address the city’s existing buildings?
 - City-owned existing buildings and projects will be prioritized for compliance with the 2012 IgCC Chapter 10. *Compliance of all city buildings up to 10 years from adoption date.*
4. National Green Building Standards (residential) content.
5. International Green Construction Code (commercial) content.
6. How does the incentive plan function?
 - The Community Development Director and Building Official shall annually consider an incentive plan.
 - The Community Development Director and Building Official shall establish a budget item for the “Maplewood Green Building Program”.
 - The Community Development Director and Building Official shall establish the residential performance level and monetary incentive rewards.
 - The Community Development Director and Building Official shall establish “certificates of compliance” to be awarded.
 - The Community Development Director and Building Official shall establish a community recognition agenda profile.

REQUIREMENTS DETERMINED BY THE JURISDICTION SYNOPSIS (Maplewood)

Table 302.1 outlines the jurisdictional requirements which must be completed by the City of Maplewood. This table provides an opportunity for the city to customize the 2012 IgCC beyond the minimum requirements and meet local environmental priorities. A response to all categories is required to be addressed.

**TABLE 302.1
REQUIREMENTS DETERMINED BY THE JURISDICTION**

Section	Section Title or Description and Directives	Jurisdictional Requirements	
CHAPTER 1. SCOPE			
101.3 Exception 1.1	Detached one- and two-family dwellings and multiple single-family dwellings (town-houses) not more than three stories in height above grade plane with a separate means of egress, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
101.3 Exception 1.2	Group R-3 residential buildings, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
101.3 Exception 1.3	Group R-2 and R-4 residential buildings four stories or less in height above grade plane, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 4. SITE DEVELOPMENT AND LAND USE			
402.2.1	Flood hazard area preservation, general	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.2.2	Flood hazard area preservation, specific	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.3	Surface water protection	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.5	Conservation area	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.7	Agricultural land	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.8	Greenfield sites	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
407.4.1	High-occupancy vehicle parking	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
407.4.2	Low-emission, hybrid and electric vehicle parking	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
409.1	Light pollution control	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 5. MATERIAL RESOURCE CONSERVATION AND EFFICIENCY			
503.1	Minimum percentage of waste material diverted from landfills	<input type="checkbox"/> 50% <input type="checkbox"/> 65% <input checked="" type="checkbox"/> 75%	
CHAPTER 6. ENERGY CONSERVATION, EFFICIENCY AND CO^{2e} EMISSION REDUCTION			
302.1, 302.1.1, 602.1	zEPI of Jurisdictional Choice – The jurisdiction shall indicate a zEPI of 46 or less in each occupancy for which it intends to require enhanced energy performance.	Occupancy: na zEPI: na	
604.1	Automated demand response infrastructure	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 7. WATER RESOURCE CONSERVATION, QUALITY AND EFFICIENCY			
702.7	Municipal reclaimed water	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 8. INDOOR ENVIRONMENTAL QUALITY AND COMFORT			
804.2	Post-Construction Pre-Occupancy Baseline IAQ Testing	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

807.1	Sound Transmission and sound levels	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 10. EXISTING BUILDINGS			
1007.2	Evaluation of existing buildings	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
1007.3	Post Certificate of Occupancy zEPI, energy demand, and CO ₂ e emissions reporting	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

The following is an explanation to the table response.

CHAPTER 1. Scope

This chapter indicates that the National Green Building Standards will be the base document for detached one- and two- family dwellings, multiple single-family dwellings (townhouses) not more than three stories in height.

Group R-3 residential buildings, their accessory structures, and the site or lot upon which these buildings are located.

Group R-2 and R-4 shall comply with the 2012 International Green Construction Code as a base document.

CHAPTER 4. Site Development and Land Use

The requirements listed are considered covered and protected by current city ordinances as established by Public Works and Community Development departments. Indicating a “no” answer allows those departments to operate as established.

CHAPTER 5. Material Resource Conservation and Efficiency

The IgCC minimum requirement is that not less than 50% of nonhazardous construction waste be diverted from landfill disposal. Research indicates that the city of Maplewood and the state of Minnesota have ample waste management resource programs to increase this requirement to a minimum of 75%.

CHAPTER 6. Energy Conservation, Efficiency and CO₂ Emission Reduction

The city of Maplewood has not deleted IgCC Chapter 6 but rather has deemed this Chapter 6 as optional. The 2012 International Energy Conservation Code will typically be used as the base document for all energy related issues. No increase is necessary.

CHAPTER 7. Water Conservation

Municipal reclaimed water is not available to the city of Maplewood at this time. No increase is necessary.

CHAPTER 8. Indoor Environmental Quality and Comfort

The city of Maplewood agrees that the base document minimums meet all the requirements necessary for indoor air and sound transmission quality.

CHAPTER 10. Existing Buildings

All city of Maplewood owned buildings and city of Maplewood financed buildings shall meet the requirements specified in 2012 IgCC Section 1007.2. As part of Maplewood's sustainability goals all "covered" buildings shall be brought into compliance with this code. "Covered" existing buildings will be prioritized for compliance.

EXCEPTIONS AND DELETIONS TO THE BASE DOCUMENTS

1. 2012 International Green Construction Code Section 101.3, exception 4 shall be deleted. **NOTE: This deletion prevents ASHRAE 189.1 as an optional design choice compliance path.**
2. 2012 International Green Construction Code Section 301.1.1 shall be deleted. **NOTE: This deletion prevents ASHRAE 189.1 as an optional design choice compliance path.**
3. 2012 International Green Construction Code Chapter 6 shall be an optional chapter. Chapter 6 or the 2012 International Energy Conservation Code shall be used, but not both or portions of both.

Recommendation

Staff recommends approval of the proposed green building program ordinance.

Attachments

1. Proposed Green Building Program Ordinance

P:/com_dvpt/ord/green building ordinance

ORDINANCE NO. _____**AN ORDINANCE TO THE MAPLEWOOD MUNICIPAL CODE REGARDING THE GREEN BUILDING PROGRAM**

The Maplewood City Council approves the following addition to the Maplewood Code of Ordinances. This ordinance creates a new green building ordinance which will be placed in the Building Chapter (Chapter 12) of the city code.

Section 1. Scope.

This ordinance applies to the regulations of “green building” within the City of Maplewood, Ramsey County, Minnesota. This ordinance focuses on residential, commercial and industrial buildings in the City of Maplewood. This ordinance applies to City of Maplewood owned and financed buildings as determined by the City Manager and approved by the City Council. Other buildings within the City of Maplewood are **NOT** subject to the code provisions of this ordinance unless the building owner or representative accepts these provisions as a volunteer commitment. The City of Maplewood shall establish an incentive plan for private property choosing the voluntary commitment.

Section 2. Purpose and Intent.

It is the goal of the City of Maplewood to provide green building program provisions consistent with the scope of a green construction code. This green building program is intended to safeguard the environment, public health, safety and general welfare through the establishment of requirements to reduce the negative impacts and increase the positive impacts of the built environment on the natural environment and building occupants. The green building program is not intended to abridge or supersede safety, health or environmental requirements under other applicable codes or ordinances.

Section 3. Base Documents.**a. ICC 700-2008 National Green Building Standards.**

This Standard applies to detached one and two-family dwellings and multiple single family dwellings (town-houses) not more than three stories in height above grade plane with a separate means of egress, their accessory structures, and the site or lot upon which these buildings are located. This Standard shall also be used for subdivisions, building sites, alterations, additions, renovations, mixed-use residential buildings, and historic buildings, where applicable.

b. 2012 International Green Construction Code.

The provisions of this code shall apply to the design, construction, addition, alteration, change of occupancy, relocation, replacement, repair, equipment, building site, maintenance, removal and demolition, of every building or structure or any

appurtenances connected or attached to such buildings or structures and to the site on which the building is located.

TABLE 302.1

c. REQUIREMENTS DETERMINED BY THE JURISDICTION (MAPLEWOOD)

Section	Section Title or Description and Directives	Jurisdictional Requirements	
CHAPTER 1. SCOPE			
101.3 Exception 1.1	Detached one- and two-family dwellings and multiple single-family dwellings (town-houses) not more than three stories in height above grade plane with a separate means of egress, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
101.3 Exception 1.2	Group R-3 residential buildings, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
101.3 Exception 1.3	Group R-2 and R-4 residential buildings four stories or less in height above grade plane, their accessory structures, and the site or lot upon which these buildings are located, shall comply with ICC 700.	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 4. SITE DEVELOPMENT AND LAND USE			
402.2.1	Flood hazard area preservation, general	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.2.2	Flood hazard area preservation, specific	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.3	Surface water protection	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.5	Conservation area	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.7	Agricultural land	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
402.8	Greenfield sites	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
407.4.1	High-occupancy vehicle parking	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
407.4.2	Low-emission, hybrid and electric vehicle parking	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
409.1	Light pollution control	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 5. MATERIAL RESOURCE CONSERVATION AND EFFICIENCY			
503.1	Minimum percentage of waste material diverted from landfills	<input type="checkbox"/> 50% <input type="checkbox"/> 65% <input checked="" type="checkbox"/> 75%	
CHAPTER 6. ENERGY CONSERVATION, EFFICIENCY AND CO_{2e} EMISSION REDUCTION			
302.1, 302.1.1, 602.1	zEPI of Jurisdictional Choice – The jurisdiction shall indicate a zEPI of 46 or less in each occupancy for which it intends to require enhanced energy performance.	Occupancy: na zEPI: na	
604.1	Automated demand response infrastructure	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 7. WATER RESOURCE CONSERVATION, QUALITY AND EFFICIENCY			
702.7	Municipal reclaimed water	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

CHAPTER 8. INDOOR ENVIRONMENTAL QUALITY AND COMFORT			
804.2	Post-Construction Pre-Occupancy Baseline IAQ Testing	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
807.1	Sound Transmission and sound levels	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
CHAPTER 10. EXISTING BUILDINGS			
1007.2	Evaluation of existing buildings	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
1007.3	Post Certificate of Occupancy zEPI, energy demand, and CO ₂ e emissions reporting	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

d. EXCEPTIONS AND DELETIONS TO THE BASE DOCUMENTS.

1. 2012 International Green Construction Code Section 101.3, exception 4 shall be deleted.
2. 2012 International Green Construction Code Section 301.1.1 shall be deleted.
3. 2012 International Green Construction Code Chapter 6 shall be an optional chapter. The 2012 International Energy Conservation Code shall be used, but not both or portions of both.

Section 4. General Ordinance Provisions

a. Interpretation

In interpreting this ordinance and its application, the provisions of these regulations shall be held to the minimum requirements for the protection of public health, safety and general welfare as determined by the Building Official.

b. Conflict

Where there is conflict between a general requirement and a specific requirement, the specific requirement shall be applicable. Where, in any specific case, different sections of the code specify different materials, methods of construction or other requirements, the most practical requirement to meet the intent of the code shall govern. The provisions of this code shall not be deemed to nullify any provisions of local, state or federal law.

Section 5. Ordinance Placement.

- a. 12-41**

The city council approved the first reading of this ordinance on.

The city council approved the second reading of this ordinance on.

Signed:

Will Rossbach, Mayor

Date

Attest:

Karen Guilfoile, City Clerk