



# Building for Sustainability

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Creating Energy-Efficient  
and  
Environmentally Friendly  
Affordable Housing in  
Chicago

*Written for the Chicago Community Loan Fund  
with underwriting support generously provided by  
ComEd – An Exelon Company*



*Made possible with a grant from*



## About CCLF

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Chicago Community Loan Fund (CCLF) is a Community Development Financial Intermediary (CDFI) providing low-cost, flexible financing to community development organizations, engaged in affordable housing, social service and economic development initiatives that benefit low- and moderate-income neighborhoods and families throughout metropolitan Chicago.

CCLF has grown from an initial investment of \$200,000 to over \$8.7 million in total capital under management. Having distinguished itself with a special commitment to the needs of small and mid-size organizations as well as a philosophy of "high-touch" lending which integrates technical assistance into the application process and throughout the life of the loan, if needed. In addition, CCLF has developed a unique expertise in predevelopment lending—by far the hardest form of capital to obtain.

CCLF is committed to being responsive to the needs of its customers and the communities in which they serve. To effectively carry out its mission, CCLF offers the following product and services:

**Predevelopment Loan:** A loan with a 2-year term that pays for expenses associated with the pre-construction period (soft costs), including land or building acquisition, site stabilization, interim maintenance, environmental surveys, appraisals, taxes, insurance coverage as well as legal, architectural and consultant fees.

**Construction (Rehabilitation):** A loan with a 1-year term used to build or rehabilitate a physical structure.

**Mini-Permanent Mortgage:** A custom mortgage product with a 10- to 15-year term.

**Equipment/Working Capital Loan:** A loan with a 3- to 5-year term that allows nonprofits and worker-owned cooperatives to buy equipment needed to establish or expand their commercial enterprises.

**Cooperative Housing Loan:** A fixed-rate loan product primarily available to low-income and/or limited-equity housing cooperatives.

<p><b>Loan maximum:</b> \$350,000 (maximum higher for cooperative housing loan). <b>Eligible borrowers:</b> nonprofits, for-profit/nonprofit joint venture, for-profit subsidiary of a nonprofit, housing or business cooperative. <b>Collateral Requirements:</b> First mortgage preferred and/or combination of first or second position lien on property and so forth. <b>Service Area:</b> Project must be located within the six -county Chicago metropolitan area (Illinois).</p>
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**Project Readiness Workshops :** An intensive one-day workshop providing an overview on the complexities and requirements involved in launching and sustaining a successful real estate development

**Comprehensive Development Assessments:** A follow up to the workshops, CDAs provide free, customized consulting in a retreat format designed to help development projects “get back on track.”

**Telephone Referral Services:** CCLF offers time -sensitive development advice and provides referrals to clients about technical assistance providers, government agencies, professional service firms and other lenders. In sharing knowledge and expertise, staff can often help clients leverage support from several agencies at once.

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## Acknowledgments

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*Thanks as well to the principals and architects at Prisco Serena Sturm for their kindness in meeting with me early on in my research and for their willingness to share their knowledge about sustainable design and energy efficiency. I am deeply indebted to PSS for their ever-present support throughout the writing of this guide. Special thanks to Michael Roy Iversen, Architect, for hosting me and answering my questions on one very cold winter day – and for providing me with a great many of the website listings found herein.*

*Thanks also to Paul Knight from Domus Plus and David Sullivan from South Chicago Workforce for forwarding me information about the Woodlawn Development Associates cohousing development, as well as for being proofreaders for this publication. In addition, I owe a great debt of thanks to Karen Lewis of the Environmental Law and Policy Center. Karen introduced me to Chicago's sustainable-development community through the American Institute of Architects' Committee on the Environment. Without her help I would not have been able to complete the contacts section of this guide.*

*Finally, very special thanks to Professor Janet Smith at the University of Illinois at Chicago, College of Urban Planning and Public Affairs. This guide was completed by her counsel and through her commitment to advocating safe, decent, and affordable housing.*

*If ever there was a case of pearls cast before swine, the research and writing of this guide certainly qualify. My thanks to you all for your time, encouragement and help.*

*Matthew Hickey*

*December 2001*

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# Introduction

Since their creation in the late 1960s, community development corporations (CDCs) have played an integral role in the physical and social transformation of affordable housing in the United States.

CDCs typically started out as small groups of concerned neighbors and individuals recognizing that something needed to be done to build a stronger, more stable local community. Today they have learned how to organize and work alongside governments, neighborhood groups, and other local nonprofits to leverage common assets (such as vacant land, underused streets and parks, and members' labor and leadership) in an effort to increase the overall number and quality of affordable housing units in their communities. Their success has been irrefutable:<sup>1</sup>

- Between 1969 and 1988, community development corporations turned out more than 20,000 affordable housing units and apartments every year.
- By 1994, CDCs had built more than 40,000 new units every year – a number greater than the federal government's total output at the height of its public housing program.
- Between 1994 and 1997, CDC housing construction projects generated 247,000 new and rehabilitated affordable housing units.

Because of this success, community development corporations have become the United States' most effective engines of urban reinvestment.

As it looks to the future, the Chicago Community Loan Fund (CCLF) will be there to assist CDCs in their mission to build more and better affordable housing. One way that CCLF will partner with CDCs to accomplish this goal is by encouraging the use of energy-efficient building standards and environmentally friendly “green” materials in the design and construction of affordable housing. CCLF promotes these two approaches for three reasons:

- By incorporating energy-efficient heating, ventilation, and air conditioning (HVAC) systems and super insulation (SI) construction practices into their housing designs, CDCs, tenants, or homeowners lower overall monthly utility expenses for heat, gas, water, and electric services.
- Inclusion of environmentally friendly materials into the construction of affordable housing units greatly increases the indoor environmental quality (IEQ) of the building by reducing the amount of airborne volatile organic compounds (VOCs) that affect tenant health.
- Combining the use of energy-efficient HVAC and SI practices with the use of green materials reduces the long-term operating and maintenance costs associated with running an affordable-housing facility. When those utility cost savings are passed along in the form of reduced rents, more tenants can qualify for affordable housing.

The Chicago Community Loan Fund recognizes the unique impact CDCs have on their neighborhoods. In promoting the use of energy-efficient and green building design techniques, CCLF wishes to further this success by funding community development projects that – through the use of energy-efficient and green building practices – increase the bottom-line operating effectiveness of each project while simultaneously extending affordable -housing opportunities to more people throughout Chicago.

By taking this new and exciting approach to building design and construction, community development corporations will continue to achieve success in building and managing affordable housing. Simultaneously they will improve their ability to meet the expectations of neighborhood residents by providing healthier, safer, and less expensive living environments.

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<sup>1</sup> Paul Grogan and Tony Proscio, *Comeback Cities* (Boulder, CO: Westview Press, 2000), 70.

## About This Guide

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Focusing on your role as a community-based housing developer interested in learning more about the benefits of building energy-efficient and environmentally friendly affordable housing, this guide is designed to:

- Educate you about the systems engineering “whole building” design approach to creating energy-efficient apartment or housing units
- Establish guidelines that can be used in selecting environmentally friendly products for incorporation into your development
- Provide you with lists of professional contacts and grant sources that you can use when designing and funding your project

To present this information in a clear, concise manner, this guide comprises four sections:

- *Building Energy-Efficient and Green*, which discusses the intricacies of the whole-building design approach and gives specific information about selecting green products
- *Professional, Financial, Advocacy, and Government Contacts*, which lists and provides contact information for Chicago-based architects, development consultants, energy consultants, engineers, general contractors, and lenders who specialize in the development of green, energy-efficient homes and apartments
- *Government Grants and Programs*, which provides information on government programs that encourage and financially support the construction of energy-efficient, environmentally friendly housing in Chicago
- *Private Foundations and Programs*, which covers private sources that work in conjunction with all the other actors in your development to underwrite the cost of housing or technical assistance in order to make your development a reality.

Finally, each section of this guide contains a list of World Wide Web resources that you can reference online to investigate and learn more about the benefits of building energy-efficient and green.

# Building Energy Efficient & Green

**This section discusses and illustrates the meaning of building energy efficient and green. It also offers insights into issues your nonprofit board must discuss prior to incorporating environmentally responsible materials and energy efficiency techniques into your affordable housing project.**

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At its core, building to conserve energy and the environment is about constructing or renovating a building so that it is durable. “Durability is typically thought of as a building’s (or material’s) ability to maintain its performance over time and use.”<sup>2</sup> By rehabbing or building a structure that embodies this notion of durability, a CDC can reduce maintenance and repair costs, minimize disruption of building operations (caused by repairs and extensive maintenance), and save money on expenses associated with disposal of construction materials and replacement of worn-out finishings once the building is complete.

As a development team, the CDC, its architect, and its general contractor must balance this goal of durability against other project considerations, including budget, aesthetics, and environmental concerns. When making trade-offs between appropriate levels of durability and other factors, the team must address the following questions:<sup>3</sup>

- What is the expected life span of the building?
- To what level of environmental exposure – extremes in weather, vibrations, and noise – will the building be subjected?
- To what types and intensity of use will the building be subjected?
- What levels of maintenance and repairs can be expected?
- How sensitive are the building activities to maintenance and repair operations?
- What degree of flexibility is required for the building?

As leaders of a community-based organization, your board of directors must discuss and define their expectations in building energy-efficient and green and then communicate those expectations and ideas to your project architect. Particular consideration should be given to the operations and management (O&M) requirements of materials and assemblies, as well as the cost of their replacement over time. Also, evaluations of life-cycle costs – the total environmental costs associated with the use of a particular product over its productive and postproductive life – are recommended to help your board assess the cost-effectiveness of durable materials and systems.

Operations and management costs reflect all the costs of running the building over the course of its useful life. When choosing to build for energy efficiency and sustainability, be sure to:<sup>4</sup>

- Set and reach demanding performance goals on both a daily and an ongoing basis.
- Quantify performance so that the building can be benchmarked against other buildings.
- Keep the building "evergreen" by assessing changing occupant needs over time and making adjustments to the HVAC, lighting, electrical, telecommunications, and housekeeping systems.
- Extend the useful service life of materials and equipment while conserving resources by using sustainable techniques.
- Prevent disruptive failures in the building and its systems.
- Promote tenant satisfaction.

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<sup>2</sup> “Design Criteria,” *WBDG: Whole Building Design Guide*, March 2, 2001. < [www.wbdg.org](http://www.wbdg.org) >

<sup>3</sup> *Ibid.*

<sup>4</sup> “O&M of a Green Facility,” *WBDG*. < [www.wbdg.org](http://www.wbdg.org) >

## Building Energy Efficient and Green

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By conducting life-cycle cost analysis, your organization will develop a way of assessing the total cost of building ownership. This analysis involves “translating all expenses associated with building ownership over a prescribed ‘life cycle’ period into current dollars.”<sup>5</sup> Considerations include:

- Initial construction costs
- Operating outlays for energy, water, and other utilities
- Maintenance, repair, and replacement expenditures

Through this process of life-cycle analysis, the project costs associated with choosing standard materials or assemblies can be compared on equal terms to the costs of using energy-efficient mechanical systems or green materials.

One of the great challenges experienced by both for-profit and nonprofit developers during this planning phase is the recognition that choosing to build green and energy-efficient might mean adding cost to the project’s construction budget. This difference between the standard cost of building materials and equipment and the cost of using energy-efficient and green products is known as the cost increment.

Building more energy efficient homes usually involves upgrading materials or equipment to increase the energy efficiency of a home. These changes normally add to the initial cost of a home. Economically, the increased energy efficiency is often justified to the home buyer/owner based on the energy cost savings that result for the energy efficient features. There are ‘break points’ where the costs of energy-efficient features are balanced by the reductions of other construction costs. These ‘break points’ involve levels of energy efficiency that allow a specific component of a building to be downsized or deleted. Construction costs are reduced by improving building envelope performance thereby allowing the downsizing of the mechanical equipment. Furthermore, the [utility cost] savings provided more than offset increased costs associated with controlled mechanical ventilation and source control of pollutants. Systems approaches are the key element used in integrating and optimizing the home building system to create these ‘break points’.<sup>6</sup>

Out of O&M and life-cycle costs analysis comes choices such as whether to incorporate a high-performance HVAC or glazing system. During this process, bear in mind that the overall impact of using energy-efficient and green materials typically increases construction costs of the development but that these costs are usually offset by operating efficiencies that lower utility and maintenance costs.

The next two sections will examine the whole-building design approach, also known as the systems engineering approach, to building design and construction and will explore what rehabbing or building in a green, environmentally sustainable manner means.

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<sup>5</sup> “Life Cycle Costing,” WBDG. < [www.wbdg.org](http://www.wbdg.org) >

<sup>6</sup> “A Systems Approach to Advanced Housing Design,” *Building America*, December 7, 2000.  
< [www.buildingscience.com/buildingamerica/goals.htm](http://www.buildingscience.com/buildingamerica/goals.htm) >

# The Whole-Building Design

The whole-building design approach, or systems engineering approach, asks the members of the development team to consider the building as a whole when designing and choosing materials and mechanical systems. From this perspective, the goal is to create buildings that are “responsive, responsible, and defensible.”<sup>7</sup> Toward that end, buildings that utilize the systems engineering approach are evaluated for:

- Cost-effectiveness
- Future flexibility
- Overall environmental impact
- The depth to which they enrich the lives of their occupants



The fundamental challenge of the whole-building design approach is to understand that all building systems are interdependent:

Through a systematic analysis of these interdependencies, a much more efficient and cost-effective building can be produced. The choice of a mechanical system, might, for example, impact the quality of the air in the building, the ease of maintenance, Global Climate Change, operating costs, fuel choice, and whether the windows of a building are operable. In turn, the size of the mechanical system will depend on factors such as, the type of lighting used, how much natural daylight is brought in, how the space is organized, the facility's operating hours, and the local microclimate.<sup>8</sup>

A successful whole-building design is a solution greater than the sum of its parts. The whole-building design approach not only examines how the materials and systems that make up a building connect and overlap but also recognizes that each feature affects the energy use and efficiency of the whole. By understanding how the structure's separate material and mechanical components interact, developers who use the whole-building design approach can better integrate their buildings into the existing site, as well as into the community at large.

The following is a suggested list of whole-building energy performance goals as noted in the *Whole Building Design Guide*.<sup>9</sup>

## Guidance/Recommendations

- Reduce loads through climate-responsive design.
- Use passive solar design; plan buildings; orient, size, and specify windows; and locate landscape elements with solar geometry and building load requirements in mind.
- Use high-performance building envelopes; select walls, roofs, and other assemblies based on long-term, insulation, and durability requirements.

## Employ Renewable Energy Sources

- Evaluate the use of common, on-site renewable energy technologies such as day lighting, solar DHW, and geothermal heat pumps.
- Investigate the use of emerging, on-site renewable energy technologies such as photovoltaics and wind turbines.
- Evaluate purchasing electricity generated from renewable sources or low-polluting sources such as natural gas.

## Specify Efficient HVAC and Lighting Systems

- Use energy-efficient HVAC equipment and systems that meet or exceed 10 CFR 435.
- Use lighting systems that consume less than one watt per square foot for ambient lighting.
- Use ENERGY STAR®-approved products or products that meet or exceed Department of Energy standards.

<sup>7</sup> “Whole Building Design Approach,” *WBDG*. < [www.wbdg.org](http://www.wbdg.org) >

<sup>8</sup> *Ibid.*

<sup>9</sup> “Whole Building Energy Performance Goals,” *WBDG*. < [www.wbdg.org/DesignResource.asp?Introduction=7&Principles=5&Resource=21](http://www.wbdg.org/DesignResource.asp?Introduction=7&Principles=5&Resource=21) >

- Evaluate energy recovery systems that preheat or precool incoming ventilation air in commercial and institutional buildings.
- Investigate the use of integrated generation and delivery systems, such as cogeneration, fuel cells, and off-peak thermal storage.

#### **Optimize Control Strategies**

- Use sensors to control loads, based on occupancy, schedule, and/or availability of natural resources for use as light or ventilation.
- Evaluate the use of modular components such as boilers or chillers to optimize part-load efficiency and maintenance requirements.
- Evaluate the use of direct digital controls.

#### **Monitor Performance**

- Use a comprehensive, building commissioning plan throughout the life of the project.
- Use metering to confirm building energy and environmental performance through the life of the project.

## Want to Know More? Check Out These Websites:

### ***Design Matters – Best Practices in Affordable Housing* at [www.uic.edu/aa/cdc/AHDC/website/](http://www.uic.edu/aa/cdc/AHDC/website/)**

The University of Illinois at Chicago's City Design Center has created this one-stop shop as a resource for building energy-efficient, functional, satisfying low-income housing.

### ***Minnesota Sustainable Design Guide* at [www.sustainabledesignguide.umn.edu](http://www.sustainabledesignguide.umn.edu)**

The *Minnesota Sustainable Design Guide* is incredibly thorough. Its step-by-step approach explains and cost-justifies energy-efficient building, walks the reader through the building process from drafting board to lease-up, discusses building design strategy, offers beautifully illustrated case studies, and provides evaluation documents.

### ***Sustainable Building Technical Manual* at [www.sustainable.doe.gov/articles/ptipub.shtml](http://www.sustainable.doe.gov/articles/ptipub.shtml)**

This Department of Energy Center of Excellence for Sustainable Development report targets building professionals. Written by some of the foremost experts in the field, it contains more than 300 pages of practical, step-by-step advice on sustainable buildings.

### ***WBDG Whole Building Design Guide* at [www.wbdg.org](http://www.wbdg.org)**

*WBDG* is a fantastic resource for any type of whole-building, systems approach to building design and construction. It is thorough, easily accessible, and searchable.

# Whole-Building Approach Case Study



*Prairie Crossing, located in Grayslake, Illinois, "is dedicated to preserving the distinctive open landscape of central Lake County and encouraging daily living in harmony with the environment."<sup>10</sup>*

*Prairie Crossing homes are not "affordable" as defined by this guide; houses range from 1,140 to 3,428 square feet and from \$269,900 to \$427,900. However, the same results can be achieved in typical Chicago-style affordable-housing projects, both rehab and new construction.*

*The systems engineering approach used to develop the Prairie Crossing designs maximizes the interaction between the building envelope and its HVAC systems. By designing each home around its HVAC system, the size-to-cost ratio of the heating and cooling system is significantly decreased, and energy efficiency is increased. In addition, the cost of the more efficient envelope is offset by the reduced costs of the smaller system.*

*Source: Prairie Crossing Homes, prepared by the Office of Building Technology, State and Community Programs, for the U.S. Department of Energy.<sup>11</sup>*

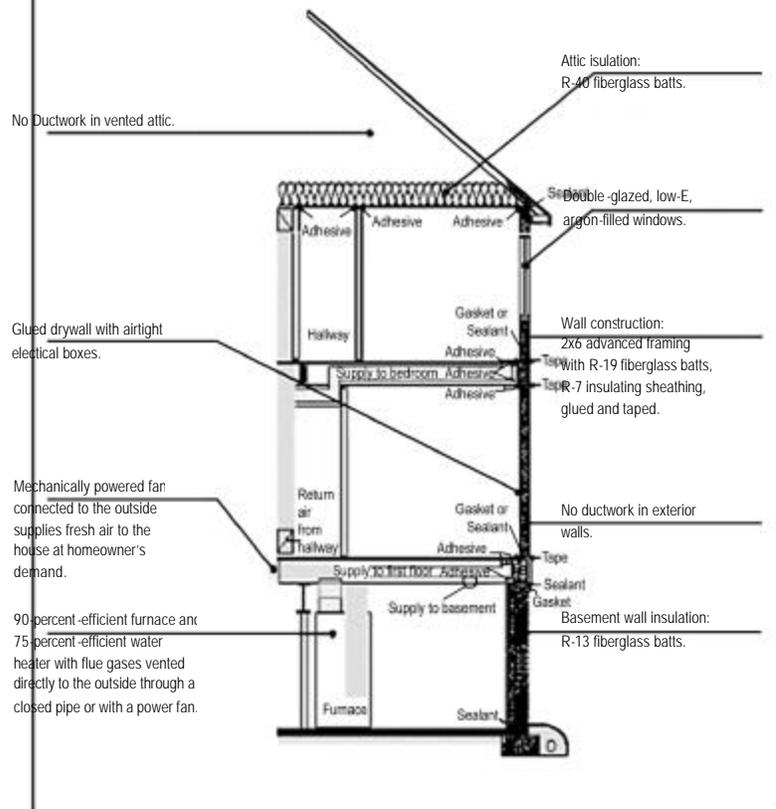
## ENERGY FEATURES

### Building Envelope

- Ceiling/roof: Truss with R-40 insulation batts, with vented assembly
- Walls: 2x6 advanced framing, with R-19 batts instead of standard R-13, R-7 insulating sheathing, and interior air-flow retarder
- Basement: R-13 full height fiberglass batt insulation
- Windows: Double-glazed, low-e, argon-filled glass
- Total envelope leakage: Less than 2.5 sa in per 100 sa ft of building

### Mechanical System

- Furnace: 90-percent-efficient condensing gas furnace; single unit, within envelope
- Hot water tank: 75-percent-efficient power-vented gas water heater
- Ductwork: Leakage less than 5 percent of total rated flow at high speed at 25 Pascals; all ductwork within conditioned space
- Ventilation: Supply fan ventilation system with distributed exhaust;



<sup>10</sup> "Prairie Crossing," *Prairie Crossing*, February 5, 2001. < <http://www.prairiecrossing.com/> >

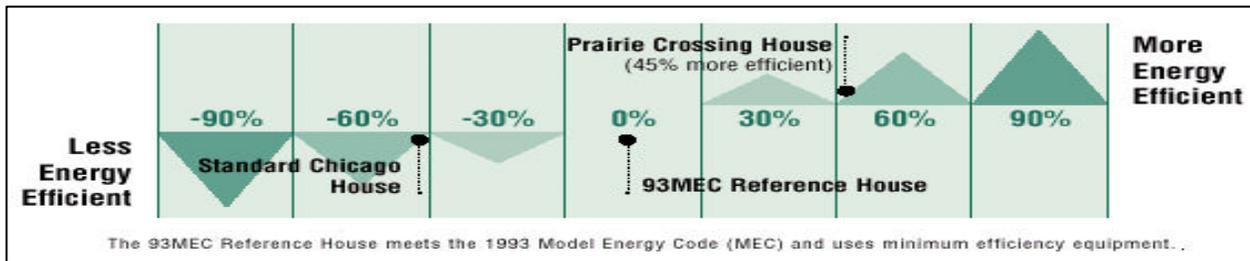
<sup>11</sup> Office of Technology, State and Community Programs, *Prairie Crossing* (U.S. Department of Energy), February 5, 2001. < [www.nrel.gov/docs/fy99osti/26261.pdf](http://www.nrel.gov/docs/fy99osti/26261.pdf) >

**Table 1: Incremental Cost Analysis**

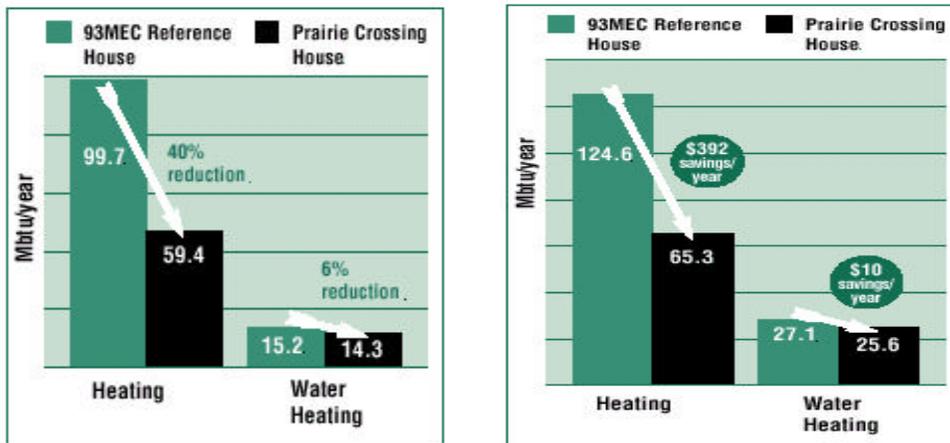
Features	Cost Difference
Advanced framing	-\$500
R-7 insulated sheathing, taped <sup>+</sup>	+300
Cost saving from not using OSB and house wrap	-300
High-performance windows	+500
Interior-airflow retarder	+200
No polyethylene vapor barrier <sup>++</sup>	-100
Basement insulation	+600
Controlled ventilation system	+100
Power-vented gas water heater*	+300
90 percent-efficient condensing gas furnace**	+500
Downsizing of AC unit by 1 ton	-700
<b>Total Incremental Cost</b>	<b>+\$900</b>

- \* Prairie Crossing houses feature a power-vented water heater, which allows greater flexibility in placing the unit. A direct-vent water heater could achieve the same energy performance for half the cost.
- \*\* These houses can achieve efficiency improvements of 40 percent without the additional cost of a 90 percent-efficient condensing furnace. The use of this furnace boosts efficiency improvements toward 50 percent.
- + This is a building code issue in Chicago; it is usually not permitted.
- ++ This depends on the type of wall insulation used and the type of wall assembly.

**Figure 2: Prairie Crossing Energy Efficiency Performance Comparison**



**Figure 3: Heating and Cooling Loads and Utility Cost Savings\***



\* Cost saving estimates assume natural gas at \$0.6615/therm.

The energy-efficient features of the Prairie Crossing homes considerably reduce the annual estimated heating and cooling loads, compared to a reference house that meets the 1993 Model Energy Code (93MEC). What's more, the energy efficiency measures have reduced energy consumption and costs significantly.

# Environmentally Responsible Building and Materials

The choice of construction materials plays a key role in determining a building's impact on the environment. Developers who choose to use resource-efficient – also known as environmentally friendly or sustainable – building products recognize that one generation's "waste" can be another one's "raw material." The notion of sustainability asks us to "reduce, reuse, and recycle" when we build by selecting materials that:<sup>12</sup>

- Maximize recycled contents, especially from the postconsumer perspective
- Specify materials harvested on a sustained-yield basis (ie., where the harvest is restricted to the annual increment of forest growth)
- Encourage the use of recyclable assemblies and products that can be deconstructed at the end of their useful lives
- Limit construction waste by separating castaway material during construction
- Eliminate the use of materials that pollute or are toxic in their manufacture, use, or reuse
- Give preference to locally produced products and products with low embodied energy content

Arriving at a concrete definition of what constitutes environmentally responsible building is difficult. However, a consensus has emerged regarding some of its important attributes. Specifically, a green, environmentally responsible building must be:<sup>13</sup>

**Energy efficient** – To the maximum extent economically feasible, the building should rely on energy-efficient and renewable energy sources rather than fossil fuel for its operation. It should meet and, in most instances, exceed current whole-building energy performance goals as discussed in the preceding section.

**Site responsive** – Creating sustainable buildings starts with proper site selection. The location of a building affects a wide range of environmental factors such as local ecosystems, transportation energy use, and the reuse or rehabilitation of existing structures.

**Water conserving** – In many parts of the country, fresh water is an increasingly scarce resource. A sustainable building should reduce, control, or treat site runoff; use water efficiently through appliance specification; and recover gray water for on-site use when feasible.

**Materials sensitive** – To the maximum extent economically feasible, a sustainable building should be constructed of durable, low-energy content, nontoxic materials that are manufactured locally using sustained yield methods when appropriate. Sustainable-building assemblies encourage reuse and recycling.

**Healthy** – The indoor environmental quality of a building has a big impact on occupant health and productivity. Along with its other attributes, a sustainable building should avoid the use of materials high in pollutants, such as VOCs or toxins, and be well ventilated.

"In the struggle to build cost-effective buildings, one can easily forget that the ultimate success or failure of a project rests on the quality of its indoor environments."<sup>14</sup> Healthy, comfortable tenants and homeowners, especially in the context of affordable housing, are invariably more productive and satisfied. Using resource-efficient, green materials will help your nonprofit organization increase tenant satisfaction while reducing their exposure to airborne particulates and volatile compounds. To achieve this success, during the design and development process your development team should seek to:<sup>15</sup>

- Value aesthetic decisions such as the importance of views of natural and man-made elements.
- Provide thermal comfort with a maximum degree of personal control over temperature and humidity.
- Supply adequate levels of ventilation and outside air to ensure indoor air quality.
- Avoid the use of materials high in pollutants, such as volatile organic compounds or toxins.
- Ensure acoustic privacy and comfort by using sound-absorbing material and equipment isolation.
- Control disturbing odors through contaminant isolation and careful selection of cleaning products.

<sup>12</sup> "Materials," *WBDG*. < [www.wbdg.org](http://www.wbdg.org) >

<sup>13</sup> "Sustainability," *WBDG*. < [www.wbdg.org](http://www.wbdg.org) >

<sup>14</sup> "IEQ – Enhance Indoor Environmental Quality," *WBDG*. < [www.wbdg.org](http://www.wbdg.org) >

<sup>15</sup> *Ibid.*

## **Want to Know More? Check Out These Websites:**

***Advanced Building Technologies at [www.advancedbuildings.org](http://www.advancedbuildings.org)***

An incredibly comprehensive guide to more than 90 environmentally appropriate technologies, materials, and practices

***Environmental Building News at [www.ebuild.com](http://www.ebuild.com)***

A super-clearinghouse for product manufacturers and distributors

***HOK Healthy and Sustainable Materials Database at [www.hok.com](http://www.hok.com)***

Offers easy access to sustainable-material information, including specific building materials' health impacts over their product life cycle

***NPS Sustainable Design and Construction Database at [www.nps.gov](http://www.nps.gov)***

Database on green products and recycling-company information; can be downloaded from the website

***Oikos at [oikos.com/products](http://oikos.com/products)***

Comprehensive, searchable database of green and energy-efficient building materials

***U.S. Department of Energy, Energy Star Program at [www.energystar.gov](http://www.energystar.gov)***

Contains an incredibly large, easily accessible library of energy-efficient products

# Materials Selection Guide

*The Home Builders Association of Metro Denver has the United States' largest program dedicated to building green, resource-efficient homes. As part of the Built Green Colorado™ Program, the Home Builder's Association of Metro Denver has developed the following list of energy-efficient components and sustainable housing materials. When you choose the specified (in parentheses) number of elements under each header and combine this number so that you have chosen a total of at least 38 elements, your home or apartment development qualifies as a "Built Green™" home in Colorado.<sup>16</sup> Although this list provides an excellent baseline for building green, your organization can include more than the specified minimum number of elements in your development to better incorporate energy efficiency and environmentally friendly practices into your project.*

## **LAND USE: LOT (Choose 2)**

- Trees and natural features on site protected during construction.
- Save and reuse all site topsoil.
- Home orientation encourages solar heating and reduces overheating potential of west facing glass.
- Home oriented on lot such that the long dimension faces within 30 degrees of south.

## **WASTE MANAGEMENT (Choose 1)**

- Built-in kitchen recycling center with two or more bins.
- Minimize job site waste by using materials wisely and prohibit burying construction waste.
- Recycle job site waste (>50%).

## **ENERGY USE: ENVELOPE (Choose 2)**

- South glass area is between 5-7% of total finished floor area.
- Advanced sealing package in addition to basic sealing practices (advanced package adds sealing at top and bottom plates, attic penetrations, corners and between cavities at penetrations).
- Provide south roof area designed for future solar collector use (20° of south).
- Home designed for passive solar heating (>20%).
- Energy heels of 6" or more on trusses.
- Insulated headers, minimum R-10.
- Sill plate sealed with foam gasket.
- Two-foot overhang, between one and two feet above south windows.
- Blower door test with 0.35 ACH or less.
- House is wrapped with an exterior air infiltration barrier to manufacturer's specifications.
- House meets EPA 5-Star Program Standards.

## **ENERGY USE: MECHANICAL (Choose 4)**

- Furnace centrally located, all duct runs reduced as much as possible.
- No ducts in outside walls unless ducts are insulated to R-6 and sealed with mastic.
- No ductwork in attic unless insulated to at least R-6 and sealed with brush-on mastic.
- Thermostat with on switch for furnace fan to circulate air.
- Two properly supported ceiling fan prewires.
- Sealed-combustion gas fireplace or sealed wood-burning fireplace or stove with outside combustion air.
- Setback thermostat.
- Furnace ductwork joints sealed with low toxic mastic.
- Whole house fan installed.
- Return-air ducts in every bedroom.
- 90% or higher energy efficiency furnace.
- 87% or higher energy efficiency boiler.
- Active solar heating system (solar fraction >20%).
- Two or more thermostats controlling separate heating and cooling zones from a single heating and/or cooling system.
- Geothermal heating and cooling system.
- In-floor heating system with insulated slab (underneath and edge).

## **ENERGY USE: INDOOR AIR QUALITY (Choose 2)**

- Sealed-combustion furnace or boiler.
- Sealed-combustion domestic water heater.
- Exhaust fan in garage on timer or wired to door opener.
- Heat recovery ventilator or air-to-air heat exchanger.
- Active or passive radon mitigation installed to EPA guidelines.
- Mechanical room enclosed and insulated to R-11.
- Provide range hood vented to outside.
- Furnace and/or duct-mounted electronic air cleaner or HEPA filter.
- House meets American Lung Association Health House Standards.

<sup>16</sup> Built Green Colorado™, *Built Green™ Checklist*, March 30, 2001. Used with permission. In 2002, this checklist will be revised to reflect a new weighted point system and increased energy requirements. For details, visit their website: < [www.builtgreen.org](http://www.builtgreen.org) >

# Materials Selection Guide

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## ENERGY USE: WATER HEATING SYSTEMS (Choose 2)

- Gas water heater with energy factor of 0.60 or greater.
- Insulate hot water pipes to R-6 in unconditioned spaces.
- Water heater within 20 pipe feet of dishwasher and clothes washer.
- Rough-in for future solar hot water heating.
- Gas water heater with insulating blanket installed to manufacturer's specifications.
- Insulate all hot water lines to all locations with standard flexible pipe insulation or better.
- Solar water heating system.
- Geothermal or waste heat recovery water heating.
- Side-arm water heater off of boiler.

## ENERGY USE: APPLIANCES (Choose 2)

- Dishwasher has energy -saving cycle or qualifies for ENERGY STAR.
- Gas clothes dryer with electronic ignition. Gas range, cooktop and/or oven with electronic ignition.
- Refrigerator qualifies for ENERGY STAR or has annual estimated electric cost less than \$66.
- If appliances are not included, a list of energy -efficient appliances is provided.
- Provide gas rough-in for clothes dryer, range, cooktop and/or oven when those appliances are not included with the home.
- Solar electric system provides 20% or more of the home's electricity.

## ENERGY USE: LIGHTING (Choose 2)

- Light-colored interior walls, ceiling and soffit.
- Light-colored carpet.
- Furnish four compact fluorescent light bulbs to owners.
- Extended-life incandescent bulbs greater than 2,000 hours (e.g., traffic signal bulbs).
- No can lights in insulated ceiling or IC-Rated can lights are used.
- Air tight can lights are used.
- Solar-powered walkway or outdoor area lighting.

## MATERIALS: STRUCTURAL FRAME (Choose 3)

- Large dimension solid lumber (2x10 or greater) avoided in floors and roofs wherever possible.
- Dimensional lumber from 3rd party certified sustainably harvested sources.
- Engineered wood "I" joists used for floors.
- Trusses or "I" joists used for roofs.
- Structural insulated panels used for walls or roofs.
- Reinforced cementitious foam-formed walls (ICFs, or insulated concrete forms) using flyash concrete when temperature permits.
- Engineered lumber products for beams or joists.
- Engineered lumber products for window or door headers.
- Reduced framing package (24" o.c. studs at interior non-bearing walls, and 3 stud corners).
- Finger-jointed or engineered plate material.
- Finger-jointed studs or engineered stud material.
- Engineered alternatives to wood framing.
- Recycled-content gypsum wallboard.
- Outdoor structures, decking and landscaping materials made from pressure treated engineered lumber or non-CCA (chromated copper arsenate) dimensional lumber.
- Outdoor structures, decking and landscaping materials made from recycled materials.
- Outdoor structures, decking and landscaping materials made from 3rd party certified sustainably harvested lumber.

## MATERIALS: FOUNDATION (Choose 1)

- Non-solvent based damp proofing.
- Regionally produced block or brick.
- Western coal flyash concrete (minimum 15%, seasonal application).
- Frost-protected shallow foundation.
- Aluminum foundation forms used.
- Rigid insulation forms that provide permanent insulation to the foundation.
- Insulated foundation with rigid R-10 foam insulation to footer.
- Foam insulated reinforced structural concrete slab.
- Recycled-content concrete or glass cullet for aggregate.
- Recycled-content expansion joint filler.

## MATERIALS: SUB-FLOOR (Choose 1)

- Urea formaldehyde-free subfloor and underlayment material.
- Oriented strand board (OSB) made from fast growth material.
- Recycled-content underlayment.
- No Luan underlayment used.

## MATERIALS: DOORS (Choose 2)

- No Luan doors (tropical hardwood).
- Exterior doors (includes door to garage) insulated to R-5, or greater.
- Reconstituted or recycled-content doors (hardboard) with least toxic binders.
- Solid, domestically grown interior wood panel doors.

## MATERIALS: FINISH FLOOR (Choose 2)

- Recycled-content carpet pad.
- Recycled-content carpet (tacked not glued).
- Natural linoleum with low toxic adhesives or backing.
- Ceramic tile installed with low toxic mastic and grout.
- Recycled-content ceramic tile.
- Natural material carpet (domestic cotton, wool) tacked not glued.
- Domestic wood flooring made from 3rd party certified sustainably harvested sources.

## MATERIALS: EXTERIOR WALLS (Choose 2)

- Recycled-content sheathing (minimum 50% pre- or post-consumer) or OSB.
- Reconstituted or recycled-content siding (minimum 50% pre- or post-consumer).
- Regionally produced brick.
- Indigenous stone.
- Natural stucco and/or synthetic plaster.
- Cementitious siding.
- Reconstituted or recycled-content fascia, soffit or trim (minimum 50% pre- or post-consumer).
- Molded cementitious "stone".
- R-3.5 or better-insulated exterior wall sheathing.

## MATERIALS: WINDOWS (Choose 2)

- Windows double glazed with 1/2" airspace.
- Finger-jointed wood windows.
- Low-E windows NFRC rated at u=0.37 or lower.
- Exterior environmental/insulated window coverings.
- No metal-frame windows in house, including basements.

## MATERIALS: CABINETRY AND TRIM (Choose 1)

- Any exposed particleboard is painted with water-based sealer inside cabinets, underside of countertops.
- Tropical hardwood trim or cabinets only if from 3rd party certified sustainably manageable forests.
- Finger-jointed trim.
- On-site application of cabinet finishes done with least toxic finishes.
- Domestic hardwood trim.
- Cabinets made with formaldehyde-free particleboard or MDF (medium density fiberboard) or recycled agricultural product.

## MATERIALS: ROOF (Choose 1)

- Recycled-content roof material.
- Minimum 30-year roofing material including concrete, slate, clay, composition, metal or fiberglass.

## MATERIALS: FINISHES AND ADHESIVES (Choose 1)

- Paints and finishes that have minimal VOC content. Standard is less than 250 grams/liter of VOCs.
- Paints or finishes with recycled-content.
- Only low toxicity, low solvent adhesives used throughout.
- Water-based urethane finishes on wood floors.
- Water-based lacquer finishes on woodwork.

## MATERIALS: INSULATION (Choose 1)

- Formaldehyde-free insulation.
- Non-toxic spray foam insulation.
- Recycled-content (minimum 25%) insulation.
- Home has wet blown wall insulation such as cellulose or fiberglass.
- Cellulose insulation with UL-rated fire retardant.
- HCFC-free rigid foam insulation.

## WATER (Choose 1)

- Permeable materials (40% of areas for all walkways, patios and driveways).
- Less than 50% of the installed landscape is cool season turf grass, such as fescue or bluegrass; remainder in non-turf planting beds.
- Installed landscape is xeriscape for at least 50% of non-paved area.
- Installed bedding areas are mulched.
- Recycled-content mulch or compost.
- Rainwater harvested and directed toward landscaping needs where practical (not stored).
- Provide a list of native drought resistant plants to homebuyers.
- Installed irrigation system is zoned separately for turf and bedding areas.
- Installed irrigation system includes a soil moisture or rain sensor, or other irrigation efficiency device.
- Install three cubic yards of soil amendment material per 1,000 square feet of installed landscaped area based on soil analysis.
- Landscape with drought-resistance plants and/or grasses.
- Bathroom faucets fitted with aerator restricting flow to at least 1.8 gpm.
- Kitchen faucet fitted with aerator restricting flow to 2.0 gpm.
- ENERGY STAR qualifying clothes washer.
- Passive or on-demand hot water deliver system installed at farthest location from water heater.

# Extending Affordability

Housing, as defined by the U.S. Department of Housing and Urban Development (HUD), is generally considered affordable if, including utilities, it costs its tenant no more than 30 percent of his/her income. Given the fixed costs for code compliance and requisite amenities, CDCs understand very well that creating affordable housing means writing down the per-unit cost of development. This is often achieved through low-interest loans and grants. As a result, many community development corporations fail to recognize the potential of using energy-efficient building techniques as a mechanism to lower rents and tenant utility costs.

Paul Knight is an energy efficiency specialist and architect with the Oak Park-based consulting firm Domus Plus. In his 1993 article, *Affordable Housing through Efficiency*, Knight demonstrates how CDCs can achieve greater affordability through energy efficiency. While involved in a substantial rehab, Mr. Knight analyzed the utility and rental rates of a normalized/code standard building and a building that incorporated energy-efficient building practices – collectively referred to as super insulation (SI).

We did cash flow analyses with and without the SI work. We estimated annual heating costs [for the normalized dwelling] to be \$1,320 (29 Btu/ft<sup>2</sup>-deg.F), or \$110 on a monthly budget plan. Monthly housing costs would be \$585 (rent plus utilities). According to the definition of affordable housing, the prospective tenant's annual income must be at least \$23,400. (Rent plus utilities must not exceed 30% of income.)

We analyzed the same building again, this time with SI included. Attic insulation was increased to R-43. Walls were furred out with 2 x 4 framing and insulated to R-19. Drywall was installed from floor to subfloor and sealed to the framing, among other indoor air sealing measures. Low-emissivity, double glazed windows were installed. Finally, Polaris combination water and space heaters were installed in each unit.

With the SI work, the yearly energy costs dropped to \$456 (10 Btu/ft<sup>2</sup>-deg.F), or \$38 per month on a budget plan. Monthly housing costs dropped to \$548, even though the rents increased. Net savings in housing costs between the proposed rehab and the SI rehab dropped by \$37. Annual minimum income of prospective tenants fell by \$1,480, to \$21,920. In essence, we created affordable housing for people with lower incomes by lowering utility costs, even though we raised the rent in the process. Remember, this analysis was done in absence of the [DCCA Energy Grant subsidy]; the numbers are even better if the developer only has to borrow \$2,000 per unit. (The developer, after seeing this analysis, is in the process of doing exactly that.)<sup>17</sup>

Table 2 illustrates the above narrative.

**Table 2: Monthly Housing Savings with Super Insulation**

	<b>Rent</b>	<b>Energy Costs</b>	<b>Housing Costs</b>
Normalized insulation	\$475	\$110	\$585
Super insulation	\$510	\$ 38	\$548
Savings	\$ 35	\$ -72	\$ -37

The above real-world example demonstrates that a CDC can, by incorporating energy efficiency into the design and construction of the project, produce a better stock of housing while simultaneously making affordable housing *even more* affordable *and* available to more people throughout the neighborhood. What's more, by using grants such as those noted in the back of this guide, community development corporations can write down the costs of SI even further, therefore reducing their need to borrow extra construction money and to raise rents. CDCs can pass along these utility and construction loan cost savings to tenants in the form of reduced rents.

<sup>17</sup> Paul Knight, "Affordable Housing through Efficiency," *Home Energy Magazine Online*, January–February 1993. March 6, 2001. < <http://hem.dis.anl.gov/eehem/93/930120.htm> >

## **Want to Know More? Check Out These Websites:**

***Center for Renewable Energy and Sustainable Technology (CREST) at [www.crest.org](http://www.crest.org)***

Advocacy site that discusses ways to promote energy efficiency, renewable energy, and sustainable technology

***City of Chicago, Green Homes for Chicago Program at [w5.ci.chi.il.us/obsGreenHomes](http://w5.ci.chi.il.us/obsGreenHomes)***

Website detailing the City of Chicago's Green Homes initiative, featuring green design guideline information

***Fannie Mae Foundation at [www.fanniemaefoundation.org](http://www.fanniemaefoundation.org)***

"KnowledgePlex," the Fannie Mae Foundation's one-stop online destination for housing-related issues from a standpoint of both a design and research

***Green Building: A Primer for Builders, Consumers, and Realtors at [www.nrg-builder.com/greenbld.htm](http://www.nrg-builder.com/greenbld.htm)***

Excellent online document that walks the reader through the why and how of resource-efficient building

***GreenHome at [www.greenhome.org](http://www.greenhome.org)***

Website of GreenHome, a Washington, DC-based nonprofit that advocates sustainable building; contains a glossary of terms and concepts, as well as links to GreenHome's demonstration projects

***Housing Information Gateway at [www.colorado.edu/plan/housing-info/menu0.html](http://www.colorado.edu/plan/housing-info/menu0.html)***

Excellent, comprehensive gateway for essays, reports, products, listservs, libraries concerning housing; an elaboration of the *Encyclopedia of Housing*, which offers essays on issues ranging from abandonment to zoning

***Sustainable Architecture Building & Culture at [www.SustainableABC.com](http://www.SustainableABC.com)***

Comprehensive site containing links to a variety of planning, environmental natural building websites

# Bringing It All Together

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In 1996, Woodlawn Development Associates (WDA) purchased a masonry building at 6224–26 South Kimbark Avenue on Chicago's south side. The building – an 11,694 square foot, three-story, six-flat structure that had been abandoned for six years – was in need of a major rehabilitation, including the removal of all interior building systems. WDA's plan called for converting the building into a 10 unit affordable cohousing project, with an interior common space reserved for meals and socializing and an outdoor area set aside for gardening and recreation. Woodlawn Development Associates proposed a unit mix of three 1-bedroom apartments, four 2-bedroom apartments, and three 3-bedroom apartments.<sup>18</sup>

WDA applied to the Illinois Department of Commerce and Community Affairs (DCCA) for a \$20,000 energy grant under the Illinois Energy Efficient Affordable Housing Program (EEAHP). Grant monies were used to subsidize the cost of super insulation (SI) at a rate of \$2,000/unit. In addition, DCCA provided funds to WDA for the inclusion of green building products and a 2.4 kilowatt photovoltaic (PV) solar energy system. Total rehab cost for the project was \$791,822, or \$67.71/square foot.

The following is a description of the materials used in the WDA project, as well as some of the general contractor's comments made during construction. The description was taken from *A Green Multi-Family Rehab: The Chicago Experience*, prepared by the Illinois Department of Commerce and Community Affairs and Domus Plus.

## Energy Efficiency

Annual space heating consumption for 6224–26 South Kimbark is estimated to be \$2,265 at \$0.60/therm (5.00 Btus/ft<sup>2</sup>-day), or \$226/unit. Based on annual space heating costs without energy-efficient building practices estimated at \$5,661 (\$566/unit), use of energy-efficient materials resulted in an annual savings of \$3,396 (\$339/unit).

### Insulation

- The inside face of the exterior walls was framed with 2" x 4" OSB wood studs. The framing was placed on average 1 inch away from the exterior wall, providing a wall cavity depth of 4½ inches for insulation.
- Spray rock wool (R = 4.13/inch) was installed in the wall cavity for a total insulation R-value of 18.6. By having the framing held away from the wall, the installers were able to spray rock wool between studs and masonry walls, creating a thermal break.
- The exposed brick in the ceiling cavities between the first and second and the second and third floors was also sprayed with rock wool.
- R-43 rock wool was installed in the roof and crawl space.

### Windows

- All the windows in the building required replacement. The windows were replaced with double-glazed, low-E, single-hung windows by Quaker (Weather Tite series 4050). Frames are aluminum with a thermal break. The R-value of the window unit is 2.88.

### Air Sealing

- The airtight drywall approach (ADA) was used to achieve air sealing in the building. On the first and second floors, drywall was installed from subfloor to subfloor, rather than the typical subfloor to ceiling. This necessitated notching the drywall to fit around ceiling joists where the joists are perpendicular to the wall. Where joists are parallel to the wall, the drywall can simply be installed to the subfloor without notching. The joint between the top of the drywall and the framing was caulked, as was the joint at the base between the drywall and subfloor.
- Drywall on the top floor was installed in the typical fashion, to the bottom of the ceiling joists, as the top-floor ceiling drywall serves as the air barrier.

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<sup>18</sup> Davlin, Maureen and Paul Knight. "A Green Multi-Family Rehab: The Chicago Experience." Presented at the *Affordable Comfort Conference* (Columbus, Ohio: April 3-8, 2000), 3.

- Penetrations through the drywall on the perimeter of the units and through the top-floor ceiling were sealed to maintain the integrity of the ADA. This included joints between junction boxes and drywall, around plumbing penetrations, and between window frames and drywall returns.

### **Mechanical Systems**

- A central heating system was utilized. Two Weil-McLain GV-4 warm water boilers were installed for space heating. Each boiler has an output rating of 105,000 Btus and a seasonal efficiency of 87.3 percent. Domestic water heating is provided by two A.O. Smith Cyclone water heaters. Each water heater is 60 gallons with an input of 125,000 Btus and seasonal efficiency of 94 percent. Notably, the combined input of the water heaters is greater than that of the two space-heating boilers.

### **Lighting**

- All common-area lighting is fluorescent. Twenty-four 27-watt (648 watts) fluorescent fixtures in the hallways and stairwell will remain on 24 hours a day. Seven exterior 27-watt fixtures (189 watts) will remain on at night.
- A 2.4 kw photovoltaic system was installed on the roof to help meet the lighting load as well as other loads on the common area (emergency exit lighting, laundry, basement lights).

### **Appliances**

- Energy Star refrigerators were installed in the units. A combination of Magic Chef 1806 ft<sup>3</sup> (CLT1911DEW) and 15ft<sup>3</sup> (CNT1511BEW) models were used in the building. The 18.6 ft<sup>3</sup> model is rated at 485 kw/year with a purchase price of \$479/unit. The 15 ft<sup>3</sup> model is rated at 437 kw/year with a purchase price of \$351.

## **Resource Efficiency**

DCCA provided funding to replace some typical affordable-housing rehab building products with resource-efficient building products. The goal was to identify resource-efficient building products that may be suitable for affordable-housing projects. Incremental costs, availability and the general contractor's comments about using the products were used to help make these recommendations. Resource-efficient products are those that:

- Use primary resources in an efficient manner
- Use recycled and secondary sources
- Contribute to a healthy indoor environment

### **Engineered Wood Studs**

- To frame the interior of the masonry walls, engineered wood studs – FrameWorks 2x4-inch studs made by Trus Joist MacMillan – were used. The studs look like oriented strand board (OSB) and may be ordered to any length. Unlike conventional studs, each FrameWorks stud is straight; it does not twist or warp. There were no availability problems with acquiring these studs, and they may be ordered through any lumber supply house.
- Wall studs were ordered at 9', 8" lengths, and top/bottom plates members were ordered at lengths of 24 feet. OSB studs are denser than conventional southern pine studs, but use of power saws and pneumatic nail guns kept this from being a problem.

*General contractor's comment: Like metal studs, they have the great virtue that they are always straight, never warped or carped even in very long lengths – hence there is little waste. Their cost would probably prohibit their use as studs on most normal jobs, but we would consider using them again for top and bottom plates when framing to assure that walls were installed straight.*

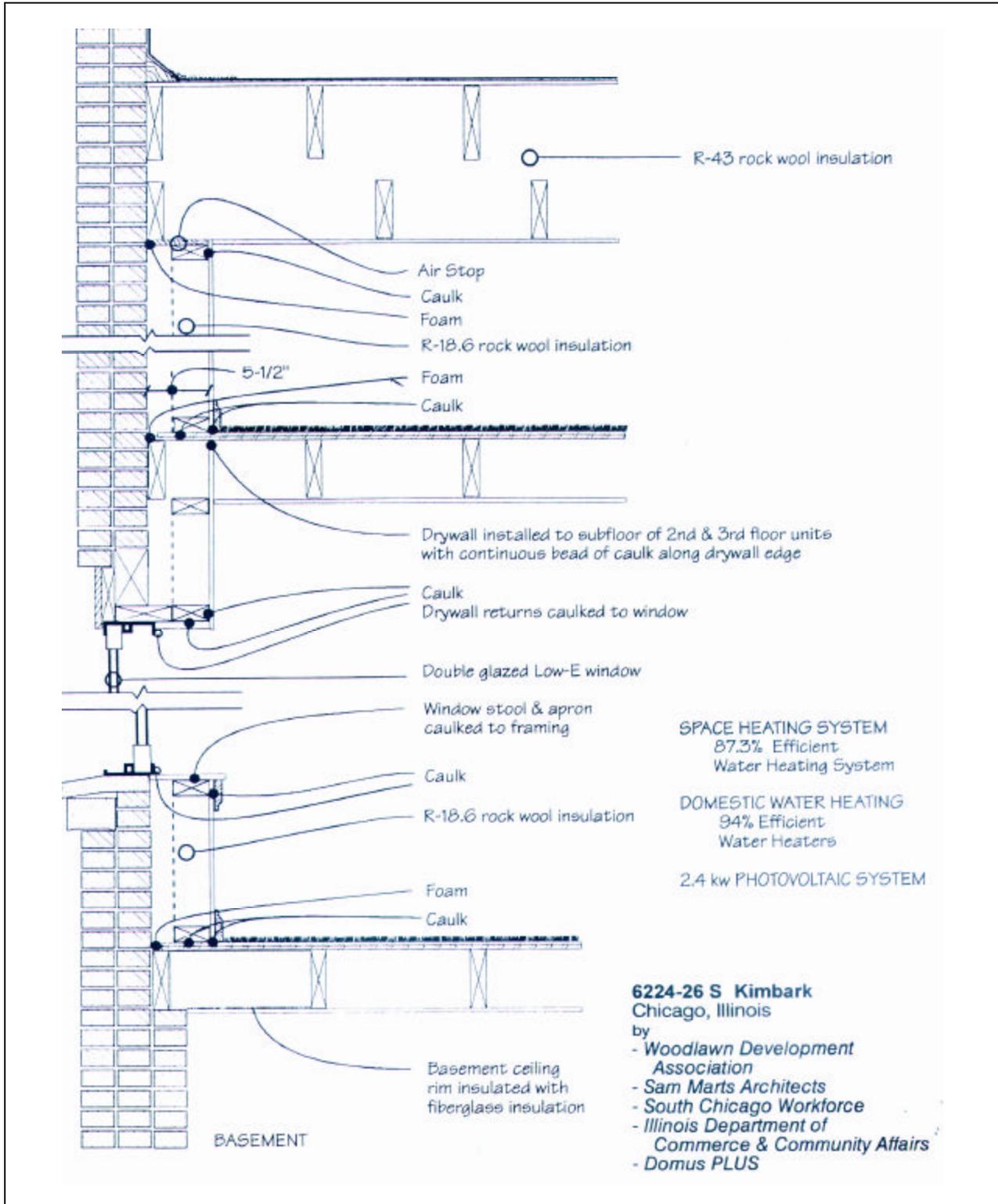
### **Rock Wool Insulation**

- Rock wool is made from rocks such as basalt and diabase. The rocks are heated and spun into fibers to form insulation. The material is noncombustible and noncorrosive and will not absorb moisture. For open-cavity installation, the insulation is mixed with a dry adhesive. It is mixed with water when a pneumatic spray is used for installation. Immediately after installation, a "stud scrubber" is used to shave off the excess

insulation, which is transported back to the hopper for installation. The Kimbark building insulation, installed in November with no heat in the building, dried within 7 to 10 days.

- The installed insulation has a density of about 4.0 pounds/ft<sup>3</sup> and an R-value of 4.13/inch. Total R-value of the installed insulation is 18.6. By comparison, the R-value of just the masonry wall is 2.40. Thus, the thermal efficiency of the exterior walls was improved by almost a factor of eight.

**Figure 4: WDA Project Energy Features**



### Drywall

- FibeRock drywall (4x8-foot by 5/8-inch sheets), made from recycled newsprint and gypsum, was used in the building hallways in conjunction with conventional drywall. FibeRock is about 20 percent more dense than conventional drywall and should hold up quite well in high-use areas, such as the common areas of the building. However, instead of using FibeRock for the entire wall height, the rehabber installed it horizontally, using standard drywall for the upper four feet of wall area. This was done to reduce cost in addition to the thought that the lower four feet of the walls would be subjected to greater abuse.
- FibeRock has no paper face that will blister or bubble should it get wet. It has tapered edges and can be “scored” like drywall. The surface can be finished in the same fashion as standard drywall. The joint between the FibeRock and conventional drywall is imperceptible following finishing and painting.

### Caulks

- As part of the air-sealing work described above, AFM Safecoat caulking was used in the building to seal joints, cracks, and penetrations. Safecoat is a nontoxic water-based interior caulk designed to replace traditional caulk for general air sealing. Because the caulk is available only in five-gallon buckets and one-quart containers, it requires loading in traditional bulk caulk guns and cleaning of the caulk gun.
- To complete the airtight drywall approach, Safecoat was used to (1) seal drywall to framing members, (2) caulk base of drywall to subfloor, (3) caulk drywall returns to window frames, (4) caulk window stools to drywall, (5) caulk junction boxes to drywall, and (6) caulk around plumbing penetrations through drywall.

### Low VOC Primer and Paint

- Glidden’s Lifemaster was used to prime the walls and ceilings. This latex primer contains no organic solvents and no volatile organic compounds (VOCs). Applied as any primer, it is quick drying and provides uniform finish. The primer emits no odor when drying.

*General contractor’s comment: The low VOC primer seemed to perform as well as regular primer and was much more pleasant to work around.*

### Wood Floor Finish

- Most existing hardwood floors in the kitchen and living areas were in reasonable shape. It was decided to patch the floors as necessary, sand, then finish. Hydroline, a water-based urethane floor finish, was used rather than polyurethane. It dries quicker than polyurethane, so two coats can be applied in one day. Each coat is not as thick as polyurethane, so a third coat may be necessary.

*General contractor’s comment: Our employees much prefer to work with and around Hydroline because it emits less of an odor during application.*

### Ceramic Tile

- Terra Traffic tile (by Terra Green Ceramics) was used in place of conventional ceramic tile floors in the bathrooms and front entryway. In addition, shower walls in three of the bathrooms were also finished with this tile. Terra Traffic contains 70 percent recycled glass. The tile is 3/8-inch thick and is available in nominal sizes of 4x4, 4x8, 6x6, and 8x8 inches with trim pieces. There was an almost two-to-one cost difference between Terra Traffic tile colors (\$4.35/ft<sup>2</sup> to \$8.70/ft<sup>2</sup>).

*General contractor’s comment: Terra Traffic was more difficult to set – and because it was thicker, it required more grout to set. The edges of the tile, especially when cut, are exceptionally sharp.*

### Carpet Padding

- Carpeting was installed in the entire bedroom, using a recycled felt padding made from waste fibers and containing no chemical additives. Padding was installed with tack strips; no glue was used.

*General contractor's comment: The felt padding was a superior product to foam. It helps dampen the sound transmission between floors but might be a problem if it gets too wet, since it will not easily dry.*

### **Carpeting**

- Image Stability carpeting made by Mohawk was used in the bedrooms (2,538 ft<sup>2</sup>). The carpeting is made from PET (polyethylene terephthalate) plastic. The primary source of the plastic is recycled two-liter soft-drink bottles. Tack strips were used instead of glue.

### **Baseboard**

- Original rehab plans called for the installation of vinyl base because it is inexpensive. Plastic lumber (see below) was investigated, but it was not available in a baseboard profile and could not be painted. Consequently, the choice was finger-jointed baseboard and shoe molding. The additional labor costs sometimes exclude it from affordable-housing projects. However, it is widely used in the residential sector.

### **Plastic Lumber**

- Trex was used for the rear porch decking and handicap ramp. This wood/plastic composite made from reclaimed hardwood sawdust and polyethylene can be cut and fastened just like wood. Conventional pressure-treated lumber was used for the porch's structural framing, stringers, and threads, as plastic lumber is nonstructural.

*General contractor's comment: The product is performing well. Its nonslip surface is a particularly good quality for porch decking.*

### **Medium-Density Fiberboard**

- Medium-density fiberboard (MDF) is usually made from softwood dust or chips that might otherwise be burned or sent to landfills. This represents a good use of a waste product; however, urea-formaldehyde glue is usually used as a binder. The urea-formaldehyde will out-gas, which may create an indoor air quality problem.
- Medex was used for the interior windowsills, staircase and entryway baseboard, and kitchen countertop bases. Medex is an exterior-grade, formaldehyde-free panel suitable for applications where moisture may be of a concern. Medex was used in place of drywall for the interior windowsills. It was also used in place of conventional MDF for kitchen countertops.

### **Reflective Roof Coating**

- Reroofing was included as part of the rehab work scope. Modified bitumen is used for a typical reroofing on a building with a low-pitch roof, such as the Kimbark building has.
- A reflective roof coating (#608 Aluminum Roof Coating) was applied over the roof to help reduce the interior temperature of the top floor units during summer. The roof surface has to be very clean for coating to adhere. It took about one day to apply the reflective coating.

## **Photovoltaic System**

Funds were requested and received from DCCA for the installation of a 2.4 kW photovoltaic (PV) system on the roof. The system provides power for common-area lighting and the laundry. Total installed cost was \$29,720, or \$12.38/watt.

The PV system consists of four modules. Each module contains eight 75-watt panels. Siemens' Solar SP75 panels were used. Each measures approximately 21 inches by 48 inches and weighs 16 pounds. The panel arrays are mounted on a steel rack tied to the roof's rafters. The steel rack was installed during the rehab of the building.

Two inverters, model SW by Trace Engineering, located in the basement electrical room convert generated power from DC to AC. A conduit 2 inches in diameter was installed between the roof and the electrical room. A 1- or 1½ -inch pipe would

have been sufficient for the wires; however, the wire size was unknown prior to closing in the building. Installing an oversized conduit ensured adequate space for wires.

To keep costs down and avoid maintenance issues, battery storage was not chosen. Electricity being generated is fed into the common-area circuitry in place of power from the electric utility. Excess generated power is expected to feed back into the system at certain times. The system is maintenance free except for the occasional cleaning of the PV panels.

**Table 3: WDA Resource-Efficient Cost Differences<sup>19</sup>**

Item	Total Cost Difference	Quantity	Cost/Unit
OSB studs	\$ 3,699	822 studs	\$4.50
Rock wool Insulation <sup>a</sup>	\$ 300	29,419 sq. ft.	\$0.01
FibeRock drywall <sup>b</sup>	\$ 634	1,760 sq. ft.	\$0.36
AFM Safecoat caulk <sup>c</sup>	\$ 824	1,920 oz.	\$0.43
Low-VOC primer	\$ 118	168 gal.	\$0.70
Hydroline floor finish	\$ 3,160	8,606 sq. ft.	\$0.37
Terra Traffic tile <sup>d</sup>	\$ 3,200	922 sq. ft.	\$3.47
Carpet padding	\$ 606	2,538 sq. ft.	\$0.24
Image Stability carpet	\$ 349	2,538 sq. ft.	\$0.14
Finger-jointed baseboard <sup>e</sup>	\$ 5,879	3,600 lin. ft.	\$1.63
Trex (plastic lumber) <sup>f</sup>	\$ 2,287	2,736 lin. ft.	\$0.84
Medex (MDF) <sup>g</sup>	\$ 484	726 sq. ft.	\$0.67
Reflective roof coating	\$ 748	3,898 sq. ft.	\$0.19
<b>Subtotal</b>	<b>\$22,288</b>		
<b>Contractor O&amp;P @15%</b>	<b>\$ 3,343</b>		
<b>Total</b>	<b>\$25,631</b>		

- a Cost increase over cellulose insulation.
- b Includes \$150 shipping cost for special order.
- c Includes additional labor.
- d Includes additional labor.
- e Cost increase over vinyl base. Also includes labor.
- f Compared to conventional 5/4-inch treated decking.
- g Compared to 3/4-inch particle board.

Building square footage: 11,694  
 Resource-efficient cost/sq. ft.: \$2.19  
 Total rehab cost: \$791,822  
 Rehab cost/sq. ft.: \$67.71  
 Percentage cost increase: 3%

Overall, the impact of using energy-efficient and green materials in Woodlawn Development Associates’ Kimbark Avenue project added approximately 3 percent to the cost of construction over normal/code standard building practices. This sum, approximately \$23,755, will be paid for in seven years assuming an average utility cost saving of \$3,396 a year. If we look at the WDA project from the perspective of the building’s useful life – a life that has been lengthened using energy-efficient techniques, super insulation, green materials, and the whole-building design approach – the costs of these improvements will easily pay for themselves over the long term

## Conclusion

As presented in the Introduction, this guide was written to encourage community development corporations to think about the benefits of incorporating sustainable materials and construction techniques into their affordable-housing development projects. The case examples demonstrate that, when nonprofit developers choose to use the systems engineering and super insulation approach to energy efficiency, they reduce the overall cost of annual utility expenses and lessen maintenance costs by building for durability. Moreover, by combining energy efficiency with the selection of environmentally friendly building products, CDCs improve the indoor air quality of their homes – adding dignity and comfort to the benefit of affordable shelter for those who need it. Finally, when CDCs build for efficiency, they extend the availability of affordable housing deeper into their communities by passing along utility cost savings in the form of reduced rents. In the end, building for energy and resource efficiency makes sense:

- Sense for your bottom-line operating costs
- Sense for the health of your tenants
- Sense for your community by increasing the pool of people who can rent decent, affordable housing

<sup>19</sup> Davlin, Maureen and Paul Knight. “A Green Multi-Family Rehab: The Chicago Experience.” Presented at the *Affordable Comfort Conference* (Columbus, Ohio: April 3-8, 2000), 18.

# Professional, Financial, Advocacy, and Government Contacts

This section lists professional and financial service providers, advocacy agencies and organizations, and government contacts. Each group is organized by company or department name and is introduced with a brief description of the service provided. Each company or agency listing contains the name of the principal contact, address, and telephone number – and, when available, fax and web address information.

## Professional Services: Architects

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Architects are central to the development process from the perspectives of aesthetics, physical safety, and political and market risk. Depending on the project type, architects bear legal liability for their plans and specifications.

Typically, an architectural firm can provide the developer with the following basic services: predesign (schematics) and final design, design development, preparation of construction contract documents, assistance in the bidding or negotiating process, administration of agreements between the developer and the builder or general contractor, and overall project administration and management. In addition, architects offer a menu of services to developers and can be instrumental in securing planning and zoning approvals, working with community groups to understand their needs and preferences for proposed projects, and performing related studies.<sup>20</sup>

### **21st Century Telecom Group, Inc.**

350 N. Orleans Street, Suite 600  
Chicago, Illinois 60654  
Phone: (312) 955-2100  
Fax: (312) 955-2111  
www.rcnchicago.com  
Contact: Jere Sullivan

### **3D Design**

2255 E. Seventy-fifth Street,  
Suite 106  
Chicago, Illinois 60649  
Phone: (773) 493-0910  
Fax: (773) 493-0923  
Contact: A. Melinda Palmore

### **A. Epstein & Sons International, Inc.**

600 W. Fulton Street  
Chicago, Illinois 60610  
Phone: (312) 454-9100  
Fax: (312) 559-1217  
www.epstein-isi.com  
Contact: Theodore Amberg

### **A. Finkl & Sons Co.**

2011 N. Southport Avenue  
Chicago, Illinois 60614  
Phone: (773) 975-2628  
Fax: (773) 348-5347  
www.finkl.com  
Contact: Bruce Limatainen

### **Applied Building Solutions, Inc.**

### **Campbell Tiu Campbell**

1326 S. Michigan Avenue Suite 200  
Chicago, Illinois 60605  
Phone: (312) 922-4244  
Fax: (312) 922-0338  
Contact: Wendell Campbell, Domingo  
Tiu

### **Chicago Associates Planners & Architects**

1807 W. Sunnyside Avenue  
Chicago, Illinois 60640  
Phone: (773) 275-1807  
Fax: (773) 275-1858  
Contact: Tom Foremen, Mike  
Newman

### **Conservation Design Forum**

324 N. York Road  
Elmhurst, Illinois 60126  
Phone: (630) 758-0355  
Fax: (630) 758-0320  
www.cdfinc.com  
Contact: Bruce Dvorak

### **Daniel Weinbach & Partners**

53 W. Jackson Boulevard Suite 1850  
Chicago, Illinois 60604  
Phone: (312) 427-2888  
Fax: (312) 427-7648  
Contact: Wendy Schulenberg

### **Eastlake Studio Inc.**

435 N. Michigan Avenue Suite 3100  
Chicago, Illinois 60611  
Phone: (312) 527-0200  
Fax: (312) 527-0699  
www.eastlakestudio.com  
Contact: Juile Adams

### **Environ, Inc.**

401 W. Superior Street 5th Floor  
Chicago, Illinois 60610  
Phone: (312) 951-8863  
Fax: (312) 951-1719  
www.environ-inc.com  
Contact: Susan King

### **Esherick, Homsey, Dodge & Davis**

626 W. Randolph Street  
Chicago, Illinois 60661  
Phone: (312) 655-0690  
Fax: (312) 655-0692  
www.ehdd.com  
Contact: Marjorie Brownstein

### **Farr Associates, Architecture & Urban Design**

53 W. Jackson Boulevard Suite 1661  
Chicago, Illinois 60604  
Phone: (312) 408-1661  
Fax: (312) 408-1496  
Contact: Doug Farr, Carol  
McLaughlin, Ronald Dean

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<sup>20</sup> Michael Miles, Richard Haney, and Gayle Barends, *Real Estate Development* (Washington, DC: Urban Land Institute, 1996), 19.

240 N. Bothwell, Suite A  
Palatine, Illinois 60067  
Phone: (847) 363-5561  
Fax: (847) 963-6894  
www.appliedbs.com  
Contact: E. David Pennebaker

**BonHeur Development Corporation**  
400 E. Forty-first Street, Suite 101  
Chicago, Illinois 60653  
Phone: (773) 548-7234  
Fax: (773) 548-5673  
Contact: Fred Bonner

**Davis Associates Architects & Consultants**

53 W. Jackson Boulevard  
Chicago, Illinois 60604  
Phone: (312) 922-6050  
www.daac.com  
Contact: Charles Davis

**DLK Architecture Inc.**  
410 S. Michigan Avenue Suite 308  
Chicago, Illinois 60605  
Phone: (312) 322-0911  
Fax: (312) 322-5324  
www.dlkinc.com  
Contact: Edward Heinen

**FM Inc.**

410 S. Michigan Avenue  
Chicago, Illinois 60604  
Phone: (312) 913-1864  
Contact: David Fleener

**Gastinger Walker Harden Architects**

20 N. Wacker Drive Suite 734  
Chicago, Illinois 60606  
Phone: (312) 236-3993  
Fax: (312) 236-3064  
www.gwhm[egk6].com  
Contact: Helen Burke

**Gonzalez Hasbrouck Architects**

180 N. Wabash Avenue Suite 601  
Chicago, Illinois 60601  
Phone: (312) 458-1200  
Fax: (312) 458-1202  
Contact: Janet Olson

**Gregory Maire Architecture & Design**

2643 Poplar Avenue  
Evanston, Illinois 60201  
Phone: (847) 492-1776  
Fax: (847) 492-1736  
www.maire.com  
Contact: Gregory Maire

**Horvath Reich CDC, Inc.**

53 W. Jackson Boulevard Suite 1208  
Chicago, Illinois 60604  
Phone: (312) 939-1900  
Fax: (312) 939-1920  
www.cdc-usa.com  
Contact: Jerry Reich

**JP Kusz, Ltd.**

310 S. Home Avenue  
Park Ridge, Illinois 60068  
Phone: (847) 721-9590  
Contact: John Paul Kusz

**Judson College**

Department of Architecture  
1151 N. State Street  
Elgin, Illinois 60123  
Phone: (847) 695-2500  
www.judson-il.edu/depts/architecture  
Contact: Keelan P. Kaiser

**Landon Architects, Ltd.**

314 W. Institute Place  
Chicago, Illinois 60610  
Phone: (312) 988-9100  
Fax: (312) 988-7146  
www.landonbone.com  
Contact: Leah Kaufman, Marsha

**Lin-Mathes, Inc.**

309 S. Green Street  
Chicago, Illinois 60607  
Phone: (312) 454-0200  
Fax: (312) 454-6182  
Contact: Robert Mathes

**Nathan Kipnis Architects, Inc.**

626 Grove Street  
Evanston, Illinois 60201  
Phone: (847) 864-9650  
Fax: (847) 864-0956  
Contact: Nathan Kipnis

**McBride & Kelly Architects**

1417 N. Dayton Street  
Chicago, Illinois 60622  
Phone: (312) 266-7400  
Fax: (312) 266-0737  
www.mkadesign.com  
Contact: Bill McBride

**Michael Roy Iversen, Architect**

144 N. Lombard Avenue  
Oak Park, Illinois 60302  
Phone: (708) 383-1189  
Fax: (708) 383-1154  
Contact: Michael Iversen

**OWP&P Architects, Inc.**

111 W. Washington Street Suite 2100  
Chicago, Illinois 60602  
Phone: (312) 332-9600  
Fax: (312) 332-9601  
www.owpp.com  
Contact: Heather Beaudoin, Michelle  
Halle Stern, Tom Arsovski,  
Robert Pfauth

**Pappageorge Haymes Ltd.**

814 N. Franklin Street Suite 400  
Chicago, Illinois 60610  
Phone: (312) 337-3344  
Contact: Garet Stefanowski

**Perkins & Will Architects**

330 N. Wabash Avenue Suite 3600  
Chicago, Illinois 60611  
Phone: (312) 755-0770  
Fax: (312) 755-0775  
www.perkinswill.com  
Contact: Nicolette Daly

**Prisco Serena Sturm Architects**

3351 Commercial Avenue  
Northbrook, Illinois 60062  
Phone: (847) 564-0370  
Fax: (847) 205-5089  
www.pssarchitects.com  
Contact: Arlene Serrano, Bill Sturm,  
Len Sciarra, Christopher  
Wollmuth, Pat Dolan

**Ross Barney & Jankowski, Inc.**

30 W. Monroe Street  
Chicago, Illinois 60603  
Phone: (312) 332-3600  
Fax: (312) 332-3606  
www.rbjarchitects.com  
Contact: Kimberly Wilson

**Roy F. Weston, Inc.**

70 W. Madison Street Suite 1990  
Chicago, Illinois 60602  
Phone: (312) 857-0447  
Fax: (312) 424-3330  
www.rfweston.com  
Contact: Sandra McCullough

**RTKL Associates, Inc.**

140 S. Dearborn Street Suite 200  
Chicago, Illinois 60603  
Phone: (312) 704-9900  
Fax: (312) 704-9910  
www.rtkl.com  
Contact: Kate Leriche

**Sam Marts Architects and Planners**

2014 W. Wabansia Avenue  
Chicago, Illinois 60647

Spencer,

**Jeff Bone**

Legat Architects  
80 N. Virginia Street Suite C  
Crystal Lake, Illinois 60014  
Phone: (815) 444-4630  
Fax: (815) 477-4550  
www.legat.com  
Contact: Mehernosh Mistry

**Patrick Engineering**

55 E. Monroe Street Suite 3450  
Chicago, Illinois 60603  
Phone: (312) 201-7900  
Fax: (312) 220-0722  
www.patrickengineering.com  
Contact: Darrel Babuk

Phone: (773) 862-0123  
Fax: (773) 862-0173  
www.timbersmart.com  
Contact: Tom Bartnik, Julie  
Wentworth

**Site Design Group**

8 S. Michigan Avenue Suite 1007  
Chicago, Illinois 60603  
Phone: (312) 855-1755  
Fax: (312) 855-0187  
www.sitedesgins.com  
Contact: Ernest Wong

**Skidmore Owings and Merrill**

224 S. Michigan Avenue Suite 1000  
Chicago, Illinois 60604  
Phone: (312) 554-9090  
Fax: (312) 360-4545  
www.som.com  
Contact: Kelly Andereck, Nancy  
Abshire

**STR Partners**

33 W. Grand Avenue Suite 500  
Chicago, Illinois 60610  
Phone: (312) 464-1444  
Fax: (312) 464-0785  
www.strpartners.com  
Contact: Julie Liska

**Studio Gang Architects**

3656 N. Lincoln Unit G  
Chicago, Illinois 60613  
Phone: (773) 929-7974  
Fax: (773) 929-7254  
Contact: Jeanne Gang, Jim Miller

**Mark Schendel**

The Zimmerman Design Group  
7707 Harwood Avenue  
Milwaukee, Illinois 53213  
Phone: (414) 276-1889  
Fax: (414) 765-8728  
www.zdg.com/  
Contact: Kurt Zimmerman

**VOA**

224 S. Michigan Avenue Suite 1400  
Chicago, Illinois 60604  
Phone: (312) 554-1400  
Fax: (312) 554-1412  
www.voa.com  
Contact: Amy Coffman, David  
Cintron

**Hahn Joh**

Weese Langely Weese  
9 W. Hubbard Street  
Chicago, Illinois 60610  
Phone: (312) 642-1820  
Fax: (312) 527-5377  
www.wlwld.com  
Contact: Dennis Langley

**William McCollum Architects**

764 N. Milwaukee Avenue  
Chicago, Illinois 60622  
Phone: (312) 829-2223  
Fax: (312) 829-8954  
Contact: Bill McCollum

**Wilkinson Blender Architecture,  
Inc.**

2041 W. Roscoe Street  
Chicago, Illinois 60618  
Phone: (773) 665-8377  
Fax: (773) 665-8453  
www.WBArch.com  
Contact: Michael Wilkinson

**Wiss, Janney, Elster Associates, Inc.**

330 Pflingsten Road  
Northbrook, Illinois 60062  
Phone: (847) 272-7400  
Fax: (847) 291-9599  
www.wje.com  
Contact: David Cook

**Want to Know More? Check Out These Websites:**

***American Institute of Architects at [www.aia.org](http://www.aia.org)***

AIA is the professional association for architects. This site contains links to individual chapters, conferences, continuing education, and professional interest areas (PIAs).

***AIA Committee on the Environment at [www.e-architect.com/pia/cote](http://www.e-architect.com/pia/cote)***

This professional interest area (PIA) of the American Institute of Architects is devoted to sustainable-building events, meetings, and projects.

***Chicago AIA Chapter at [www.aiachicago.org](http://www.aiachicago.org)***

The Chicago AIA Chapter site offers browsers information on hiring an architect, tips for successful building, access to AIA's national architect database for locating an architect, announcements about free seminars for clients, and lists of Chicago-based architects on the Web.

## Professional Services: Development Consultants

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When developing a project, community-based organizations do not have to go it alone. Development consultants can be hired by a nonprofit to see the project through development from beginning to completion. These developers can be hired on a contract or fee-for-service basis.

### **Associated Equities**

220 W. Huron Street Suite 500W  
Chicago, Illinois 60610  
Phone: (312) 664-5933  
Fax: (312) 642-9291  
Contact: James Keledjian

### **DC & Associates**

Post Office Box 50847  
Cicero, Illinois 60648  
Phone: (773) 542-0901  
Fax: (773) 343-6887  
Contact: Debra Claybron

### **Everest Partners**

350 W. Hubbard Street Suite 222  
Chicago, Illinois 60610  
Phone: (312) 332-9700  
Fax: (312) 332-9707  
www.everestpartners.com  
Contact: Bob Kaplan

### **Growing Home Inc.**

125 S. Wabash Avenue Suite 205  
Chicago, Illinois 60605  
Phone: (312) 435-8601  
Fax: (312) 435-0198  
Contact: Daniel Goldfarb, Les Brown

### **LL Consulting**

339 W. Barry Avenue  
Chicago, Illinois 60657  
Phone: (773) 281-7873  
Fax: (773) 281-7880  
Contact: Laurel Lipkin

### **Lucas Greene Associates LLC**

Post Office Box 496248  
Chicago, Illinois 60649  
Phone: (773) 374-2200  
Fax: (773) 374-5611  
Contact: Linda Greene

### **Metropolitan Housing Development Corporation**

8 S. Michigan Avenue Suite 3000  
Chicago, Illinois 60603  
Phone: (312) 236-9673  
Fax: (312) 236-9679  
Contact: Sal Ferrara

### **Pam Hallet & Associates**

6556 N. Bosworth Avenue  
Chicago, Illinois 60626  
Phone: (773) 338-2220  
Fax: (773) 338-2232  
Contact: Pam Hallet

### **Prim Lawrence Group**

9305 S. Michigan Avenue  
Chicago, Illinois 60619  
Phone: (773) 785-9605  
Fax: (773) 785-6302  
Contact: Teresa Prim

### **Pusateri Development Associates**

53 W. Jackson Boulevard Suite 622  
Chicago, Illinois 60604  
Phone: (312) 692-1712  
Fax: (312) 692-1775  
Contact: Larry Pusateri

### **Sperry Management**

1130 S. Michigan Avenue Suite 3210  
Chicago, Illinois 60605  
Phone: (312) 461-9358  
Fax: (312) 461-9543  
Contact: Angela Sperry

## Professional Services: Energy Consultants

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Energy consultants are experts in the field of energy analysis. They will analyze heating, ventilation, air conditioning (HVAC) systems, as well as the structure for potential leaks and inefficiencies; explain possible energy-saving measures, including changes in control settings, modifications to lighting, and new controls or equipments that would make the building more energy efficient; and help estimate potential costs and energy savings that would accrue after changes are made. Services can be rendered on a fee-for-service or contract basis.

### **Boelter-Yates**

1300 Higgins Road Suite 301  
Park Ridge, Illinois 60068  
Phone: (847) 692-4700  
Fax: (847) 692-3127  
www.boelter-yates.com  
Contact: Steve Blonz

### **ComEd**

1919 Swift Drive  
Oak Brook, Illinois 60523  
Phone: (630) 684-3771  
Fax: (630) 684-3719  
www.ucm.com  
Contact: Michael Kuk

### **Domus Plus**

408 N. Grove Street  
Oak Park, Illinois 60302  
Phone: (708) 386-0345  
Fax: (708) 386-2652  
www.sustainable.doe.gov  
Contact: Paul Knight

### **EnergyWise Association, Inc.**

608 W. Columbus Street  
McHenry, Illinois 60050  
Phone: (815) 378-2073  
Fax: (815) 378-2073  
Contact: Bill Fritzche

### **Kouba-Cavallo Associates**

6912 Main Street Suite 20  
Downers Grove, Illinois 60516  
Phone: (630) 971-2016  
Fax: (630) 971-1505  
www.kouba-cavallo.com  
Contact: Jim Cavallo

### **Sieben Energy Associates**

401 N. Wabash Avenue Suite 536  
Chicago, Illinois 60611  
Phone: (312) 828-0700  
Fax: (312) 828-0755  
www.siebenergy.com/  
Contact: Helen Kessler, Roger Hill

### **University of Illinois at Chicago**

Energy Resources Center  
851 S. Morgan Street  
Chicago, Illinois 60607  
Phone: (312) 413-2317  
Fax: (312) 996-5620  
www.uic.com  
Contact: David Balderas

## Professional Services: Engineering Consultants

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Engineering consultants are critical to physical safety. Like architects, engineers bear legal liability for their plans and specifications, and they can be paid on a contract or fee-for-service basis.

Several different kinds of engineers play important roles in the development process. *Structural engineers* usually work with the architect, particularly during the initial design phase, to ensure that plans are structurally sound and that mechanical systems will adequately serve the project. Structural engineers also assist in identifying cost-saving measures that simultaneously satisfy structural design and construction requirements. *Electrical engineers* design electrical power and distribution systems. *Soil engineers* are responsible for determining the soil's bearing capacity, the required depth of footings, various types of loads, the level of the groundwater table, and the presence of any toxic materials. *Environmental engineers* may also be needed if the project is on a site that contains asbestos or other hazardous substances.

### **Argonne National Laboratory**

9700 S. Cass Avenue  
Argonne, Illinois 60439  
Phone: (630) 252-8688  
Fax: (630) 252-6407  
www.anl.gov/  
Contact: Dee Wernette

### **Chicago Academy of Sciences**

2060 N. Clark Street  
Chicago, Illinois 60614  
Phone: (773) 549-0606  
Fax: (773) 549-5199  
www.chias.org  
Contact: Paul Heltne

### **Conservation Research Institute**

324 N. York Road  
Elmhurst, Illinois 60126  
Phone: (630) 758-0355  
Contact: Melinda Perrin

### **Construction Technology Laboratories, Inc.**

5420 Old Orchard Road  
Skokie, Illinois 60077  
Phone: (866) 285-4768  
Fax: (847) 965-6541  
www.ctlgroup.com  
Contact: Medgar Marceau

General contractors typically execute a contract with the developer to build the project according to plans and specifications developed by the architect and engineer. General contractors then divide the contract among different subcontractors to perform different tasks. General contractors schedule subcontractors' work and monitor quality to ensure that subcontractor performance satisfies the general contractor's obligations to the developer. General contractors and subcontractors typically bear legal liability for the quality of their work for a specified period after the development is complete.<sup>21</sup>

**Batteast Construction Company, Inc.**

430 LaSalle Avenue  
South Bend, Indiana 46617  
Phone: (219) 234-3539  
Contact: William Batteast

**Cumexa, Inc.**

4012 W. Ogden Avenue  
Chicago, Illinois 60623  
Phone: (773) 277-2077  
Fax: (312) 277-2070  
Contact: Ramon Montelongo

**Humboldt Construction**

2550 W. North Ave.  
Chicago, IL 60647  
Phone: (773) 278-5669  
Contact: Efrían Vargas

**KJK Construction**

5951 W. Fullerton Avenue  
Chicago, Illinois 60639  
Phone: (773) 637-4401  
Contact: Joseph Karkut

**Latin United Community Housing Association (LUCHA)**

3541 North Avenue F11  
Chicago, Illinois 60647  
Phone: (773) 276-5338  
www.lucha.org  
Contact: Juan Rivera, Jared Rogers

**Monterrey Contractors, Inc.**

3600 S. Albany Avenue  
Chicago, Illinois 60632  
Phone: (773) 254-6090  
Fax: (773) 376-8421  
Contact: Jeff Welsh

**New England Builders**

4927 Main Street  
Skokie, Illinois 60077  
Phone: (847) 677-2000  
Fax: (847) 677-2380  
Contact: Christopher Rintz

**Par Construction**

503 Madison Avenue  
Oak Park, Illinois 60302  
Phone: (708) 848-5562  
Fax: (708) 848-5570  
Contact: Russ Rojakovick

**S. N. Peck Builders, Inc.**

650 W. Grace Street  
Chicago, Illinois 60613  
Phone: (773) 248-8883  
Fax: (773) 248-1062  
Contact: Neil Peck

**South Chicago Workforce**

8616-18 South Chicago Avenue  
Chicago, Illinois 60617  
Phone: (773) 933-0842  
Fax: (773) 933-7532  
Contact: David Sullivan

**UBM Inc.**

223 W. Jackson Boulevard Suite 1200  
Chicago, Illinois 60606  
Phone: (312) 939-0505  
Fax: (312) 939-0483  
www.ubminc.com  
Contact: Alex Olin

**William Ryan Homes**

945 N. Plum Grove Suite G  
Schaumburg, Illinois 60173  
Phone: (847) 995-8700  
www.williamryan.com  
Contact: William Ryan

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<sup>21</sup> Miles et al., *Real Estate Development*, 23.

### **Want to Know More? Check Out These Websites:**

***Argonne National Laboratory, Existing Buildings Efficiency Research Program at [www.anl.gov](http://www.anl.gov)***

This gateway to the Argonne National Laboratory site offers information about Argonne's projects, reports, and publications.

***Building Environmental Science and Technology (BEST) at [www.nrg-builder.com](http://www.nrg-builder.com)***

BEST provides technical support and information services about "green" building products and practices. This site contains numerous links, reports, book information, and BEST practices.

***ComEd at [www.ucm.com/comed/business/display.asp?id=10](http://www.ucm.com/comed/business/display.asp?id=10)***

This gateway to Commonwealth Edison's community programs details specific ComEd initiatives to support energy efficiency and the environment.

***Energy Federation Incorporated (EFI) at [www.efi.org](http://www.efi.org)***

Energy Federation Incorporated (EFI) is an energy transformation agency that promotes access to and use of effective resource conservation technologies. The site contains information about energy efficiency programs and products, as well as distribution information.

***Lawrence Berkeley National Laboratory at [eetd.lbl.gov](http://eetd.lbl.gov)***

The Building Technologies Department website showcases the Lawrence Berkeley National Laboratory's research on air quality and energy efficiency.

***Oak Ridge National Laboratory Buildings Technology Center at [www.ornl.gov/ORNL/BTC](http://www.ornl.gov/ORNL/BTC)***

This site details the Oak Ridge National Laboratory's research into systems engineering approaches to energy-efficient building.

***Partnership for Advancing Technology in Housing (PATH) at [www.pathnet.org](http://www.pathnet.org)***

PATH's site is a premier clearinghouse for information about ways to improve the quality, durability, environmental performance, energy efficiency, and affordability of housing. The site contains articles, a calendar, and links on management, building construction, and program support.

***Sustainable Buildings Industry Council at [www.sbicouncil.org](http://www.sbicouncil.org)***

The SBIC website, tailored toward building professionals interested in sustainable design, contains a calendar of training dates, consumer-related reviews and periodicals, and energy analysis tools.

***Sustainable Business Network at [sbn.netforchange.com](http://sbn.netforchange.com)***

The Sustainable Business Network is a clearinghouse for jobs, training, advocacy, and organization information – as well as product articles and event calendars – dedicated to sustainable living.

***Sustainable Sources Website at [www.greenbuilder.com](http://www.greenbuilder.com)***

This is a one-stop source for green building articles, catalogs, professional contacts, and ecotravel.

## Financial Services: Construction and Permanent Loan Lenders

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Loans used to finance a developer's construction of on-site improvements are called construction (or interim) loans. They are general made by commercial banks, which specialize in short-term loans to businesses, including real estate developers.

Permanent loans are used to finance the long-term ownership or use of a parcel of real estate. Such loans are commonly made by life insurance companies (either directly or through loan correspondents known as mortgage bankers or through mortgage brokers), commercial banks, savings and loan associations, savings banks, and pension funds.

The following banks are some of the Chicago-based institutions that make construction and/or permanent loans. Check with your bank's loan officer to inquire about its construction or permanent loan financing products.

- Bank of America
- Citibank
- Harris Bank
- Marquette National Bank
- Shore Bank
- Bank One
- Fifth Third Bank
- LaSalle Bank
- Northern Trust

In addition, two other entities have been created to extend permanent and construction loans specifically to nonprofit organizations:

### **Illinois Housing Development**

#### **Authority**

401 N. Michigan Avenue Suite 900  
Chicago, Illinois 60611  
Phone: (312) 836-5239  
Fax: (312) 832-2167  
www.ihda.org

### **Illinois Facilities Fund**

300 W. Adams Street  
Chicago, Illinois 60606  
Phone: (312) 629-0060  
Fax: (312) 629-0065  
www.npo.net/  
Contact: Sarah Carol

## Financial Services: Energy-Efficient Mortgage Lenders

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Energy-efficient mortgage (EEM) financiers recognize the utility bill and operating cost savings accruing to borrowers who purchase a home or dwelling that uses energy-efficient materials and construction techniques. EEM providers will typically lend at a higher debt-to-equity level, given the assumption that reductions in utility expenses will enable the borrower to service more debt. EEMs are federally recognized, easy-to-use lending products that encourage developers to build and/or purchase energy-efficient dwellings.

### **Norwest Mortgage**

303 E. Hillcrest Drive  
DeKalb, Illinois 60115  
Phone: (815) 748-2721  
www.norwest.com  
Contact: Brian Baker

### **GMAC Mortgage**

9501 W. Forty-fourth Place Suite 101  
Orland Park, Illinois 60462  
Phone: (708) 349-7707  
www.gmacmortgage.com  
Contact: Joe Thomas, Alan  
Hildebrand

### **GMAC Mortgage**

1501 E. Woodfield Drive Suite 113E  
Schaumburg, Illinois 60173  
Phone: (800) 244-8411  
Fax: (847) 240-1201  
www.gmacmortgage.com  
Contact: Dan Gordon

### **GMAC Mortgage**

2122 York Road Suite 120  
Oak Brook, Illinois 60523  
Phone: (630) 990-1777  
Fax: (630) 990-1796  
www.gmacmortgage.com  
Contact: Rose Anne Donzelli

### **Mortgage Now of McHenry County, Inc.**

28875 W. Rand Road  
McHenry, Illinois 60050  
Phone: (815) 344-3800  
Fax: (815) 344-8900  
Contact: Mark Kennedy

## Financial Services: Predevelopment Lenders

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Predevelopment loan lenders provide high-risk capital funds and lend these monies toward the initial cost of a project. These funds help finance such activities as determining project feasibility, planning, and gaining site control for affordable-housing projects.

### **Chicago Community Loan Fund**

29 E. Madison Street, Suite 1700  
Chicago, Illinois 60602  
Phone: (312) 252-0440  
Fax: (312) 252-0419  
Contact: Issa Barrett

### **Community Investment Corporation**

222 S. Riverside Plaza Suite 2200  
Chicago, Illinois 60606  
Phone: (312) 258-0070  
Fax: (312) 258-8888  
www.cichicago.com  
Contact: David Price

### **Corporation for Supportive Housing**

1 N. LaSalle, 12<sup>th</sup> Floor  
Chicago, Illinois 60602  
Phone: (312) 360-0800  
Fax: (312) 360-0185  
www.csh.org  
Contact: Renita Myles Lee

### **Local Initiatives Support Corporation**

1 N. LaSalle, 12<sup>th</sup> Floor  
Chicago, Illinois 60602  
Phone: (312) 360-0800  
Fax: (312) 360-0183  
www.liscnet.org  
Contact: Barbara Beck

## **Want to Know More? Check Out These Websites:**

### ***Illinois Housing Development Authority at [www.ihda.org](http://www.ihda.org)***

The IHDA website is an essential resource for finding funding and support for affordable-housing construction in the state of Illinois. The site contains extensive listings of Illinois's grant programs and lending support information.

### ***Local Initiatives Support Corporation at [www.liscnet.org](http://www.liscnet.org)***

LISC provides grants, loans, and equity investments to community development corporations for neighborhood redevelopment. The LISC website contains information on LISC's programs, services, and affiliates and offers a searchable database on community economic development topics.

### ***National Conservation Guild at [www.nationalguild.com](http://www.nationalguild.com)***

The NCG website features energy-efficient mortgage (EEM) information and links to lenders, home energy rating consultants, and other contractors.

## Advocacy Organizations

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The organizations listed here represent an emerging group of associations, community development corporations, and legal practitioners that are working to increase the use of energy-efficient technologies and materials and to promote sustainability in the greater Chicago metropolitan region.

### **AIA Chicago**

222 Merchandise Mart Plaza Suite  
1049  
Chicago, Illinois 60654  
Phone: (312) 670-7770  
Fax: (312) 670-2422  
www.aiachicago.org  
Contact: Joan Pomaranc

### **Center for Neighborhood Technology**

2125 W. North Avenue  
Chicago, Illinois 60647  
Phone: (773) 278-4800  
Fax: (773) 278-3840  
www.cnt.org  
Contact: Robert Lieberman

### **Community Energy Cooperative**

2125 W. North Avenue  
Chicago, Illinois 60647  
Phone: (773) 486-7600  
Fax: (773) 486-7643  
www.energycooperative.net  
Contact: Kathy Tholin

### **Delta Institute**

53 W. Jackson Boulevard Suite 1604  
Chicago, Illinois 60604  
Phone: (312) 554-0900  
Fax: (312) 554-0193  
www.delta-institute.org  
Contact: Donna Ducharme, Timothy  
Brown

### **Environmental Law & Policy Center**

35 E. Wacker Drive Suite 1300  
Chicago, Illinois 60601  
Phone: (312) 673-6500  
Fax: (312) 795-3730  
www.elpc.org  
Contact: Karen Lewis

### **Midwest Energy Efficiency Alliance**

35 E. Wacker Drive Suite 1300  
Chicago, Illinois 60601  
Phone: (312) 795-3740  
Fax: (312) 673-6518  
www.mwalliance.org  
Contact: Alecia Ward

### **Northeastern Illinois Planning Commission**

222 S. Riverside Plaza Suite 1800  
Chicago, Illinois 60606  
Phone: (312) 454-0401  
Fax: (312) 454-0411  
www.nipc.cog.il.us  
Contact: John Paige

### **Sustainable Building Industry Council**

1331 H Street NW Suite 1000  
Washington, DC 20005  
Phone: (202) 628-7400  
Fax: (202) 393-5043  
www.sbicouncil.org  
Contact: Helen English, Ellen Larson,  
Christian May

## **Want to Know More? Check Out These Websites:**

***Habitat for Humanity International Environmental Initiative* at [www.habitat.org/env/default.html](http://www.habitat.org/env/default.html)**

This site details Habitat's commitment and approach to sustainable building.

***National Affordable Housing Network* at [www.nahn.com](http://www.nahn.com)**

NAHN is a professional housing association. Its website provides information on affordable-housing design techniques tailored to climate zone.

***National Low Income Housing Coalition* at [www.nlihc.org](http://www.nlihc.org)**

NLIHC is an advocacy agency that mobilizes grassroots, community-based support for housing policy reform. The site contains organizing information, bulletins on new government regulations, and an excellent links page to more websites on low-income housing.

***Rocky Mountain Institute* at [www.rmi.org](http://www.rmi.org)**

Rocky Mountain Institute is a nonprofit research and education foundation that promotes energy-efficient and sustainable use of natural resources.

***United States Green Building Council (USGBC)* at [www.usgbc.org](http://www.usgbc.org)**

USGBC is the United States' premier green building association. The site contains information about programs, resources, and USGBC's Leadership in Energy and Environmental Design (LEED) standards.

***World Wide Web Virtual Library* at [www.ulb.ac.be/ceese/meta/sustvl.html](http://www.ulb.ac.be/ceese/meta/sustvl.html)**

This virtual library contains links to environmentally friendly organizations, events, building materials, projects, articles, databases, and tools.

## Government Agencies and Contacts

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The following is a list of Chicago, Cook County, Illinois, and federal officials working with local, community-based organizations and for-profit companies on expanding the use of energy-efficient building technologies and materials, as well as promoting the use of sustainable practices in development.

### **City of Chicago**

Department of Buildings – Permit Issuance  
121 N. LaSalle Street Room 801  
Chicago, Illinois 60602  
Phone: (312) 744-2152  
Fax: (312) 744-0721  
[www.ci.chi.il.us/Buildings](http://www.ci.chi.il.us/Buildings)  
Contact: Felipe Torres

### **City of Chicago**

Department of Energy Management  
30 N. LaSalle Street Suite 2500  
Chicago, Illinois 60602  
Phone: (312) 744-3634  
Fax: (312) 744-6451  
[www.ci.chi.il.us/Environment/Energy Management](http://www.ci.chi.il.us/Environment/EnergyManagement)  
Contact: Gretchen Neuman, Steve Walter

### **City of Chicago**

Department of Environment  
30 N. LaSalle Street Suite 2500  
Chicago, Illinois 60602  
Phone: (312) 744-9139  
Fax: (312) 744-6451  
[www.ci.chi.il.us/Environment](http://www.ci.chi.il.us/Environment)  
Contact: David Reynolds,  
Karen Gordon

### **City of Chicago**

Department of Housing  
318 S. Michigan Avenue 4th Floor  
Chicago, Illinois 60604  
Phone: (312) 747-9000  
Fax: (312) 747-9207  
[www.ci.chi.il.us/Housing](http://www.ci.chi.il.us/Housing)  
Contact: Billy McGhee, Larry Haynes,  
Monique Tripp

### **City of Chicago**

Department of Natural Resources  
30 N. LaSalle Street Suite 2500  
Chicago, Illinois 60602  
Phone: (312) 744-7469  
Fax: (312) 744-6451  
[www.ci.chi.il.us/Environment/Natural Resource](http://www.ci.chi.il.us/Environment/NaturalResource)  
Contact: Suzanne Malec

### **City of Chicago**

Department of Solid Waste & Technical Services  
30 N. LaSalle Street Suite 2500  
Chicago, Illinois 60602  
Phone: (312) 744-3172  
Fax: (312) 744-6451  
[www.ci.chi.il.us/Environment/SolidWaste](http://www.ci.chi.il.us/Environment/SolidWaste)  
Contact: Alexandra Holt

### **Cook County**

Department of Planning & Development  
69 W. Washington Street Suite 2900  
Chicago, Illinois 60602  
Phone: (312) 603-1064  
Fax: (312) 603-9970  
[www.ci.chi.il.us/PlanAndDevelop/](http://www.ci.chi.il.us/PlanAndDevelop/)  
Contact: Ted Sucharski, Evelyn Bazel

### **State of Illinois**

Department of Commerce and Community Affairs  
620 E. Adams Street  
Springfield, Illinois 62701  
Phone: (217) 785-2373  
Fax: (217) 785-2618  
[www.commerce.state.il.us](http://www.commerce.state.il.us)  
Contact: Maureen Davlin

### **United States Government**

Department of Energy  
1 S. Wacker Drive Suite 2380  
Chicago, Illinois 60606  
Phone: (312) 886-8587  
Fax: (312) 886-8561  
[www.doe.gov](http://www.doe.gov)  
Contact: Carla Clemons, John Devine,  
Michael Peterson

### **United States Government**

Federal Transit Administration  
55 E. Monroe Street Suite 1415  
Chicago, Illinois 60603  
Phone: (312) 353-2883  
[www.dot.gov](http://www.dot.gov)  
Contact: Douglas Gerleman

### **United States Government**

Department of Fish & Wildlife  
1000 Hart Road Suite 180  
Barrington, Illinois 60010  
Phone: (847) 381-2253  
[www.fws.gov/](http://www.fws.gov/)  
Contact: John Rogner

## Want to Know More? Check Out These Websites:

***City of Chicago, Department of Housing*** at [www.ci.chi.il.us/housing/](http://www.ci.chi.il.us/housing/)

Gateway site to housing development and assistance programs sponsored by the City of Chicago

***City of Chicago, Department of Planning & Development*** at [www.ci.chi.il.us/PlanAndDevelop](http://www.ci.chi.il.us/PlanAndDevelop)

Link to the City of Chicago's Department of Planning; includes listings and descriptions of the City's economic and community development programs

***Illinois Department of Commerce and Community Affairs*** at [www.commerce.state.il.us](http://www.commerce.state.il.us)

Contains information on Illinois's statewide energy efficiency, sustainability, and low-income housing finance assistance programs

***United States Department of Energy, Building America Program*** at [www.eren.doe.gov/buildings/building\\_america](http://www.eren.doe.gov/buildings/building_america)

A private-public partnership that constructs energy-efficient housing throughout the United States

***United States Department of Energy, Efficiency and Renewable Energy Network (EREN)*** at [www.eren.doe.gov](http://www.eren.doe.gov)

Provides access to information about renewable energy and energy efficient technologies

***United States Department of Energy, High Performance Commercial Buildings: A Technology Roadmap***

at [www.eren.doe.gov/buildings/](http://www.eren.doe.gov/buildings/)

Allows downloading of an excellent report on building energy-efficient, high-performance commercial buildings

***United States Department of Energy, Building Energy Efficiency*** at [www.eren.doe.gov/EE/buildings.html](http://www.eren.doe.gov/EE/buildings.html)

Focuses on clarifying building terms and concepts

***United States Department of Energy, Center for Excellence for Sustainable Development*** at

[www.sustainable.doe.gov](http://www.sustainable.doe.gov)

Premier site that covers and provides links to every aspect of energy-efficient and sustainable building; includes exhaustive list of articles about planning, zoning, financing, materials, and systems engineering approaches to development

***United States Environmental Protection Agency, Indoor Environments Division (IED)*** at [www.epa.gov/iaq](http://www.epa.gov/iaq)

Contains valuable links to articles, research, and policy decisions regarding indoor air quality

***United States Department of Energy, National Renewable Energy Laboratory*** at [www.nrel.gov](http://www.nrel.gov)

Premier site for discussing renewable energy sources; contains links to articles about renewable-energy organizations, contracting opportunities, data, partnerships, and technology

***United States Department of Energy, Office of Building Technology State and Community Programs***

at [www.eren.doe.gov/buildings](http://www.eren.doe.gov/buildings)

Contains a broad range of links to research, programs, initiatives, and road maps to assist in any type of energy-efficient design process

***United States Department of Housing and Urban Development (HUD)*** at [www.hud.gov](http://www.hud.gov)

Premier site for finance and policy information concerning U.S. Housing and Urban Development (HUD) programs; extremely easy to use, searchable, and comprehensive in scope

***United States Environmental Protection Agency (EPA)*** at [www.epa.gov](http://www.epa.gov)

Gateway site to federal EPA programs, partnerships, research, grant initiatives, and statistics; contains links to all EPA regions

# Government Grants and Resources

These Chicago, Cook County, State of Illinois, and federal grant or loan programs can be used to write down the cost of building affordable, energy-efficient, sustainable housing in the Chicago metropolitan region. Each entry notes the program title and describes the grant or loan program, eligibility requirements, intended use of funds information, and amount of money available. Finally, each listing ends with the name of the program officer and department address and telephone number.

**Special Note:** In the case of federal programs, most dollars flow through local, state, and county agencies. The federal programs listed in this guide are targeted toward for-profit developers and can be applied to affordable-housing projects where public-private partnerships are utilized in the development and management of the property.

## City of Chicago

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### *Description*

The City of Chicago has a number of programs housed in several departments for developers of affordable and energy-efficient housing. Primary departments to contact are the Department of Housing and the Department of Environment.

Department of Housing financing for affordable housing includes:

- Tax credits to generate equity for the development of affordable housing
- Bond financing to renovate or create affordable housing
- Subsidies for the new construction of affordable single-family and two-flat homes
- Grants to lower apartment rental costs for income-eligible renters
- Financing to improve the condition of multiunit apartment buildings

Department of Environment initiatives include:

- Green Homes for Chicago
- Green Corps
- Clean Air Initiative
- Chicago Solar
- Urban Heat Island

### *Eligibility*

Funds are primarily distributed from the Department of Housing. Low-interest loans (0–3 percent) are available to not-for-profit and for-profit developers to acquire and rehabilitate residential properties of five or more units for low- to moderate-income renters. Much like the application process in a bank, development projects under consideration by DOH are assigned to a relationship manager, who is responsible for analyzing all aspects of a project.

### *Intended Use of Funds*

Loans can be used for construction and permanent financing. Low-income housing tax credits are typically used to fund 80- to 100-unit developments. The City will also provide subsidies on writing down the cost of development. Loans are made for 30 years or more, with debt servicing made in fixed payments or as a percentage of cash flow.

### *Amount of Money Available*

There is no fixed limit or maximum loan amount.

### *Contact*

Monique Tripp Bottrell  
City of Chicago Department of Housing  
318 S. Michigan Avenue 4th Floor  
Chicago, Illinois 60604  
Phone: (312) 747-9000  
Fax: (312) 747-9207  
Web: [www.ci.chi.il.us/Housing](http://www.ci.chi.il.us/Housing)

David Reynolds  
City of Chicago Department of Environment  
30 N. LaSalle Street Suite 2500  
Chicago, Illinois 60602  
Phone: (312) 744-9139  
Fax: (312) 744-6451  
Web: [www.ci.chi.il.us/Environment](http://www.ci.chi.il.us/Environment)

# Cook County

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## Cook County Consortium HOME Investment Partnerships Program

### *Description*

The HOME Investments Partnership Program was created by the United States Congress under Title II (the Home Investment Partnership Act) of the National Affordable Housing Act of 1990. The program seeks to:

- Expand the supply of decent, affordable housing (particularly rental housing) for low- and very low-income persons
- Strengthen the abilities of state and local governments to design and implement strategies for achieving adequate supplies of decent, affordable housing
- Provide both financial and technical assistance to participating jurisdictions, including the development of model programs for affordable low-income housing
- Extend and strengthen partnerships among all levels of government and the private sector

### *Eligibility*

Eligible entities include for-profit and not-for-profit businesses and organizations. The activities undertaken by Cook County through the resources of the HOME Program must be consistent with the county's Comprehensive Plan. A consistency review and certification are undertaken for each HOME application submitted.

The program's jurisdiction is limited to the Cook County Urban county containing all the unincorporated areas of Cook County and all suburban municipalities of 50,000 people or less; There is one Cook County community development block grant (CDBG) joint participant within Urban County's geographic boundary, specifically the city of Chicago Heights; Three CDBG entitlement communities are located within the geographic boundaries of suburban Cook: Cicero, Berwyn, and the Village of Oak Park.

### *Intended Use of Funds*

Eligible expenditures for grant funding include acquisition, new construction, multifamily residential rehabilitation (five or more units), single-family residential rehabilitation (one to four units/owner occupied), tenant-based rental assistance, and programs for homeownership assistance and homebuyers.

In addition, a provision for community housing development organizations' set-aside funding grants funds to community development organizations for consulting, legal, engineering, and/or architectural fees; preliminary financial applications; initial feasibility studies; engaging a development team; and site control.

### *Amount of Money Available*

Cook County proposes to allocate HOME grant and matching funds for prioritized HOME-eligible activities in the following manner:

Acquisition	\$ 500,000	7%
New construction	3,279,750	49
Rehabilitation	1,478,000	22
HOME administration	567,700	13
Required 15% CHDO set-aside	851,550	13
Total	\$6,677,000	100%

### *Contact*

Ted Sucharski, Director  
Cook County Department of Planning & Development  
69 W. Washington Street Suite 2900  
Chicago, Illinois 60602  
Phone: (312) 603-1064  
Fax: (312) 603-9970

# State of Illinois

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## **Illinois Department of Commerce and Community Affairs Energy Efficient Affordable Housing Program**

### ***Description***

The Energy Efficient Affordable Housing Program is administered through the Illinois Department of Commerce and Community Affairs (DCCA) Bureau of Energy and Recycling. This program provides financial and technical assistance for energy-efficient improvements completed by not-for-profit developers rehabilitating or constructing affordable housing units. Program objectives include:

- Demonstrating the impact that energy efficiency has on creating and maintaining affordable housing as a result of being energy efficient: lower housing costs
- Educating developers, architects, and builders about the various energy-efficient building measures suitable for new residential construction, such that they begin using these measures on other projects not receiving grants from DCCA
- Educating affordable-housing lending partners as to the benefits of energy-efficient building
- Stabilizing low-income neighborhoods through new energy-efficient residential construction

### ***Eligibility***

Eligible applicants may include any not-for-profit developer implementing housing projects for low- and moderate-income residents. In addition, grants may be awarded to local governments on behalf of property owners repairing or rebuilding structures damaged by natural disasters.

### ***Intended Use of Funds***

Grant funds may be expended only for the incremental costs of approved energy efficiency improvements such as:

- Increased levels of insulation
- Upgraded windows
- Materials and labor for air-sealing work
- Ventilation systems
- Upgrades to the heating and domestic hot water systems

All nonliving spaces are ineligible for grant funding. These include but are not limited to:

- Administrative offices
- Commercial space
- Basement space (unless the basement will be finished as living units)

### ***Amount of Money Available***

Application forms are available upon request; applications will be accepted on an ongoing basis. Grant funding is limited to the incremental costs of the energy efficiency improvements and shall not exceed the following:

- \$2,500 per dwelling unit in multifamily rehabilitation projects
- \$2,000 per unit for new single or multifamily construction
- \$3,500 per unit for new duplex construction

Additionally, up to \$750 per grant may be awarded as an administrative fee. All prospective applicants are encouraged to consult with DCCA program staff before submitting a proposal, to discuss any questions concerning specific provisions of the program.

### ***Contact***

Maureen Davlin

Illinois Department of Commerce and Community Affairs

Bureau of Energy and Recycling

Energy Affordable Housing Program

620 E. Adams Street

Springfield, Illinois 62701

Phone: (217) 785-2373

Fax: (217) 785-2618

TDD: (800) 785-6055

E-mail: [mdavlin@commerce.state.il.us](mailto:mdavlin@commerce.state.il.us)

Web: [www.commerce.state.il.us/resource\\_efficiency/Energy/AffordableHousing.htm](http://www.commerce.state.il.us/resource_efficiency/Energy/AffordableHousing.htm)

**Illinois Department of Commerce and Community Affairs  
Homeless Shelter Energy Conservation Program*****Description***

The Homeless Shelter Energy Conservation Program is administered through the Illinois Department of Commerce and Community Affairs (DCCA) Bureau of Energy and Recycling. This program provides grants for the purchase and installation of energy conservation measures in existing or newly constructed facilities operated by organizations that serve homeless or formerly homeless persons. These conservation measures reduce energy consumption, improve energy efficiency, and substantially improve the condition of the facilities. By reducing utility costs, the program improves cash flow for the operating budgets of participating organizations.

***Eligibility***

The following eligibility criteria must be met to receive funding:

- Applicant is a local public or private federal income tax-exempt not-for-profit group organized for charitable or social welfare purposes.
- Applicant provides shelter or permanent housing for homeless or formerly homeless people.
- Applicant is legally authorized to operate in the state of Illinois.

Eligible applicants must provide or plan to provide shelter or permanent housing for homeless or formerly homeless individuals and/o families. All housing must be coupled with appropriate supportive services for the populations the applicant serves. Applicants for grant funding under the Homeless Shelter Energy Conservation Program must currently maintain an established operation involving the provision of services to homeless or formerly homeless persons as an integral part of their normal activities, or demonstrate in their application that they will have established an operation involving the provision of such services no later than 30 days following notice of approved funding.

***Intended Use of Funds***

Grant funds may be used for rehabilitation or construction projects involving the installation of energy-efficient components. Funds may be expended for the following energy efficiency measures:

- Attic or ceiling insulation
- Lighting-related retrofits
- Caulking, weather-stripping, and air-sealing materials or techniques
- Replacement of water-heating equipment
- Repair or replacement of entrance or storm doors
- Wall, foundation, and/or basement insulation
- Air or vapor barriers
- New high-efficiency appliances, which may be considered but are a lower priority
- Energy efficiency improvements in ventilation systems
- Repair, replacement, or modification of primary or storm windows
- Boiler or heating equipment repair, modification, or replacement

***Amount of Money Available***

Through a competitive selection process, DCCA provides grant funding from \$5,000 to \$60,000 per project.

***Contact***

Anne Franklin  
Illinois Department of Commerce and Community Affairs  
Bureau of Energy and Recycling  
Homeless Shelter Conservation Program  
620 E. Adams Street  
Springfield, Illinois 62701

Phone: (217) 785-7440

Fax: (217) 785-2618

TDD: (800) 785-6055

E-mail [afrankli@commerce.state.il.us](mailto:afrankli@commerce.state.il.us)

[http://www.commerce.state.il.us/resource\\_efficiency/Energy/homelessshelter.htm](http://www.commerce.state.il.us/resource_efficiency/Energy/homelessshelter.htm)

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**Illinois Department of Commerce and Community Affairs  
Institutional Conservation Program*****Description***

This program is designed to assist public institutions in making the effort to conserve energy. Financial and technical assistance is provided for the completion of a comprehensive study to identify energy conservation opportunities. Financial assistance is also available for specific energy conservation measures installed to accomplish this goal.

***Eligibility***

Eligible applicants include all K–12 schools, colleges, universities and not-for-profit hospitals located within the state of Illinois.

***Intended Use of Funds***

Two levels of assistance are provided. Technical assistance funding may be used to cover the costs for contractual technical services and consultant fees. Energy conservation measures grants may be used for design fees, equipment, materials, installation fees, labor costs, and contractor overhead costs.

***Amount of Money Available***

Technical assistance grants provide funding to hire an Illinois -registered architect or engineer to complete a detailed energy study. The resulting report will identify all feasible energy conservation measures that, if implemented, would reduce energy consumption and the associated costs for the building. The exact amount of grant funding provided is based on the square footage of each building.

Energy conservation measures grants provide funding for eligible institutions to pay for the design, equipment and/or materials, and installation of projects recommended in the technical assistance report. DCCA provides grant funding up to \$40,000 per building and \$80,000 per institution.

Both grant levels require a matching grantee investment of 50 percent.

***Contact***

Greg Lenaghan  
Illinois Department of Commerce and Community Affairs  
Bureau of Energy and Recycling  
Institutional Conservation Program  
620 E. Adams Street  
Springfield, Illinois 62701

Phone: (217) 785-3983

Fax: (217) 785-2618

E-mail [glenagha@commerce.state.il.us](mailto:glenagha@commerce.state.il.us)

Web: [www.commerce.state.il.us/resource\\_efficiency/Energy/ICP.htm](http://www.commerce.state.il.us/resource_efficiency/Energy/ICP.htm)

**Illinois Department of Commerce and Community Affairs  
Renewable Energy Resources Program*****Description***

This program provides rebate and grant funding for projects that increase the utilization of alternative energy technologies in Illinois.

***Eligibility***

Eligible applicants include associations, individuals, private companies, public and private schools, colleges and universities, not-for-profit organizations, and units of state and local government in Illinois.

***Intended Use of Funds***

Projects funded by this program include hydropower (that does not involve new construction or significant expansion of hydropower dams), organic waste biomass, photovoltaic cells and panels, solar thermal energy, dedicated crops grown for energy production, and wind. Eligible expenditures may include contractual services such as subcontracts for design, construction, repairs, or maintenance; fees for legal, financial, artistic, or other professional services; commodities such as materials, supplies, feedstocks, and fuel; equipment; and other direct costs such as travel, duplication fees, and data processing.

### ***Amount of Money Available***

Rebate projects are funded to the following limits:

- Solar thermal energy – 50 percent, with a maximum rebate of \$5,000
- Photovoltaic cells and panels – 60 percent, with a maximum rebate of \$5,000

Grant projects have the following limits:

- Dedicated crops grown for energy production – 50 percent, with a maximum grant of \$150,000
- Solar thermal energy – 50 percent, with a maximum grant of \$150,000
- Photovoltaic cells and panels – 60 percent, with a maximum grant of \$200,000
- Wind – 60 percent, with a maximum grant of \$300,000
- Organic waste biomass – 50 percent, with a maximum grant of \$550,000
- Hydropower – 50 percent, with a maximum grant of \$1 million

### ***Contact***

Rex Buhrmester  
Illinois Department of Commerce and Community Affairs  
Bureau of Energy and Recycling  
Alternative Energy Development Section RERP  
620 E. Adams Street  
Springfield, Illinois 62701

Phone: (217) 557-1925

Fax: (217) 785-2618

E-mail [rbuhrmes@commerce.state.il.us](mailto:rbuhrmes@commerce.state.il.us)

Web: [www.commerce.state.il.us/resource\\_efficiency/Energy/rerp.htm](http://www.commerce.state.il.us/resource_efficiency/Energy/rerp.htm)

## **Illinois Special Assessment for Renewable Energy Systems**

### ***Description***

This statute allows for a special assessment of solar energy systems for property tax purposes.

### ***Eligibility***

The statute applies to commercial, industrial, and residential sectors in Illinois.

### ***Intended Use of Funds***

Eligible equipment includes active and passive systems and wind and geothermal systems, including passive solar space heat, active solar water heat, active solar space heat, photovoltaics, wind, and biomass.

### ***Amount of Money Available***

This statute allows solar equipment and systems to be valued at no more than a conventional energy system.

### ***Contact***

David Loos  
Illinois Department of Commerce and Community Affairs  
Bureau of Energy and Recycling  
620 E. Adams Street  
Springfield, Illinois 62701

Phone: (217) 785-3969

Fax: (217) 785-2618

E-mail [dloos@commerce.state.il.us](mailto:dloos@commerce.state.il.us)

Web: [www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive\\_Code=IL01F&Back=tsrch&state=IL&type=Property](http://www.dcs.ncsu.edu/solar/dsire/incentive.cfm?Incentive_Code=IL01F&Back=tsrch&state=IL&type=Property)

# Federal Government

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## Federal Five -Year Depreciation Schedule for Solar Energy Property

### *Description*

The federal government offers a five-year accelerated depreciation for all solar energy equipment.

### *Eligibility*

Any commercial entity that invests in or purchases qualified solar energy property may use the accelerated depreciation schedule.

### *Intended Use of Funds*

Solar energy property that qualifies for accelerated depreciation includes equipment that uses solar energy to generate electricity including:

- storage devices,
- power conditioning equipment
- transfer equipment, and related parts
- and equipment up to (but not including) the stage that transmits or uses electricity;
- dual-use equipment (such as pipes and hot water tanks, that uses both solar and nonsolar energy) only if:
  1. its use of energy from non-solar sources does not exceed 25% of its total energy input in an annual measuring period
  2. only to the extent of its basis or cost allocable to its use of solar energy.

### *Amount of Money Available*

#### **Deduction Schedule**

Year 1	20.00%
Year 2	32.00
Year 3	19.20
Year 4	11.52
Year 5	11.52
Year 6	5.76

Taxpayers who take advantage of the Federal Commercial Investment Tax Credit for solar equipment should use 95 percent, not 90 percent, of the original value of the solar equipment as the basis for depreciation. If you do not take the investment tax credit, you should use the full 100 percent of the value as the basis for depreciation.

### *Contact*

Solar Energy Industries Association  
1616 H Street NW 8th Floor  
Washington, DC 20006

Phone: (202) 628-7979

Fax: (202) 628-7779

E-mail [plowenth@seia.org](mailto:plowenth@seia.org)

Web: [www.eren.doe.gov/consumerinfo/refbriefs/la7.html](http://www.eren.doe.gov/consumerinfo/refbriefs/la7.html)

## Federal Commercial Investment Tax Credit for Solar Energy Property

### *Description*

The investment tax credit, otherwise known as the business energy tax credit, can save businesses up to 10 percent of the investment or purchase and installation amount of qualified solar energy property. Solar energy property is defined as equipment that uses solar energy to generate electricity, to heat or cool (or provide hot water for use in) a structure, or to provide solar process heat.

### *Eligibility*

Commercial entities that invest in or purchase qualified solar energy property can take the credit when income tax forms are filed.

***Intended Use of Funds***

Solar energy property that qualifies for the credit includes equipment that uses solar energy to generate electricity, including storage devices, power conditioning equipment, transfer equipment, and related parts, and equipment up to (but not including) the stage that transmits or uses electricity; dual-use equipment (equipment that uses both solar and nonsolar energy, such as pipes and hot water tanks) only if its use of energy from nonsolar sources does not exceed 25 percent of its total energy input in an annual measuring period and only to the extent of its basis or cost allocable to its use of solar energy.

***Amount of Money Available***

The allowable tax credit for any one-year is limited to \$25,000 plus 25 percent of the total tax remaining after the credit is taken. Credit not allowable in one year may be taken in other tax years.

***Contact***

Solar Energy Industries Association  
1616 H Street NW 8th Floor  
Washington, DC 20006  
Web: [www.eren.doe.gov/consumerinfo/refbriefs/la7.html](http://www.eren.doe.gov/consumerinfo/refbriefs/la7.html)

Phone: (202) 628-7979  
Fax: (202) 628-7779  
E-mail: [plowenth@seia.org](mailto:plowenth@seia.org)

**Federal Renewable Energy Production Tax Credit*****Description***

The Energy Policy Act established an incentive program for generators of electricity that use biomass and wind energy resources to produce electricity.

***Eligibility***

Private entities subject to taxation (corporations, small businesses, and homeowners) are eligible to receive a production tax credit (PTC) for electricity sold to unrelated parties.

***Intended Use of Funds***

Eligible entities must generate electricity from wind and biomass energy and sell surplus electricity to an unrelated party.

***Amount of Money Available***

The PTC was set at 1.5¢/kilowatt-hour (kWh) and is adjusted annually for inflation. As of November 1999, the adjusted rate is 1.7¢/kWh. The PTC credit applies to electricity produced from qualified sources during a 10-year period after the facility is placed into service. The credit is proportionally phased out over a 3¢/kWh range if the national average price of electricity from these source exceeds a threshold price of 8¢/kWh.

***Contact***

Solar Energy Industries Association  
1616 H Street NW 8th Floor  
Washington, DC 20006  
Web: [www.eren.doe.gov/consumerinfo/refbriefs/la7.html](http://www.eren.doe.gov/consumerinfo/refbriefs/la7.html)

Phone: (202) 628-7979  
Fax: (202) 628-7779  
E-mail: [plowenth@seia.org](mailto:plowenth@seia.org)

# Private Foundations and Grants

The listed private foundations lend financial support or offer grants that can be used to produce affordable, energy-efficient, and/or sustainable affordable housing in the Chicago metropolitan region. Each entry gives the program title and a description of the foundation or grant program, eligibility requirements, intended use of funds information, and amount of money available. Finally, each listing ends with the foundation or program's address and contact information.

## Bersted Foundation

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### *Description*

Established in 1972, the Bersted Foundation grants funds to support children/youth services, community development, programs that support the economically disadvantaged, family services, health care, mental health/crisis services, and the alleviation of homeless.

### *Eligibility*

Giving limited to Kane, DuPage, DeKalb, and McHenry counties, Illinois. No support is given for religious houses of worship or degree-conferring institutions of higher learning. No grants to individuals or for endowment funds exclusively or for deficit financing.

### *Intended use of funds*

Bersted Foundation funds will be granted to building/renovation, continuing support, general/operating support, and technical assistance.

### *Amount of money available*

As of year-end 1997, the Bersted Foundation's giving activities include \$788,643 for 41 grants (high: \$38,000; low: \$1,570).

### *Contact*

Cathy Ryan  
The Bersted Foundation  
c/o Bank of America NT & SA  
231 South LaSalle Street  
Chicago, Illinois 60697  
Phone: (312) 828-1785

## Chicago Community Trust and Associates

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### *Description*

The Chicago Community Trust was established in 1915 to support the "mental, moral, intellectual and physical improvement, assistance and relief of the inhabitants of the County of Cook, State of Illinois." Grants are given for both general operating support and specific programs and projects in the areas of health, social services, education, arts and humanities, and civic affairs. The foundation also awards fellowships to individuals in leadership positions in local community service organizations.

The CCT&A supports the work of Cook County-based organizations through a broad spectrum of grants. Fields of interest include support for programs/projects that address: aging; AIDS; arts and cultural activities; early childhood development; children and youth services; community development; economic development programs targeted towards individuals with disabilities; elementary, secondary and higher education; environment; government/public administration; health care; homelessness and housing/shelter; leadership development; and programs that focus on minorities, immigrants and women.

### *Eligibility*

Giving primarily in Cook County, Illinois. Support will not be given for religious purposes. No grants to individuals (except for limited fellowship programs), or for annual campaigns, deficit financing, endowment funds, publications, conferences, or

scholarships; no support for the purchase of computer hardware; no general operating support for agencies or institutions whose program activities substantially duplicate those already undertaken by others.

***Intended use of funds***

The Chicago Community Trust and Affiliates make grant to support: building/renovation; capital campaigns; continuing support; emergency funds; employee matching gifts; equipment; general/operating support; land acquisition; matching/challenge support; program development and evaluation; program-related investments/loans; research; seed money; and technical assistance.

***Amount of money available***

As of the Chicago Community Trust's 1998 year-end financial data, CCT&A's total granted giving amounted to \$31,905,715 (average: \$10,000-\$50,000).

***Contact***

Mr. Michael Marcus  
The Chicago Community Trust and Affiliates  
222 N. LaSalle St., Suite 1400  
Chicago, Illinois 60601-1009

Phone: (312) 372-3356

TDD: (312) 853-0394

FAX: (312) 580-7411

Web: [www.cct.org](http://www.cct.org)

## ComEd

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### **ComEd Affordable Housing Rebate Program**

***Description***

ComEd's "Home Efficiency For You" Affordable Housing Rebate Program is part of ComEd's Community & Economic Development initiative designed to promote the development of energy efficient housing for low and moderate income first-time home buyers throughout Northern Illinois. ComEd will rebate between \$250 and \$500 to low and moderate-income first-time homebuyers in connection with their purchase of energy efficient homes.

***Eligibility***

To be eligible for the program, the homebuyer must have low or moderate income under existing Federal Section 8 guidelines. Rebates under the program will be issued directly to the homeowner upon presentation of 1) the results of a home energy inspection that satisfies the program's requirements; and 2) proof of purchase of the home involved.

***Intended use of funds***

The rebate is available to first time home buyers who are buying new homes, or redeveloped residential properties, from builders and developers who have been approved by ComEd in connection with the Program (contact your builder or developer to see if they qualify).

Builders wanting to participate should submit a letter of interest listing the following information:

- Number of homes their planning on building
- Time frame in which homes will be built
- Neighborhoods in which homes will be built
- Expected energy efficiency ratings
- Name of energy rater

***Amount of money available***

First time home buyers that purchase homes that are built to Energy Star Standards and have energy efficiency ratings from 86-87 on a scale of 1-100 are eligible for a \$250 rebate; First time home buyers that purchase homes that are built according to the Illinois Department of Commerce and Community Affairs (DCCA) standards and have energy efficiency ratings from 88+ on a scale of 1-100 are eligible for a \$500 rebate; Applications for program rebates should be made within 90 days of your purchase of a new home.

**Contact**

Cheryl L. Hyman, Program Administrator  
Community & Economic Development  
ComEd  
(312) 394-7564  
Web: [www.ceco.com/comed/main.asp](http://www.ceco.com/comed/main.asp)

**ComEd Brownfield Development Grant Program****Description**

ComEd's Brownfield Development Grant Program is part of ComEd's Community & Economic Development initiative, and provides monetary grants to qualifying municipalities and community-based organizations who are involved in the redevelopment of a brownfield site

**Eligibility**

Must be a municipality or community based organization, and meet the requirements listed below.

**Intended use of funds**

The guidelines for the program are as follows:

1. The title to the brownfield property that is the subject of a grant request must be held by either the municipality involved or by a developer working with the municipality to re-develop the property;
2. A resolution must be passed by the municipality or community based organization that receives a grant stating that it supports and plans to participate in ComEd's Brownfield Development program (see attached resolution);
3. The property must be at least 3 acres, although some exceptions may be made for properties that are slightly less than this size;
4. There should be one or more development incentives for the property that is to be the subject of the grant (for example, the property being within a tax incremental financing district, an Illinois Enterprise Zone and/or a Federal Empowerment or Enterprise Community Zone would satisfy this requirement);
5. Grant amounts must be used for Phase I and/or II environmental studies of the property. Grant applicants must provide an estimate or estimates of the costs of these studies with their applications;
6. Grants will be issued upon the receipt of an invoice indicating that the environmental study referred to in the grant application has been completed; and

In applying for and/or receiving a grant, the Applicant acknowledges that ComEd has no interest in the project or the property involved, is not a partner or joint venturer in the project, and has no responsibility or authority for any aspects of the Applicant's project or the property whatsoever.

**Amount of money available**

Grant amounts made pursuant to the program will be at the discretion of ComEd, and must be used for Phase I and/or II environmental studies of brownfield sites in connection with active re-development efforts.

**Contact**

Cheryl L. Hyman, Program Administrator  
Community & Economic Development  
ComEd  
(312) 394-7564  
Web: [www.ceco.com/comed/main.asp](http://www.ceco.com/comed/main.asp)

**ComEd Renaissance Illinois Program****Description**

ComEd's Renaissance Illinois Program was created by ComEd in 1995 to convert vacant housing units into energy efficient and affordable residences targeted toward low and moderate-income families. ComEd makes grants to upgrade the energy efficiency in buildings being rehabbed with the goal of cutting homeowner energy expenses by a minimum of 50% when compared to "typical" rehab.

**Eligibility**

ComEd's Renaissance Illinois Program is targeted towards non-profit housing developers in ComEd's service territory. All grants made for rehabs must result in owner-occupied housing (no rental units).

***Intended use of funds***

Projects receiving ComEd Renaissance Illinois Program funds must meet the following minimum energy standards:

***I. Insulation***

- Sidewalls • R-19 full cavity blown insulation.
- Attic • R-43.
- Basements • R-19 full ceiling insulation over unconditioned basement.
- R-19 insulation in basement bandjoist if basement conditioned.
- Walls • Insulated like sidewalls if units are located in basement.

***II. Windows***

- Double-glazed with low-E coating (maximum U-value of 0.35 for window unit).

***III. Air Sealing***

- Foil backed drywall on exterior walls and top floor ceiling (not required if cellulose or rock wool insulation is used).
- Exterior drywall installed to subfloor of unit above.
- Top of drywall caulked to subfloor and framing members.
- Base of drywall caulked to subfloor.
- All penetrations through exterior drywall sealed with caulk or foam.
- Seal drywall to framing members on exterior walls.
- Completed units not to exceed 0.5 air changes/hour as measured with blower door.

***IV. Mechanical***

- Furnace • Sealed combustion/direct vent; minimum 90% AFUE.
- Water Heater • Sealed combustion/direct vent; minimum 60% EF.
- Air Conditioner • Minimum SEER of 12.
- Ventilation • Minimum 75 CFM exhaust fans in all bathrooms with sone rating no higher than 1.5.
- Minimum 150 CFM exhaust fan in kitchen.
- All fans vented directly to the outside.
- Duct Sealing • All duct joints (supply and return) sealed with duct mastic.
- All ducts and pipes located in conditioned areas.

***V. Refrigerators***

- Magic Chef CTN1511AEW (15 ft3), CTN1911DEW (18.5 ft3), or approved equal.

***VI. Lighting***

- Minimum of 3 fluorescent fixtures/unit.
- All common area and exterior lights to be fluorescent or approved equal.

***VII. Water***

- 1.6 gallon toilet, low flow showerheads, aerators.

***Amount of money available***

\$2,000/unit or \$3.25/ft<sup>2</sup>, whichever is less

***Contact***

Cheryl L. Hyman, Program Administrator  
Community & Economic Development  
ComEd  
Phone: (312) 394-7564

## DeKalb County Community Foundation

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### **Description**

The DeKalb County Community Foundation was established in 1991 to fund health and human services, education, and community development.

### **Eligibility**

Giving primarily in DeKalb County, Illinois. Grants are made to support the arts, community development, education, health care, and human services.

### **Intended use of funds**

The DeKalb County Community Foundation will support building/renovation, capital campaigns, equipment, and provide seed money.

### **Amount of money available**

As of year-end 1999, the DeKalb County Community Foundation's giving activities included \$525,503 for 85 grants (high: \$35,893; low: \$65; average: \$500-\$20,000).

### **Contact**

Jerome A. Smith, Executive Director  
DeKalb County Community Foundation  
2225 Gateway Drive  
Sycamore, Illinois 60178

Phone: (815) 748-5383

Fax: (815) 748-5873

E-mail: [dekccf@aol.com](mailto:dekccf@aol.com)

Web: [www.locl.net/homes/dccf/](http://www.locl.net/homes/dccf/)

## Dr. Scholl Foundation

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### **Description**

Incorporated in 1947, the Dr. Scholl Foundation grants funds to support private education at all levels – including elementary, secondary, and post secondary schools, colleges and universities, and medical and nursing institutions; general charitable programs including grants to hospitals and programs for children, the developmentally disabled, and senior citizens; and civic, cultural, social welfare, economic, and religious activities.

### **Eligibility**

Dr. Scholl Foundation grants to a range of interests, including the development of housing/shelter and human services directed towards the homeless. Giving is done on a national basis with emphasis on Illinois. No support is given to individuals, for general support, continuing support, operating budgets, deficit financing or for unrestricted purposes.

### **Intended use of funds**

Grants can be used for building/renovation, conferences/seminars, endowments, equipment, fellowships, program development, and research.

### **Amount of money available**

As of year-end 1998, the Dr. Scholl Foundation's giving activities included \$11,190,728 for 432 grants (high: \$500,000; low: \$4,000; average: \$10,000-\$100,000).

### **Contact**

Pamela Scholl, President  
Dr. Scholl Foundation  
11 S. LaSalle Street, Suite 2100  
Chicago, Illinois 60603-1302  
Phone: (312) 782-5210

Web: [www.ats.edu/faculty/spons/D0000188.HTM](http://www.ats.edu/faculty/spons/D0000188.HTM)

## Elgin Financial Foundation

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### **Description**

The Elgin Financial Foundation is a company-sponsored foundation by the Elgin Financial Savings Bank, EFC Bancorp, Inc. The foundation's grants are focused on the support of the arts, community development, education, health care, housing/shelter development, human services, religion, and the development of youth centers and clubs.

### **Eligibility**

The Elgin Financial Foundation's giving is limited to areas in the market of the Elgin Financial Center, Elgin, Illinois. The foundation provides funding for community services and for affordable housing for low- and moderate-income individuals; it also supports activities that promote economic development by financing business or farms, and activities that rentalize or stabilize low- or moderate-income geographies.

### **Intended use of funds**

None specified

### **Amount of money available**

As of year-end 1998, the Elgin Financial Foundation's giving activities included \$274,571 for 41 grants (high: \$37,000; low: \$250).

### **Contact**

Jim Schmidt  
Elgin Financial Foundation  
1695 Larkin Avenue  
Elgin, Illinois 60123  
Phone: (847) 741-3900  
Web: [www.elginfsb.com](http://www.elginfsb.com)

## Evanston Community Foundation

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### **Description**

Established in 1986, the Evanston Community Foundation grants to organizations whose missions focus on the issues of aging, AIDS, arts, children and youth services, crime/violence prevention, delinquency prevention, the economically disadvantaged, early childhood education, health care, homelessness, housing/shelter development, leadership development, and mental health/crisis services. Specific support is given to programs that focus on minorities and immigrants, citizen participation and youth development services.

### **Eligibility**

Giving is limited to Evanston, Illinois. No grants to individuals.

### **Intended use of funds**

Grants will be given to fund continuing support, emergency funds, general/operating support, program development, and as project seed money.

### **Amount of money available**

As of year-end 1998, the Evanston Community Foundation's giving activities included \$62,000 for 12 grants (high: \$11,000; low: \$2,000; average: \$5,500).

### **Contact**

Thomas K. Jager, Administrator  
828 Davis St., Ste. 300  
Evanston, Illinois 60201

Phone: (847) 492-0990  
Fax: (847) 475-2469  
Web: [www.evcommfdn.com](http://www.evcommfdn.com)

## Fannie Mae Foundation

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### ***Description***

The Federal National Mortgage Association established the Fannie Mae Foundation in 1979 as a company-sponsored foundation. The FMF gives primarily to those organizations that promote the expansion of housing opportunities for under-served families and individuals, as well as enhance the quality of life in their neighborhoods and communities.

The foundation's overall grant-making emphasis centers on housing and community development issues. Specifically, the foundation focuses on increasing, maintaining and managing housing production, strengthening organizational and individual capacities including homeownership counseling, disseminating information about homeownership to new audiences, homeownership counseling, and exploring affordable housing issues through policy and research programs. Applications are reviewed in three categories: homeownership, rental, and special needs housing.

### ***Eligibility***

No support will be given to organizations whose fundraising costs are in excess of 20% of their contributed support, churches and sectarian organizations for religious purposes, public or private elementary and secondary schools, or charitable activities undertaken outside of the U.S. No grants to individuals (except for housing related research), or for general or scholarship support of institutions of higher learning or secondary education.

### ***Intended use of funds***

Grants are made to nonprofit organizations and institutions for the following purposes: community development, annual campaigns, building/renovation, capital campaigns, conferences/seminars, employee matching gifts, employee-related scholarships, endowments, equipment, general/operating support, matching/challenge support, program development, program-related investments/loans, research, seed money, and technical assistance.

### ***Amount of money available***

As of year-end 1998, the FMF had distributed \$31,352,218 for 1,377 grants (high: \$1,000,000; low: \$500; average: \$10,000-\$20,000)

### ***Contact***

Fannie Mae Foundation  
North Tower, Ste. 1  
4000 Wisconsin Ave., N.W.  
Washington, DC 20016-2800

Phone: (202) 274-8000

Fax: (202) 274-8100

Web: [www.fanniemaefoundation.org](http://www.fanniemaefoundation.org)

## Field Foundation of Illinois

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### ***Description***

An independent foundation incorporated in 1960, the Field Foundation of Illinois focuses its giving in the areas of health, community welfare, primary and secondary education, cultural activities, conservation, and urban and community affairs.

### ***Eligibility***

Grants are primarily given to Chicago-based organizations. No support will be given for member agencies of community funds, national health agencies, neighborhood health clinics, small cultural groups, or for religious purposes. In addition, no grants are made to support individuals, endowment funds, medical research, conferences, operating support of day care centers, fundraising events, advertising, scholarships, printed materials or video equipment, fellowships, continuing operating support or as loans.

### ***Intended use of funds***

The Field Foundation of Illinois will grant funds for building/renovation, capital campaigns, curriculum development, emergency funds, employee matching gifts, equipment, land acquisition, program development, seed money, and technical assistance.

### ***Amount of money available***

1998 year-end giving activities include \$1,244,543 for 110 grants (high of \$50,000; low of \$2,500).

**Contact**

Handy L. Lindsey, Jr., President  
The Field Foundation of Illinois, Inc  
200 South Wacker Drive, Ste. 2080  
Chicago, Illinois 60606  
Phone: (312) 831-0910

## Grand Victoria Foundation

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**Description**

Established in 1996, the Grand Victoria Foundation supports organizations that provide educational services, housing/shelter, and care for the environment.

**Eligibility**

The Grand Victoria Foundation giving is limited to Illinois -based organizations. No grants to individuals.

**Intended use of funds**

The Grand Victoria Foundation grants funds to support capital campaigns, consulting service fees, land acquisition, matching/challenge support, program development, program evaluation, and technical assistance.

**Amount of funds available**

As of year-end 1999, the Grand Victoria Foundation's giving activities included \$3,380,304 for 98 grants (high: \$415,000; low: \$100)

**Contact**

Nancy Fishman, Executive Director  
Grand Victoria Foundation  
60 S. Grove Ave.  
Elgin, Illinois 60120  
Phone: (847) 289-8575  
Web: [www.grandvictoriafdn.org](http://www.grandvictoriafdn.org)

## Harris Bank Foundation

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**Description**

Incorporated in 1953, the Harris Bank Foundation is a company-sponsored foundation that funds Harris Bancorp's community reinvestment and education reform efforts – including an employee matching gift program, support for cultural activities, neighborhood development, and social services.

Harris Bank is committed to financially assisting community-based organizations in the revitalization of Chicago's neighborhoods. To insure the development of expertise at a local community level, new and renewal grants are given to a broad range of organizations that strengthen local initiatives.

**Eligibility**

Giving is limited to the greater metropolitan Chicago area – except for matching gift program. Support is not given to sectarian or religious organizations, fraternal organizations, political activities, hospitals, national health organizations, private elementary and secondary schools. In addition, the Harris Bank Foundation does not grant to individuals, research, publications, conferences, testimonials, and advertisements.

**Intended use of funds**

The Harris Bank Foundation makes grants to Illinois organizations and institutions that promote the arts, civil rights, race/inter-group relations, community development, education, employment, higher education, human services, public affairs, public policy, and research.

Grant funds can be used for annual campaigns, building/renovation, capital campaigns, continuing support, employee matching gifts, equipment, general/operating support, in-kind gifts, matching/challenge support, program development, program-related investments/loans, seed money, and technical assistance.

***Amount of money available***

As of year-end 1999, the Harris Bank Foundation's giving activities included \$1,037,500 for 108 grants (high: \$100,000; low: \$1,000 average: \$5,000-\$7,500).

***Contact***

Donna Streibich, Treasurer  
Harris Bank Foundation  
P.O. Box 755  
Chicago, IL 60690-0755  
Phone: (312) 461-5834  
Web: [www.harrisbank.com](http://www.harrisbank.com)

## Harry F. and Elaine Chaddick Foundation, Inc.

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***Description***

Established in 1986, the Harry F. and Elaine Chaddick Foundation grants funds to support aging centers/services, arts, cancer research, community development, programs targeting persons with disabilities and the economically disadvantaged, health care and organizations, heart and circulatory diseases, heart and circulatory research, higher education; historic preservation/historical societies, human services, leadership developments, secondary school education, urban/community development, vocational education, and youth development services.

***Eligibility***

Giving is limited to the metropolitan Chicago, Illinois, area. No grants to individuals.

***Intended use of funds***

The Harry F. and Elaine Chaddick Foundation grants funds for building/renovation, conferences/seminars, continuing support, curriculum development, equipment, program development, research, and scholarship funds.

***Amount of money available***

As of year-end 1998, the Harry F. and Elaine Chaddick Foundation's giving activities included \$174,063 for 22 grants (high: \$85,943; low: \$2,000).

***Contact***

Elaine M. Chaddick, President  
Harry F. and Elaine Chaddick Foundation, Inc.  
23 West Madison Street, Suite 200  
Chicago, Illinois 60602-4511

Phone: (312) 704-4100

## Home Depot Environment Grants

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***Description***

The Home Depot awards grants to support a variety of environmentally focused non-profit organizations throughout the communities it serves in the United States and abroad.

***Eligibility***

Assistance is provided to nonprofit organizations that direct efforts toward protecting natural systems.

***Intended use of funds***

The grants program focuses on the following areas: sustainable and green building practices; forestry and ecology; clean-up and recycling; lead poisoning prevention; consumer education.

***Amount of money available***

Variable.

**Contact**

Director, Community Affairs  
The Home Depot  
2455 Paces Ferry Road  
Atlanta, Georgia 30339

Phone: 1 (800) 430-3376  
Web: [www.homedepot.com](http://www.homedepot.com)

## Kresge Foundation Bricks and Mortar Grant

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**Description**

The Kresge Foundation makes grants to build and renovate facilities, challenge private giving, and build institutional capacity among nonprofit organizations. While there is no budget by geographic region, approximately ten percent of the foundation's grant making is in Michigan, much of it in Detroit.

**Eligibility**

Tax-exempt, charitable organizations operating in fields of higher education (awarding baccalaureate and/or graduate degrees), health care and long-term care, human services, science and the environment, arts and humanities, and public affairs are eligible to apply. Governmental agencies are also eligible to apply.

**Intended use of funds**

Funds can be used for the following: construction of facilities; renovation of facilities; purchase of major equipment or an integrated system at a cost of at least \$300,000; purchase of real estate.

**Amount of money available**

Recent grants have ranged between \$150,000 and \$600,000.

**Contact**

The Kresge Foundation  
3215 W. Big Beaver Road  
P.O. Box 3151  
Troy, Michigan 48007-3151

Phone: (248) 643-9630  
Fax: (248) 643-0588  
Web: [www.kresge.org](http://www.kresge.org)

## Mary Heath Foundation

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**Description**

Established in 1994, the Mary Heath Foundation extends sponsors projects in the areas of public health, safety, recreation, and education in Illinois. Fields of interest include: adult/continuing education; aging centers/services; multipurpose arts centers/programs; community and neighborhood development; disasters and fire prevention; education including PTA groups; food banks; housing/shelter development; libraries/library science; park and playground development; residential/custodial care services; and youth development through centers and clubs.

**Eligibility**

Giving is limited to Illinois. No grants will be given to individuals, or for endowments, deficit reduction, fundraising, or political campaigns.

**Intended use of funds**

No restrictions specified.

**Amount of money available**

As of year-end 1998, the Mary Heath Foundation's giving activities included \$166,761 for 24 grants (high: \$15,000; low: \$2,000).

**Contact**

Jimmy J. Rogers, Vice President  
Mary Heath Foundation  
c/o Old National Trust  
P.O. Box 10  
Oblong, IL 62449

Phone: (618) 592-5029

Fax: (618) 592-3135

E-mail: jimmy\_rogers@oldnational.com

## Northern Trust Company Charitable Trust

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**Description**

The Northern Trust Company Charitable Trust was incorporated in 1966 to carry out the Trust's giving activities, with a focus in making grants for: community development, education, health services, cultural activities, social services and welfare agencies, youth agencies and child welfare, and women's organizations.

**Eligibility**

Giving by the Trust is limited to nonprofits based in Cook County, Illinois – with a focus on the Chicago area. No support is given to national organizations, health organizations concentrating efforts in one area of human disease (except through matching gift program), religious organizations whose services are limited to any one sectarian group, fraternal or political groups, or operating support for United Way agencies. Grants are not made to individuals, fellowships, advertising for fundraising benefits, or research.

Priority is given to programs that: 1) address the needs of the homeless and hungry; 2) help the unemployed and underemployed break out of the cycle of public dependency; and 3) provide services to victims of domestic violence.

**Intended use of funds**

The Northern Trust Company Charitable Trust supports annual campaigns, building/renovation, capital campaigns, consulting services, continuing support, emergency funds, employee matching gifts, general/operating support, matching/challenge support, program development, seed money, and technical assistance.

Specific programs that focus on community revitalization should contain a strong self-help component, and should be designed to serve communities that have both limited resources and the potential for meaningful development. Priority is given to programs that: 1) increase or improve housing for low-income people in Chicago; and 2) promote commercial and industrial development that create and sustains jobs in inner-city neighborhoods.

**Amount of money available**

In fiscal year 1998, the Northern Trust Company Charitable Trust giving activities included \$2,238,255 for 325 grants (high: \$162,500; low: \$25; average: \$250 to \$25,000).

**Contact**

Larry Wisnewski Vice President, The Northern Trust Company  
Eleanor Alcantara, Community Coordinator/Matching Gifts Manager  
The Northern Trust Company Charitable Trust  
c/o The Northern Trust Co., Community Affairs Division  
50 S. LaSalle Street  
Chicago, Illinois 60675

Phone: (312) 444-3533

Fax: (312) 444-3108

Web: www.nbtc.com

## Robert R. McCormick Tribune Foundation

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### ***Description***

The trust was established in 1955 and became a foundation in 1990. The Robert R. McCormick Tribune Foundation makes grants to improve the social and economic environment; to encourage a free and responsible discussion of issues affecting the nation; to enhance the effectiveness of American education; and to stimulate responsible citizenship.

Other fields of interest include: child development and education; children/youth, services; civil liberties; community development and the economically disadvantaged; early childhood education; employment; government/public administration; historical activities; homelessness and housing/shelter development; human services; Latin America; media and journalism/publishing; minorities and citizen participation; vocational education; voluntarism promotion; and youth development through citizenship.

### ***Eligibility***

The foundation's focus on communities is designed to combine the efforts of the foundation and program partners to increase local philanthropy, and improve the social and economic conditions of the community. Giving is limited primarily to the metropolitan Chicago area.

### ***Intended use of funds***

Grants will be given to support building/renovation, conferences/seminars, continuing support, curriculum development, employee matching gifts, general/operating support, matching/challenge support, program development, program evaluation, program-related investments/loans, research, seed money, and technical assistance.

### ***Amount of money available***

As of year-end 1998, the Robert R. McCormick Tribune Foundation's giving activities included \$84,501,624 for 1,661 grants (high: \$4,768,233; low: \$1,000).

### ***Contact***

Robert R. McCormick Tribune Foundation  
435 N. Michigan Avenue, Suite 770  
Chicago, Illinois 60611  
Bill Call, Programs Officer  
Phone: (312) 222-5407  
Fax: (312) 222-3523  
E-mail: [rrmtf@tribune.com](mailto:rrmtf@tribune.com)  
Web: [www.rrmtf.org](http://www.rrmtf.org)

## W. P. and H. B. White Foundation

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### ***Description***

Incorporated in 1953, the W.P. and H.B. White Foundation makes grants to Chicago-based organizations that contribute to the future good of the country, primarily in the areas of education, health, and human services, with an emphasis on helping those most in need.

Grants will be made to programs and projects that focus on adult/continuing education; children/youth, services; economically disadvantaged; early childhood development programs and education; health care; higher education; hospitals and housing/shelter development; human services; minorities; secondary school/education; and urban/community development.

### ***Eligibility***

The Foundation's giving is concentrated primarily in the metropolitan Chicago, Illinois, area. No grants will be made to individuals, or for land acquisition, endowment funds, publications, conferences, deficit financing, matching gifts or visual or performing arts; no loans.

### ***Intended use of funds***

Funds can be used for annual campaigns, building/renovation, capital campaigns, continuing support, general/operating support, program development, and scholarship funds.

***Amount of money available***

As of year-end 1999, the W.P. and H.B. White Foundation's total giving activities included \$2,426,250 for 153 Grants (high: \$50,000; low: \$5,000).

***Contact***

Ms. M. Margaret Blandford, Executive Director  
W. P. and H. B. White Foundation  
540 Frontage Road, Suite 3240  
Northfield, Illinois 60093  
Phone: (847) 446-1441

**Contributor:**

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*The following individuals contributed to the research, writing, and proofing of this document.*

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