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Highland Homes and Highland Gardens

Milwaukee, Wisconsin

Project Type: **Mixed Residential**

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PROJECT TYPE

Highland Homes and Highland Gardens (HHHG) are two components of a 160-unit mixed-income U.S. Department of Housing and Urban Development HOPE VI project that replaced an obsolete public housing project in Milwaukee, Wisconsin. Highland Gardens is a 114-unit apartment complex for elderly and disabled people. Highland Homes consists of 46 single-family residences, 26 of which will be public housing rentals; the remaining units are for sale at market rates. All of these houses are modular and were constructed on site. Both components of HHHG incorporate numerous universal design elements and environmentally friendly features. Among the most notable green features are the stormwater facilities, which include a green roof on Highland Gardens.

LOCATION

Inner City

SITE SIZE

9.44 acres/3.83 hectares

LAND USES

Multifamily Rental Housing, Single-Family Detached Residential

KEY FEATURES

- Workforce Housing
- Affordable Housing
- Elderly/Seniors' Housing



- Mixed-Income Housing
- Traditional Neighborhood Development
- Sustainable Development
- Universal Design
- Government Developer
- Urban Regeneration

HIGHLAND HOMES WEB SITE

www.hacm.org/highland%20homes/index.htm



PROJECT ADDRESS

1818 West Juneau
Milwaukee, Wisconsin

DEVELOPER

Milwaukee Housing Authority
Milwaukee, Wisconsin
414-286-5678
www.hacm.org



ARCHITECT

AG Architecture
Wauwatosa, Wisconsin
414-431-3131
www.agarch.com

LANDSCAPE ARCHITECT

Plant Associates, Inc.
New Berlin, Wisconsin
262-679-1881
www.plantassociates.com

GENERAL DESCRIPTION

Highland Homes and Highland Gardens (HHHG) is a 160-unit mixed-income redevelopment in central Milwaukee, one mile (1.6 km) west of downtown. The development replaces a dilapidated 276-unit "superblock" public housing project that contained two high rises and barrack-style rowhouses with a mix of housing for people with a range of incomes. It includes several environmentally friendly features and adheres to principles of new urbanism and universal design.

Highland Homes is the single-family residential component of the project. When completed, it will consist of 46 houses, 26 of which will be public housing rentals reserved for families, and the remainder will be for sale at

market rate. A four-story, 114-unit apartment building for elderly and disabled residents, Highland Gardens is the project's multifamily housing component.

HHHG was developed using low-income housing tax credits and U.S. Department of Housing and Urban Development (HUD) HOPE VI funds. The Milwaukee Housing Authority owns and manages approximately 5,000 public housing units throughout the city. Of these, most are located in 20 specific developments, but 466 units are in sites scattered across the city.

DEVELOPMENT BACKGROUND

Highland Homes and Highland Gardens were developed by the Milwaukee Housing Authority as part of its program to improve and diversify its public housing stock. The goal of the program is to redevelop obsolete and dilapidated high-rise and barrack-style public housing projects that were built as part of urban renewal, which the authority considers to be a flawed model. Beginning in the early 1990s, the city of Milwaukee, the Wisconsin Housing and Economic Development Authority (WHEDA), HUD's HOPE VI program, and the Milwaukee Housing Authority launched an effort to replace aging and dated public housing units with mixed-income communities.

Prior to HHHG, HOPE VI developments in Milwaukee—including Hillside Terrace, Parklawn, and the Townhomes at Carver Park—led to the renovation and/or redevelopment of over 800 housing units. As with many HOPE VI projects around the United States, new urbanist principles were followed for the redevelopments in Milwaukee, including reintroducing the street grid, adding sidewalks, introducing market-rate units to public housing developments, and building schools, parks, and/or other community facilities. New urbanism is a feature of numerous redevelopment projects throughout the city of Milwaukee, which is a legacy of John Norquist, who was mayor from 1988 to 2004 and is now president of the Congress for the New Urbanism.

Under Norquist's leadership, Milwaukee's Department of City Development also began an effort to attract middle-class families back to the central city. This included the redevelopment of vacant and blighted parcels, blocks, and even entire neighborhoods, and introducing single-family, market-rate housing to these areas. Redevelopment continues, and over 15 years' time more than 500 market-rate units have been added to an area within a one-mile (1.6-km) radius of the Highland Homes/Highland Gardens site.

Planning for the HHHG project commenced in 2002 and the 114-unit Highland Gardens opened in late 2004. Development of single-family units at Highland Homes continues on a lot-by-lot basis, and as of spring 2008, 27 of the 46 homes planned for the site are complete.

APPROVALS AND FINANCING

The Milwaukee Housing Authority had an established track record for redevelopment by the time the HHHG project began. As a result, it was well prepared with regard to the approvals and public input process.

The authority believes in including its residents in the decision-making process, particularly for development. It created resident committees for design, architect selection, and building finishes, and a plan for moving existing residents temporarily or permanently during construction. As a result, the input and approvals process went smoothly, and given the authority's track record of using new urbanist principles, the design of HHHG was well received by the community.

The Milwaukee Housing Authority has received five HOPE VI grants since the inception of the federal program during the early 1990s. HHHG was the fourth project in Milwaukee to be awarded a HOPE VI grant. Of the \$27 million total project cost, HOPE VI funds covered nearly \$16 million.

Additional funding included equity from the syndication of \$7.3 million in low-income housing tax credits by WHEDA, a \$1.8 million mortgage from US Bank, \$730,000 in housing authority loans, \$684,000 from the federal HOME grant program, and \$655,000 in Federal Home Loan Bank grants.

Although a market study was not required for the public housing units, the city hired third-party consultants to perform several market studies on the market-rate homes. None of the studies delivered to the housing authority showed support for market-rate housing in the area. However, the city and housing authority had already developed such housing, and although some earlier projects were subsidized by the city, not all were, and the housing authority nonetheless believed there was enough evidence of a market for single-family residences to construct them on the Highland Homes site.

PLANNING AND DEVELOPMENT

Planning for HHHG began in 2002 after the HOPE VI grant was awarded. The land plan includes a three-square-block area bounded on the north by McKinley Avenue, on the west by 20th Street, on the south by Juneau Avenue, and on the east by 17th Street.

The overall site plan is three blocks wide from east to west and one block long from north to south. Rectangular in shape, the site is roughly twice as wide as it is long. The Highland Gardens building is located on the southern portion of the middle block. Highland Homes' single-family houses occupy the rest of the site.

As mentioned earlier, Highland Gardens is intended for elderly and disabled residents of public housing. The structure is *U*-shaped, with two four-story wings forming the sides of the *U* and the main entrance and common areas located in the one-story central section. Flanked by the two wings and the common areas, a courtyard is located in the middle of the *U*.

The main entrance to the building is in the middle of the structure, facing the courtyard and Juneau Avenue to the south. A second entrance, also located in the middle of the building, faces the parking lot to the north. This entrance is used more frequently, due to the position of the parking lot and the drop-off area for shuttle buses and delivery vehicles.

The common area features a multipurpose room, a beauty shop, a library, a meditation room, an exercise room, a computer room, a game room, and a craft room. In addition to these facilities, there is an open common area with seating, plants, and skylights to provide a pleasant meeting space. Wide-open stairwells receive natural light to encourage increased usage by residents and thereby promote a healthier lifestyle.

Most units have one bedroom and are 610 to 700 square feet (56.6 to 65 sq m) in size, although there are eight two-bedroom dwellings that measure 928 square feet (86.2 sq m). Units are finished with mid-grade materials. An architectural characteristic is a small window in each living room that is approximately one square foot, which residents often use to display keepsakes or special possessions. Each residential floor contains a laundry room. Hallways feature another architectural flair: a large porthole window to bring in natural light.

There are 46 single-family lots on the Highland Homes site. Designed and constructed by the housing authority, the houses come in a variety of models, which is intended to maintain some variety in the streetscape. Most single-family dwellings are two-story in design, contain three to five bedrooms, and include a front porch and detached garage facing a rear alley. A few residences are just one story, allowing them to be fully accessible to the physically disabled. All homes are modular and assembled on site, which reduces construction time to as little as 30 days. It also reduces the amount of equipment that is required to be used and stored on site, which decreases theft and vandalism.

The planning and phasing of development on the site were complex. The 54 barrack-style rowhouses, which occupied the western two-thirds of the site and later became two city blocks, were demolished first. The families living there moved to existing or newly built units around the city. That allowed for the Highland Gardens building

to be constructed, as well as the single-family units on the western and central block. Many residents of the high rises moved into the Highland Gardens building when it was complete. However, the towers remained standing so residents from a public housing complex a half-mile away could move in while that structure was torn down and replaced by a newer facility called Cherry Court. Once Cherry Court was complete, the towers were finally demolished and the eastern block was made available for the remaining single-family homes to be built.

NEW URBANISM

Highland Homes and Highland Gardens comprise numerous innovative design and construction features. The site plan and building design incorporate principles of the new urbanism and environmentally friendly features. In addition, to allow for easier access for those with physical disabilities, aspects of universal design were included in the building.

New urbanist features at HHHG include a street grid to match that of the surrounding neighborhood, pedestrian-friendly sidewalks, off-street parking generally hidden from view including alley-loaded garages, front porches on homes, a mix of housing styles and incomes, and architectural standards to help buildings blend in with the area.

As with many public housing sites, Milwaukee had several projects built on what are known as "superblocks," which interrupt the street grid and block pattern of many cities. The HHHG site was one such example, and the primary element of the site plan was to reintroduce the street grid, including a network of public sidewalks to provide connections through and along the edge of the site. Martin Luther King Park is across 17th Street to the east and a Montessori elementary school is also located nearby.

Another new urbanist feature employed at the HHHG site is pedestrian-friendly streetlighting. During the 1990s, the city began replacing cobra-style streetlights with more traditional-looking streetlights. The cobra lights, which were installed in the 1950s and 1960s and have since fallen out of favor aesthetically, generally illuminated only the streets themselves. The new streetlights, which are similar to the original gas and electric lights installed in the city, have two styles. One light is taller and generally located at street corners, and the other is shorter and placed along boulevards in mid-block locations. Unlike the cobra lights, both new lights are intended to better illuminate the street and sidewalk in order to enhance the safety of the pedestrian realm.

UNIVERSAL DESIGN

Because Highland Gardens is intended to house elderly and disabled residents, accessibility is standard in the building design. Working with Milwaukee-based nonprofit IndependenceFirst, the housing authority went further than what was required, however, and utilized universal design principles in both the Highland Gardens building and the single-family homes on site. The mission of the nonprofit organization is to empower persons with disabilities, and the nonprofit has worked with the Milwaukee Housing Authority to create better opportunities for independent living.

Features in the Highland Gardens building that utilize universal design principles and provide for independent living include the following:

- Nothing in units is mounted on a wall above four feet (1.2 m) in height, including light switches, for example. Even the front door has two eyeholes: one for a person standing and one for a person in a wheelchair.
- All doors have levers rather than round knobs.
- Power outlets are higher on the wall than in typical residential units.
- Light switches are paddles rather than switches.
- The height of the counter adjacent to the kitchen is adjustable.
- Cabinets in front of sinks in kitchens and bathrooms are easily removable for tenants in wheelchairs. Four main screws hold them in place, and building management can easily remove or reinstall depending on tenants' needs.

- Bathrooms have a modular bathing area, allowing for conversion from a typical tub and shower fixture to a roll-in shower for a wheelchair.
- Bathroom walls and ceilings have three-quarter-inch (2-cm) plywood backing for installing additional grab bars or lifts as needed.
- All bathrooms have accessible toilets, allowing a side transfer from a wheelchair to the toilet, rather than having to pivot around.
- Circuit-breaker boards in units are at an accessible height.
- Stove knobs are located on the front of the stove rather than the top.
- A power outlet and stove fan switch is mounted on the face of the countertop.
- The laundry rooms on each floor have two doors, allowing wheelchair users to pass through rather than having to turn around.

The dwellings at Highland Homes also have several universal design features. For instance, every residence has a wheelchair ramp from the public sidewalk to the front porch, allowing for access to the first floor at the front of the house. Inside, all first floors have a bedroom and an accessible bathroom, as well as an optional hookup for laundry machines. This enables a person with a physical disability to live there, even if he or she cannot access the second floor. However, a first- and second-floor closet are stacked above one another and are large enough to permit an elevator to be installed, and others are reinforced to allow for a staircase lift to be added. Though not considered fully accessible, the houses are deemed to be “visitable” due to the access and services on the first floor and adaptable to full accessibility because of the provisions for second-floor access. As of spring 2008, two single-family homes have been built with all square footage on the ground floor, and those are considered to be fully accessible. These are the exception, however, as all other single-family residences at Highland Homes are two stories in height.

GREEN FEATURES

Both Highland Gardens and Highland Homes have numerous green features, and are pioneering for the city and the housing authority. This fits with the vision of Mayor Tom Barrett, who strongly endorses sustainability. Since HHHG, the authority has continued to build more green developments.

Highland Gardens’ green features include recycled building materials, a rain garden, occupancy sensors for heating and cooling, and, most notably, a green roof. The east and west wing of the building each contain a 10,000-square-foot (929-sq-m) modular green roof. Sitting atop a built-up roof, which is typical for structures like Highland Gardens, four-foot-by-two-foot (1.2-m-by-0.6-m) trays are arranged side by side. Each tray contains a growing medium that is lighter than soil, in which a combination of grasses and sedum grows. The trays can hold a two-inch (5.08-cm) rain event (two inches in an hour), and the roof overall can hold four inches (10.16 cm) of water or 40 inches (101.6 cm) of snow. At the time of construction, the green roof was the largest in existence on a residential structure in the Midwest. The green roof was added during the planning of the project when the housing authority determined that they had the knowledge to build it and the budget allowed for the additional cost. The authority estimates that the same roof, built today, would cost one-third the price due to the increasing familiarity of green roof design and technology among architects and contractors.

Rainwater on the Highland Gardens site is collected in two rain gardens located in the courtyard. The floor of the multipurpose room is recycled from the recreation center that was once on site. The building also uses recycled steel, masonry, and rebar from structures formerly on the site. Cork flooring—a material that is renewable, nontoxic, and biodegradable—is utilized in some of the common areas. Natural daylighting is used in several common areas to reduce the energy needs. As well, occupancy sensors are installed in several of the separate common rooms, such as the craft and mediation room, and are not heated or cooled as much as the rest of the building unless occupied, thereby providing additional energy savings.

The Highland Homes site is designed so that all rainwater is collected on the site and none of it enters the municipal system. Rainwater that falls on the site flows into a large cistern underneath the Highland Gardens parking lot, where it is held until it can filter into the ground. The houses are equipped with energy-efficient

heating and cooling systems. Furthermore, the modular design of the single-family residences reduces construction waste and saves resources.

MARKETING AND PROGRAMMING

Since opening in late 2004, Highland Gardens has performed very well. As of spring 2008, occupancy has averaged around 92 percent. A variety of events and services at Highland Gardens is available to residents. The facility contains the aforementioned exercise room, meditation room, library, and computer room for use by residents. The computer room utilizes a partnership with the Milwaukee Area Technical College to provide computers and curriculum to train residents to be computer literate. The beauty parlor is open twice a week for residents.

Residents of Highland Gardens are also eligible for additional services. These include case management, in which two different providers work with residents on health issues, financial management, and life skills to help them live as independently as possible. This reduces the need for the housing authority to provide nursing home services. The housing authority also offers additional financial management and workforce development services to assist residents with finding employment and achieving economic self-sufficiency.

As mentioned earlier, 27 of the 46 single-family homes planned for the site have been constructed and occupied. Approximately half of those are for-sale market-rate units, and all have sold as they have been built at prices ranging between \$170,000 and \$210,000. This is an indication of continued demand for entry-level, market-rate single-family residences in the central city.

The marketing of Highland Homes' houses includes a Web site and advertisements in local newspapers such as the *Milwaukee Journal Sentinel*. Municipal employees are required to live within the city limits, so additional advertising targets police officers, firefighters, and teachers. To reduce vandalism and theft and to improve curb appeal and salability, the windows of dwellings under construction are covered with Plexiglas rather than boards.

EXPERIENCE GAINED

HHHG is part of a long-term effort by the city of Milwaukee and its housing authority to redevelop their public housing stock, attract middle-class families back to the central city, promote a green development agenda, and utilize new urbanist principles.

HHHG represents the cumulative experience of numerous redevelopment projects that the housing authority has completed since the early 1990s. Several aspects of planning, new urbanism, support services, universal design, and environmentally friendly features were tested in earlier projects before being put to use or improved upon at HHHG. Some aspects, such as using new urbanist principles to replace superblocks in previous projects, were initially met with suspicion and disapproval by residents. Fortunately for HHHG, many of these issues were ironed out by the time the project was being developed.

Working closely with residents, involving them in committees, allowing them to assist with relocation, and including them in design, planning, financial, and other important decisions reflects the commitment of the housing authority and the city for all redevelopments. This stakeholder involvement strategy has instilled a level of trust that has made successive projects easier to execute.

A very important aspect of the project is the inclusion of residents with a mix of incomes, particularly market-rate for-sale housing at Highland Homes. The city and its housing authority learned from earlier projects that mixing incomes was feasible and that there was indeed demand for market-rate housing. Highland Homes has provided additional proof of this, and the city and housing authority continue the practice.

The various green measures used in the HHHG project were groundbreaking for the city, and marked the start of a growing commitment to environmentally sustainable design. The Milwaukee Housing Authority believes the

Highland Gardens building could have been LEED certified, and if it were to develop the project again today, it would pursue certification.

The green features of the site, including treating all runoff on site, have inspired the city to incorporate additional green measures with successive projects. For example, a subdivision currently under development a half-mile northeast of HHHG, called Josey Heights, is testing permeable pavers for its streets.

HIGHLAND GARDENS PROJECT DATA				
LAND USE INFORMATION				
Site area (acres/hectares): 1.99/0.81 Percentage complete: 100 Gross density (units per acre/hectare): 57.3/140.7 Number of off-street parking spaces: 49				
LAND USE PLAN				
Use	Area (Acres/Hectares)	Percentage of Site		
Buildings	0.86/0.35	43.2		
Streets/surface parking	0.37/0.15	18.6		
Landscaping/open space	0.76/0.31	38.2		
Total	1.99/0.81	100.0		
RESIDENTIAL INFORMATION				
Unit Type	Number of Units	Area (Square Feet/Square Meters)	Percentage Leased	Rental Prices
One-bedroom	106	610-700/56.7-65	91.5	\$610
Two-bedroom	8	928/86.2	100	\$665
DEVELOPMENT COST INFORMATION				
Site Acquisition Cost: \$130,000				
Site Improvement Costs: \$879,823 Excavation/grading: \$400,000 Sewer/water/drainage: \$129,600 Paving/curbs/sidewalks: \$164,140 Landscaping/irrigation: \$80,000 Fees/general conditions: \$106,083				
Construction Costs: \$12,577,725				
Soft Costs: \$1,331,599 Architecture/engineering: \$864,546 Project management: \$57,638 Marketing: \$10,000 Legal/accounting: \$166,515 Taxes/insurance: \$31,000 Title fees: \$10,000 Construction interest and fees: \$191,900				
Total Development Cost: \$14,919,147				
DEVELOPMENT SCHEDULE				
Site purchased: January 2002 Planning started: June 2002 Construction started: September 2003				

Sales/leasing started: November 2004
Project completed: November 2004

HIGHLAND HOMES PROJECT DATA

LAND USE INFORMATION

Site area (acres/hectares): 7.45/3.02
Percentage complete: 59
Gross density (units per acre/hectare): 6.2/15.2
Number of off-street parking spaces: 86

LAND USE PLAN

Use	Area (Acres/Hectares)	Percentage of Site
Buildings	2.07/0.84	27.8
Streets/surface parking	3.99/1.61	53.6
Landscaping/open space	1.39/0.57	18.6
Total	7.45/3.02	100.0

RESIDENTIAL INFORMATION

Unit Type	Number of Units	Area (Square Feet/Square Meters)	Percentage Sold	Sale Prices
Three-bedroom	6	1600/148.6	100	\$170,000
Four-bedroom	15	2,000/185.8	100	\$195,000
Five-bedroom	6	2,200/204.4	100	\$210,000
Unbuilt units*	19	N/A	N/A	N/A

*Size and price points to be determined.

DEVELOPMENT COST INFORMATION

Site Acquisition Cost: \$489,000

Site Improvement Costs: \$1,957,001

Excavation/grading: \$181,950
Sewer/water/drainage: \$487,500
Paving/curbs/sidewalks: \$617,475
Landscaping/irrigation: \$271,000
Fees/general conditions: \$399,076

Construction Costs: \$7,133,886

Soft Costs: \$2,580,378

Architecture/engineering: \$886,000
Project management: \$224,000
Marketing: \$20,000
Legal/accounting: \$185,000
Construction interest and fees: \$190,315
Other: \$1,075,063

Total Development Cost: \$12,160,265

DEVELOPMENT SCHEDULE

Site purchased: January 2002
Planning started: June 2002
Construction started: September 2004
Sales/leasing started: March 2005
Phase I completed: June 2005
Project completed: In progress as of spring 2008

DRIVING DIRECTIONS TO HIGHLAND HOMES AND HIGHLAND GARDENS

From General Mitchell International Airport: Take the airport exit to Interstate 94 heading north/west for one mile (1.6 km), then take Interstate 43/94 north/west toward downtown Milwaukee. At the 94/43/794 interchange in downtown Milwaukee, take Interstate 94 west one mile (1.6 km) to the 22nd Street exit. Make an immediate right on Clybourn Street. Go east to 16th Street. Turn left on 16th, which is a one-way street. After one-quarter mile, 16th shifts one block to the left and becomes 17th Street, which is a two-way street. After two more blocks, turn left on Juneau Avenue. Highland Homes/Highland Gardens will be on the right.

Driving time: 20 minutes in nonpeak traffic.

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This Development Case Study is intended to serve as a resource for subscribers in improving the quality of future projects. Data contained herein were made available by the project's development team and constitute a report on, not an endorsement of, the project by ULI—the Urban Land Institute.

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Highland Homes and Highland Gardens are two components of a 160-unit mixed-income HUD HOPE VI project in Milwaukee, Wisconsin, that was designed to be environmentally friendly and universally accessible to people of all physical abilities.



Courtesy of the Milwaukee Housing Authority

Reserved for elderly and/or disabled people, Highland Gardens is a 114-unit, four-story apartment building comprising one- and two-bedroom units.



Courtesy of the Milwaukee Housing Authority

The single-family housing component of the project, Highland Homes, when completed, will consist of 46 houses, 26 of which will be public housing rentals and the remainder will be for sale at market rate.



Courtesy of the Milwaukee Housing Authority

The project employed a number of green building techniques and incorporated many environmentally friendly features; most notable among these is the extensive stormwater management system, which includes two 10,000-square-foot (1,858-sq-m) green roofs on Highland Gardens.



Courtesy of the Milwaukee Housing Authority

Designed according to the principles of new urbanism, the project's site plan reintroduces a street grid and uses alleys to separate parking.



