

August 8, 2008

Shawna Lode  
Iowa Finance Authority  
2015 Grand Avenue  
Des Moines, Iowa 50312

Dear Ms. Lode:

We would like Iowa Finance Authority to consider granting an Iowa Housing Award under the Category of Green Development to Community Housing Development Corporation (CHDC).

CHDC is currently building a new green affordable demonstration house, built to LEED standards. This project has been dubbed *Green<sup>th</sup> Street*. Located at 1347 Forest Avenue in the King Irving Neighborhood of Des Moines, *Green<sup>th</sup> Street* merges environmental concerns with affordability concerns for low- to moderate-income families. From planning stage to construction phase, the project has been a collaborative effort, bringing together a wide range of experiences and expertise. Spearheaded by CHDC, groups such as the City of Des Moines, Polk County Housing Authority, Wells + Associates, LEE Engineers & Surveyors, the Center on Sustainable Communities (COSC), Cerergy, Waste Management, Metro Waste Authority, and community members from both the River Bend neighborhood and the King Irving neighborhood have all lent their suggestions and knowledge

This collective effort has brought many innovations to the project. Core to *Green<sup>th</sup> Street* is its durability, requiring little up-keep maintenance, and energy-efficiency to help residents save on water and electricity costs. Rain gardens and native plantings also help with maintenance and resources savings. The rain gardens also divert rain water overflow from storm sewers; lessening storm surge and limiting contaminate run-off. The native plantings are non-invasive, low growing, and drought-tolerant reducing or eliminating the need for chemical treatments and maintenance.

The house is universally designed, allowing access to all people regardless of age or physical ability. The build site is also located along a bus route, allowing for easy access to affordable transportation. Sustainable living is further enhanced by the sites adjacency to the Des Moines Forest Avenue Public Library, allowing ongoing learning opportunities, and Evelyn Davis Park, providing green recreational space.

The architectural plan also takes advantage of the building sites East-West orientation, providing ample natural lighting for each room in the house. A reverse dormer and opening in the southern roof-line allows for sunlight to penetrate the interior dining room and upstairs second bedroom. Limited windows on the house's northern exposure help prevent heat loss and minimize cold-air exchange.

In keeping with the community-based nature of the project, CHDC created an on-line interactive blog. This blog, found at <http://greenthstreet.blogspot.com>, allows CHDC to post updates on the project's progress through pictures, videos, and written commentary and allows the public to post comments and engage in discussion about *Green<sup>th</sup> Street*. The website also serves as a resource to help low- to moderate-income families incorporate affordable green practices into their own homes and lives. Workshops led by COSC throughout the build process, some of which will be held on the build site itself, will allow further public participation and learning experiences.

While durable and affordable housing is something that CHDC has engaged in since its founding, *Green<sup>th</sup> Street* is the organization's first green build. As such, CHDC is using the house as a Best Practices model which will allow future projects of its kind to be more efficiently built.



The house was designed to be replicated. Indeed, the original housing site was located on a North-South axis; when the building site moved to one with an East-West axis, the design was retooled with minimum alterations, underscoring the designs universalism. Both architectural plans will be retained for use on future sites, whether as a green build or as a regular build. In terms of budget, this house will act as a best practices project to help CHDC determine what green elements are feasible for replication across all of CHDC's future housing development.

From its inception, *Green<sup>th</sup> Street* was created to serve the single-housing needs of low- to moderate-income families, such as those served by the Iowa Finance Authority. From the build materials, to the EngeryStar appliances, to the house's landscaping, *Green<sup>th</sup> Street* will save its owners time and money in terms of natural resources, energy usage, and housing and lawn maintenance. The house also addresses environmental health concerns often faced by low income residents who may only be able to afford distressed houses that commonly contain such hazards as lead paint, asbestos, urea formaldehyde, poor ventilation systems, and inadequate heating/cooling units. *Green<sup>th</sup> Street* will employ a HVAC system designed to maintain a high level of indoor air quality and will use green, urea formaldehyde-free build material as well as low/no VOC paints, primers, solvents, and floor coverings. The rain garden and native plantings will also minimize or eliminate the need for chemical applications and maintenance. An extensive rain catchment system consisting of a set of rain barrels, a rain pipe, and underground tiling system will feed into two rain gardens and a rain garden planter, helping to conserve water resources.

*Green<sup>th</sup> Street* will also capture resource efficiencies throughout the construction phase. Advanced-framing techniques will minimize wood waste and will reduce on-site build time. Following LEED standards, a waste management plan has been set in place to divert as much construction waste as possible from being sent to the landfill. Waste will be sorted and stored by material type, then weighed and taken to the appropriate recycling center. Material that can be reused will either be kept for future builds or will be donated to other non-profit groups. The CHDC recycling coordinator will keep track of how much waste is generated on site and will ensure that all recycling material is hauled to the appropriate recycler. The waste management plan will be shared on a regular basis with everyone on the construction site from the workers to visitors to guarantee resources are being used efficiently.

Energy savings and air quality will be tested by Cenergy at the time of installation and at the completion of the build to certify a high standard of efficiency and quality. Water and energy rates will also be tracked after the house is purchased and occupied to measure the cost savings of the systems.

The construction cost for the build is expected to be approximately \$170,000; the house's market value will be \$125,000. Gap funding granted by the City of Des Moines Home Fund and the Polk County Housing Trust Fund will help cover costs. Once finished, *Green<sup>th</sup> Street* will be sold to a low- to moderate-income family based on income guidelines set by HUD.

We hope that *Green<sup>th</sup> Street*'s innovative design, energy-efficiency, affordability, durability, and community-based effort makes CHDC worthy of being honored by Iowa Finance Authority with a Housing Iowa Award. We appreciate your consideration.

Sincerely,

Brian Douglas  
Project Manager

Christine Hall  
Intern

# COMMUNITY HOUSING DEVELOPMENT CORPORATION'S GREEN AFFORDABLE DEMONSTRATION HOUSE

Summer - Fall 2008



Green<sup>th</sup> Street Project:  
Looking Southwest  
Design by Wells + Associates

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*"We shape our  
buildings, then  
our buildings  
shape us."*

*-- Winston Churchill*

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Green<sup>th</sup> Street Project:  
Looking Northwest  
Design by Wells + Associates

## About the CHDC

Community Housing Development Corporation (CHDC) is a non-profit, community-based organization that provides housing and home maintenance assistance to low- to moderate-income families and seniors. Working with various partners, CHDC revitalizes distressed neighborhoods and encourages neighborhood sustainability by renovating existing homes and building new houses.

## Green<sup>th</sup> Street

As part of its sustainable neighborhoods mission, CHDC has embarked on a new project to incorporate green, energy-efficient strategies into the construction of a new affordable home. This project, dubbed "Green<sup>th</sup> Street", is being built at 1347 Forest Avenue in the King Irving Neighborhood in Des Moines, IA. Ground-breaking will occur August 2008. Construction is expected to last 5 months.

The three main priorities that CHDC hopes to achieve through the build are:

- Longevity of the house, with minimum maintenance needs
- Affordable maintenance of the finished house
- High standard of indoor air quality

The project will have a full basement, 3 bedrooms, and 2 baths. The house is universally designed to accommodate those living with disabilities.

The house is expected to cost \$150,000 to build and will sell for \$125,000 to a low- to moderate-income family based on HUD median income requirements. Gap funding for this project has been provided by the City of Des Moines Home Funds and the Polk County Housing Trust Fund.

## It's Easy Being Green

Resource conservation, energy-efficiency, and healthy indoor air quality are the foundation blocks of green buildings. CHDC's Green<sup>th</sup> Street will incorporate these standards into the project by:

- Using green-certified construction materials
- Employing advanced framing techniques to minimize waste, lower material and construction costs, and increase structural integrity
- Reducing and recycling construction material through source-separation practices
- Monitoring air quality and energy use in the completed home to ensure maximum efficiency
- Equipping the house with energy-efficient appliances, mechanical, and electrical systems

Natural daylight will also be incorporated into every room of the house while minimal windows on the north side will help conserve energy costs. The slope of the roof will allow for rain water to be diverted to rain gardens planted on the site.

The housing site offers further green and sustainable amenities. Green<sup>th</sup> Street



## Public Workshops

The Center on Sustainable Communities (COSC) will offer public workshops throughout the building process. Classes will include:

- Site Management and C&D Waste Management
- Foundations and Basements
- Advanced Framing
- Insulation
- Installation of HVAC
- Interiors Rain Gardens

For more information on classes and workshops please contact COSC at:

Phone: (515) 277-6222  
Website: [www.icosc.com](http://www.icosc.com)



Above: First Floor Layout  
Below: Second Floor Layout  
Design by Wells + Associates



will sit across the road from the Des Moines Forest Avenue Public Library, providing on-going learning opportunities to residents and sits on the corner to Evelyn Davis Park, which offers picnic areas, play grounds, and basketball courts. *Green<sup>th</sup> Street* is also located along a *Des Moines Area Regional Transit* bus route, providing a sustainable, public transit option to future owners of the house.

The build will follow LEED standards, a third-party measurement of design excellence and construction and maintenance efficiency. *Green<sup>th</sup> Street* will also serve as a Best Practices home in order to improve the quality of future CHDC housing projects.

## It Takes a Community

CHDC is working closely with several local organizations to make *Green<sup>th</sup> Street* a reality. Many of our partners will be donating their goods and services to the project.

*Green<sup>th</sup> Street* is truly a community-based effort. CHDC greatly appreciates all of our community partners:

- Cenergy
- Center on Sustainable Communities
- City of Des Moines
- Double D Construction
- Fireplace & Stone Center
- Flooring Gallery
- LEE Engineers & Surveyors
- Menards
- Metro Waste Authority
- Polk County Housing Trust Fund
- Signs Plus
- Team Services
- Waste Management
- Wells + Associates

### For more information regarding *Green<sup>th</sup> Street* contact:

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| Press Contact:   | Sales Contact:   |
| Heidi Wessels  | Brian Douglas  |
| CHDC Associate Director  | CHDC Project Manager   |
| 515-244-7798   | 515-244-7798   |
| <a href="mailto:h.wessels@chdcdesmoines.org">h.wessels@chdcdesmoines.org</a> | <a href="mailto:b.douglas@chdcdesmoines.org">b.douglas@chdcdesmoines.org</a> |

Visit our blog at <http://greenthstreet.blogspot.com>



## Contact Us

Community Housing Development Corporation  
601 Forest Avenue  
Des Moines, IA 50314  
Phone: 515-244-7798  
Fax: 515-243-8507  
Web-site: [www.chdcdesmoines.org](http://www.chdcdesmoines.org)