A F F O R D A B L E H O U S I N G

ISSUES

SHIMBERG CENTER FOR AFFORDABLE HOUSING

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The Shimberg Center for Affordable Housing

The purpose of this newsletter to re-introduce Shimberg Center for Affordable Housing. The Center was established by the Legislature in 1988 with a broad mandate (See Section 1004.46, F. S.). Since that beginning, the Center has developed and maintains the Florida Housing Data Clearinghouse; it has overseen the construction of four regional Windstorm Damage Mitigation Training & Demonstration Centers; and it has teamed with the Jim Walter Partnership Center at the University of South Florida to work with Tampa and Hillsborough County.

The Shimberg Center is involved in numerous housing research and community development outreach and demonstration programs such as windstorm damage mitigation, alternative building technologies, energy characteristics of new homes in Florida, and a number of projects located in the Tampa metropolitan area.

Florida Housing data Clearinghouse

The Florida Housing Data Clearinghouse is a joint project of the Center and the state of Florida through funding from the Florida Housing Finance Corporation. The Clearinghouse website can be found at:
http://www.flhousingdata.shimberg.ufl.edu/

Some of the highlights of this website include:

Statewide, Regional & Local Profiles (http://www.flhousingdata.shimberg.ufl.edu/a/profiles) or Comparisons (http://www.flhousingdata.shimberg.ufl.edu/comparison_quick_custom.html) - data on demographics, housing market characteristics, affordable housing needs, and housing stock characteristics for cities and counties in Florida.

Data Access Tools (http://www.flhousingdata.shimberg.ufl.edu/DAT_introduction.html) - create customized, user-friendly tables for multiple geographic areas and variables. You can also download the data for offline use.

Tools for Planning (http://www.flhousingdata.shimberg.ufl.edu/TFP_introduction.html) - data to assist in responding to three local planning requirements: the Housing Element of the local comprehensive plan, the HUD Consolidated Plan, the Public Housing Agency Plan.

Assisted Housing Inventory (http://www.flhousingdata.shimberg.ufl.edu/AHI_introduction.html) - five databases that contain property-level information on affordable housing developments throughout the state including the preservation database that provides information on mortgage maturity dates and rent supplement contract expiration dates to assist users in understanding periods of affordability and potential loses to the assisted housing inventory.

Library (http://www.flhousingdata.shimberg.ufl.edu/apps/library.pl) - includes a variety of articles, publications, datasets, ordinances, and presentations pertaining to affordable housing.

Windstorm Damage Mitigation

The design for the Training and Demonstration Centers reflects the desire of the Department of Financial Services and the Shimberg Center to produce a building plan that is on the scale and mass of a house. The logic for this choice is that the training that would take place in the structure would focus on the mitigation of windstorm damage to Florida's housing inventory.

In order to control costs, the Department of Financial Services (previously known as the Department of Insurance) requested that the Shimberg Center locate potential sites for constructing the buildings where: the land would be provided at no cost, the continuing operational costs and maintenance would be provided at no cost, and there would be assurance that the primary use of the facility would remain that of training and demonstration related to windstorm damage mitigation in new and existing homes in Florida. The locations chosen for the centers are in coastal counties dispersed throughout the state. They also are accessible from an interstate highway to facilitate access by attendees that drive to the training classes. The ideal situation would be to have the centers located in such a way that they can be reached from any point in Florida in no more than a two-hour drive.

The Building

The building contains 3,126 square feet. The interior of the one-story building is divided roughly in half between a display area and a training area.

The front entrance leads into the display area housing a reception desk and administrative office. Around the perimeter of the area are rest rooms, a small galley, a maintenance closet, and the mechanical room. The display area contains a small-scale Saferoom that can be installed in existing homes and there is literature describing alternative building systems that will better withstand hurricane force winds. The exterior walls of the buildings are constructed of polystyrene insulating concrete forms with cut-away sections covered with Plexiglas panel to illustrate the internal construction features. Attachment of the roof system to the top of the wall section is also exposed behind a Plexiglas panel.

The training room occupies the remaining half of the building and has a capacity for classes ranging from forty to fifty attendees. The training room is equipped with appropriate audio-visual equipment. Important parts of the training room are a wood-framed wall section, a concrete block wall section, a garage door, and the cut-away sections of the wall and ceiling. The purpose for the wood-framed and concrete block wall sections is to demonstrate the reinforcing and wall-roof connections that are appropriate for the existing housing inventory, most of which is built with either wood framing or concrete block. Similarly, the garage door installed in the exterior wall of the training area is used to demonstrate a reinforcing system that will improve the wind resistance of existing garage doors. The transparent panels covering cut-away sections of the wall and ceiling reveal internal structure, utility placement, and structural connections.

Demonstration Features

Many items used in the construction of the Center serve as demonstrations of wind-resistant products or materials.

The walls are built of an insulating concrete form (ICF) system. Polystyrene blocks with hollow cores are stacked and reinforcing rods are inserted both horizontally and vertically in the hollow cores of the blocks. The cores are then filled with concrete.

The result is an insulated, reinforced concrete wall system that meets wind load and impact resistance requirements of the South Florida Building Code.

The windows in the building are constructed and installed in such a way that they are impact resistant.

Window openings also are equipped with impact resistant shutters. Three different shuttering systems are displayed. The roll-up shutter design operates much like a window shade mounted on the exterior wall surface over the window or recessed in the soffit above the window. The accordion-style shutter design opens and closes horizontally. The third shutter system consists of panel sections that are manually installed in a track mounted above and below the window opening. Although no sliding glass door is installed in the building, the accordion-style shuttering system is one option for glass door protection.

The double entry door installed at the main entrance to the Center is made of impact-resistant glass.

As noted above, installed in the wall of the training room is a garage door. This door serves to demonstrate a reinforcing device for garage doors that meets impact and pressure requirements for winds in excess of 150 miles per hour.

Trusses form the roof structure of the centers and are connected with galvanized metal straps o the wall system to resist uplift. When engineered wood trusses are installed, the roof sheathing is fastened to the top chords of the trusses with conventional connectors as well as a polyurethane spray adhesive. The adhesive also is applied to the seams between the sheathing panels as a means of providing secondary water resistance in the event that the roof covering is damaged or blown away. An alternative to the adhesive foam is to seal the seams between sheathing panels with an adhesive-backed tape.

The shingles covering are fiberglass that have been produced and installed such that they are rated to withstand 110 mile per hour wind.

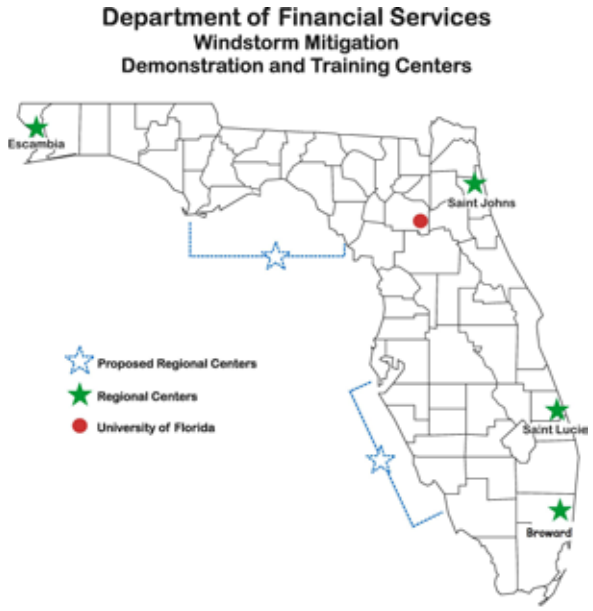
A wind and impact resistant fabric has been installed at the front and rear entry/exit areas to illustrate another product that can protect homes from flying debris while admitting some light into the building - a particularly important consideration for persons that suffer from mild to severe claustrophobia.

Training Models

In addition to the wall sections in the display area and the various elements of the building itself, the Training & Demonstration Centers will be equipped with models that support the training task. As the building was being designed it became evident that some products and materials that influence the structural integrity of the building are either impossible or very difficult to demonstrate once they are installed in place. Accordingly, desktop models are available in the training room that are used by classroom instructors to illustrate proper use of a product or material. Other material that improve the structural performance of the buildings will be added from time to time.

Building Locations

The plan is to construct six of the regional Training and Demonstration Centers across the state. Each facility will serve as a regional training center for the surrounding counties. The locations have been chosen in coastal counties near interstate highways for easy access. Once completed the buildings will be turned over to the county government with the stipulation that the county provide maintenance and operating costs and that the county utilize the facility primarily for demonstrating and teaching about materials and methods for mitigating windstorm damage in new and existing housing. As shown in the following map, existing centers are located in Escambia County, Broward County, St. Johns County, and St. Lucie County.



Visit the Centers on the Internet:

Ft. Pierce, St. Lucie County

http://stlucie.ifas.ufl.edu

Cantonment, Escambia County

http://escambia.ifas.ufl.edu

St. Augustine, St. John's County

http://ifas.ufl.edu

For Additional Information

If you have any questions or comments about the Shimberg Center for Affordable Housing or the Florida Housing Data Clearinghouse we'd like to hear from you. Please contact us by phone at 1-800-259-5705 or (352) 273-1192, or by email at fhdc-comments@shimberg.ufl.edu.

Other Internet web sites that you can use are:

- **http://www.flhousingdata.shimberg.ufl.edu/** for the Florida Housing Data Clearinghouse
- **http://www.shimberg.ufl.edu/** for general information about the Shimberg Center and it staff.

Affordable Housing ISSUES is prepared bi-monthly by the Shimberg Center for Affordable Housing for the purpose of discussing contemporary issues facing affordable housing providers. Reproduction of this newsletter is both permitted and encouraged. Comments or questions regarding the content are welcome and should be addressed to Robert C. Stroh, Director.

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