



NEW ECOLOGY, INC.

Case Study: 1460 House *Building Affordable Green Housing in an Environmental Justice Community*

Green Highlights:

- Grayfield Rehabilitation
- Integrated Design Charrette
- 53 HERS Score
- High Efficiency Condensing Boilers
- Photovoltaics
- High Efficiency Lighting
- White Roof
- Green Label Carpet
- Low Flow water fixtures
- Low VOC Paints and Adhesives
- Energy Star Appliances

1460 House represents a successful and sustainable vision in the evolution of green affordable housing. New Ecology Inc. worked with Viet-AID and the project team to create a healthy and efficient building design for 43 units of much-needed affordable housing units in the Fields Corner neighborhood of Dorchester, MA. The project site was a previously developed and underutilized grayfield in a dense, environmental justice community. The project includes a mix of uses with first floor commercial and community spaces. The upper three stories were designed as efficient studio and 1 bedroom layouts. The project site is extremely transit oriented, as it is located within 50 meters of the Fields Corner rapid transit station. The site was also purposefully designed to add no new parking.

An integrated design charrette was facilitated by NEI in October 2006, early in the design phase to ensure that green features were considered and added to maximize potential benefits. NEI was responsible for applying for and securing a \$50,000 grant from Green Communities to support greening in the planning and construction phases, and to fund the green charrette. Due to Boston

building regulations the building was designed to achieve LEED Silver certification which meshed well with the project teams' goals to build a healthy and environmentally friendly building for an underserved population.

The residential portion of the project is expected to receive approximately \$52,500 in rebates through the Energy Star Homes Program due to its achievement of a 53 HERS score. The building envelope is highly insulated and air-sealed, with cellulose insulation within the wall cavity and 1 inch of rigid insulation beneath the masonry veneer. The space is heated by high efficiency condensing boilers. The electric load is reduced further by a high efficiency/Energy Star certified lighting scheme, and Energy Star certified appliances. NEI was also able to secure a

\$400,000 grant from the Department of Neighborhood Development to fully fund the installation of a photovoltaic system that is used not only to offset the building's common load, but also to offset a portion of the electric bills of the building's 9 lowest income occupants.

Further green features include low flow shower heads and faucet aerators, pressure assisted 1.1 gpf toilets, low VOC paints, adhesives and sealants, and Green Label certified carpet. A white roof will also be installed to minimize heat transfer through the roof and to mitigate the urban heat island effect. Additionally the site was previously completely impervious and a native landscaped outdoor space is planned as an additional amenity for building residents. Construction is expected to complete in November of 2008.

