

Memorandum



CITY OF DALLAS

DATE September 21, 2012

TO Honorable Members of the Transportation and Environment Committee:
Linda L. Koop (Chair), Sheffie Kadane (Vice Chair), Sandy Greyson,
Delia Jasso, Vonciel Jones Hill, Pauline Medrano

SUBJECT **Green Building Ordinance Phase 2 Update**

At the Transportation and Environment Committee Meeting on Monday, September 24, 2012, there will be a briefing on the Green Building Ordinance Phase 2 Update.

Please feel free to contact me if you need additional information.

A handwritten signature in cursive script, appearing to read 'J. Jordan'.

Jill A. Jordan, P.E.
Assistant City Manager

c: The Honorable Mayor and Members of the City Council
Mary K. Suhm, City Manager
Thomas P. Perkins, Jr. City Attorney
Rosa Rios, City Secretary
Craig Kinton, City Auditor
A.C. Gonzalez, First Assistant City Manager
Ryan S. Evans, Assistant City Manager
Forest Turner, Assistant City Manager
Joey Zapata, Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Edward Scott, Director, Controller's Office
Frank Libro, Public Information Office
Theresa O'Donnell, Director, Sustainable Development and Construction
Rick Galceran, Director, Public Works
Stephanie Cooper, Assistant to the City Manager – Council Office



Green Building Ordinance Phase 2 Update

Transportation and Environment Committee
September 24, 2012



City of Dallas
Public Works Department



Purpose

- To provide an update of the Green Building Ordinance
- To present the 2012 Green Building Task Force recommendations for Phase 2 of the Ordinance



Background

- City Council adopted Green Building Ordinance in April of 2008 for **ALL** new construction; incorporated into City Code
- Green Building Ordinance consists of two phases:
 - Phase 1 - effective **October 1, 2009**, focused on energy efficiency, water conservation and reduction of heat island effect through cool roofs
 - Phase 2 - to be effective **October 1, 2012**, would expand Phase 1 to a more comprehensive green building standard for all new construction



Background

- The 2008 Ordinance Resolution adopting Green Building required the City Manager to
 - Reconvene the Green Building Task Force to review progress of the Green Building Code
 - Report to Council before implementation of Phase 2 of the Ordinance
- Green Building Task Force convened in 2010 and on September 12, 2011 recommended:
 - Delay of Phase 2 until October 1, 2012; and
 - Reconvening the **Task Force in 2012** to review progress and report to Council before implementation of Phase 2
 - One of the reasons for the recommended delay was the anticipated release of the International Green Construction Code (IgCC) in 2012 which could be a substitute for the city's planned Phase 2



2012 Green Building Task Force

- Reconvened from **June 6 to September 11, 2012** to review:
 - City’s ability to implement Phase 2, as adopted, without creating potential delays in the building permit process
 - Progress in the development and applicability of the new IgCC Code relevant to the implementation of Phase 2, as adopted
 - Third-party provider process- outsourcing of plan review and inspection process
 - Recommend, if needed, modifications to Phase 2



Green Building Task Force

- Comprised of:
 - Industry stakeholders that participated in the development of the original ordinance or expressed an interest subsequently (approx. 190 in distribution list—15 to 35 participants twice weekly), and
 - Registered City of Dallas third-party providers
 - No one was turned away from membership

Task Force divided into two groups-
Commercial and Residential



GOALS-Commercial Task Force

- **Update Phase 2 program adopted in 2008**
 - Review applicability of and proposed changes to LEED
- **Address current changes in Development of Building Codes**
 - International Green Construction Code (IgCC)
 - ASHRAE Standard 189.1
 - 2012 ICC Codes
- **Review Building Inspection's resources for implementation**
 - Allow transition period to educate and train staff and industry members
 - Review existing third-party program for plan reviews and inspections
 - Streamline and provide online resources/access to schedule inspections online/online technical support
- **Address existing commercial building projects**



GOALS-Residential Task Force

- Update Phase 2 program adopted in 2008
- Address key environmental and conservation issues such as:
 - Water efficiency
 - Storm water and low impact development strategies
 - Energy efficiency
 - Heat island mitigation through roofs and pavement
 - Indoor air quality
- **Review Building Inspection's resources for implementation**
 - Allow transition period to educate and train the industry
 - Review existing third-party process for plan review and inspections
 - Streamline and provide online resources/access to schedule inspections online/online technical support
- **Address existing homes:**
 - Roof replacement requirements
 - Landscaping requirements for water conservation
- **Resolve confusion between single-family and multi-family requirements**



Findings

- **Adoption of Phase 2 should be delayed until October of 2013**
 - BI staff is just now being increased to meet capacity demands
 - Third-party program is working for Phase 1
 - In-house reviews and inspections would be preferable for the commercial component of Phase 2
 - Phase 2 should be streamlined to eliminate redundant requirements (base codes vs. green code)



Findings

- **Task force should review the 2012 IgCC as an alternative for Phase 2**
 - Allows greater integration with all areas of building inspection
 - Dallas would be an early adopter
 - Dallas would continue to lead and meet the long-term vision of being “greenest city in the US”
 - City and some task force members have been appointed to the new NCTCOG Energy and Green Advisory Board that will review the IgCC



Recommendations

- Delay Phase 2 implementation to October 1, 2013; and
- Implement Phase 2 with two options as alternative paths of compliance:
 1. Implement Phase 2 as adopted on April 2008; or
 2. Implement IgCC recommendations from 2012 GBTF
 - » Chapters 3 (Jurisdictional Requirements, 4 (Site Development and Land Use), 5 (Material Resource Conservation and Efficiency), 7 (Water Resource Conservation) and 8 (Indoor Environmental Quality and Comfort), as modified
 - » Delete requirements for above-code energy efficiency; commissioning and existing buildings
- Recommend building inspection add staff to review and inspect Phase 2 in-house
- Streamline and provide online resources/access to schedule inspections online/online technical support
- Train and educate industry and staff during fY13
- Reconvene Task Force in 2015 to review code updates for continuation of Phase 2



Recommendations

- Phase 2 program that offers several paths to compliance:
 - Meet min. requirements of GreenBuilt TX; or
 - Meet min. requirements of LEED for Homes; or
 - Meet min. requirements of ICC700; or
 - Meet the following prescriptive requirements:
 - Storm Water
 - Permeable lot . Design the lot such that at least 70% of the built environment, not including area under roof, is permeable or designed to capture water runoff for infiltration onsite.
 - Water efficiency
 - Utilize drip irrigation emitters for all bedding areas of the landscape plan; and



Recommendations

- **Meet water reduction strategies that include installing high-efficiency (low-flow) fixtures or fittings which meet at least three of the following requirements**
 - » The average flow rate for all lavatory faucets must be ≤ 2.0 gallons per minute.
 - » The average flow rate for all showerheads must be ≤ 2.0 gallons per minute.
 - » The average flow rate for all toilets must be:
 - » ≤ 1.3 gallons per flush;
 - » Be dual-flush and meet the requirements of ASME A112.19.14; or
 - » Meet the United States Environmental Protection Agency Water Sense specification and be certified and labeled accordingly.
 - » Utilize ENERGY STAR labeled dishwashers that use 6.0 gallons or less per cycle.
 - » Utilize ENERGY STAR labeled clothes washers with a modified energy factor (MEF) ≥ 2.0 and a water factor (WF) < 5 .
- **For additions to existing homes, meet at least two of following the water reduction strategies**
 - » The average flow rate for all lavatory faucets must be ≤ 2.0 gallons per minute.
 - » The average flow rate for all showerheads must be ≤ 2.0 gallons per minute.
 - » The average flow rate for all toilets must be:
 - » ≤ 1.3 gallons per flush;
 - » Be dual-flush and meet the requirements of ASME A112.19.14; or
 - » Meet the United States Environmental Protection Agency Water Sense specification and be certified and labeled accordingly.



Recommendations—continued

- **Energy Efficiency**
 - Meet the performance requirements of ENERGY STAR for Homes to achieve a HERS rating of 75; or achieve 15% over IC3 calculator, over the 2009 IECC baseline.
- **Heat Island Mitigation**
 - Install an ENERGY STAR Qualified roof on all roofs with slopes of 2:12 or greater.
 - The use of a vegetated roof may be an acceptable alternative subject to the review and approval of the building official.
- **Indoor Air Quality**
 - No HVAC equipment allowed in garage. Place all air-handling equipment and ductwork outside the fire-rated envelope of the garage.
 - Minimize pollutants from Garage. If there is a garage, tightly seal shared surfaces between garage and conditioned spaces, including all of the following:
 - In conditioned spaces above the garage:
 - Seal penetrations;
 - Seal all connecting floor and ceiling joist bays; and
 - Paint walls and ceilings
 - In conditioned spaces next to the garage:
 - Weather-strip all doors;
 - Seal all penetrations; and
 - Seal all cracks at the base of the walls.
 - Air filters. Install air filters with a minimum efficiency reporting value (MERV) ≥ 8 and ensure that air handlers can maintain adequate pressure and air flow. Air filter housings must be airtight to prevent bypass or leakage.



Implementation

- **Continue Third-Party program for residential plan reviews and inspections**
- **Rely on existing and established industry certified professionals**
 - Dallas Builders
 - US Green Building Council- LEED AP with Specialty
 - Environmental Protection Agency (EPA)
 - Professional license
- **Review city's checklists to streamline green review and inspection processes**
- **Work with NCTCOG on the IgCC for adoption by cities throughout the region**



Next Step

- Council Consideration of task force recommendations:
 - Approval of ordinance amendment to Phase 2 on September 26, 2012

