

Affordable Housing, durability and disaster mitigation, Low-Impact Development, and Resiliency

RALPH LOCKE
KATRINA LOCKE

About Volunteers of America

- “almost 1.3 million people in over 400 communities in 46 states” “each year.”
- “Since 1896,” Volunteers of America has “supported and empowered America's most vulnerable groups, including veterans, at-risk youth, the frail elderly, men and women returning from prison, homeless individuals and families, people with disabilities, and those recovering from addictions.”

Taken from: www.voa.org/about-us



IMPACT REPORT

FLORIDIANS IN NEED



Volunteers of America of Florida has touched the lives of 15,960 Floridians in need the last 5 years. Over 3000 Floridians are engaged annually through affordable housing & supportive services. Families with children, individuals coping with mental illness, homeless Veterans & low income seniors are all included as Floridians served.

BEHAVIORAL HEALTH SERVICES



Mental illness has been cited as one of the largest causes of homelessness in the US.* **Volunteers of America of Florida provides more than 18,000 hours of behavioral health services & coordination each year.** Each program participant receives direct and customized support. With these services participants are able to cope and break the cycle of homelessness.

JOB TRAINING, EDUCATION & EMPLOYMENT (TEE) SERVICES



Employment can play a critical role in housing stability. TEE services help participants overcome barriers to employment and education opportunities. Through the TEE service's hundreds of Floridians are employed each year. **TEE's Homeless Veteran Reiteration Program secured employment for 162 Veterans in 2017.**

DONATIONS & SUPPORTERS



The work of Volunteers of America of Florida is made possible through grants, donations and support. Nothing would be possible without that. **Thanks to donors and corporate partners in 2017 alone \$1,023,96.00 of in kind donations were received & put to good use.**

DEDICATED STAFF



Volunteers of America of Florida staff is the organization's greatest asset. The state-wide team provides life changing services daily. **The team believes so fully in the Mission that the organization has achieved 100% employee giving.**

To learn more or to donate & support this life changing work visit:

www.voaflorida.org



*http://www.nationalhomeless.org/factsheets/Mental_Illness.pdf

**https://web.stanford.edu/class/e297c/poverty_prejudice/soc_sec/hcauses.htm

IMPACT REPORT



Meet Melody & Ethan.
Read their story at
voaflorida.org/success

**OVER \$1 Million in
in-kind donations**
1000 HURRICANE KITS
TO FL & PR



**100%
EMPLOYEE GIVING**

Meet our wonderful Seniors.
Read their story at
voaflorida.org/success



**The Sandra Gal Charity Challenge
raised over \$105,000 in 2016 & 2017 to
benefit our families programs.**



**152 local
outreach
efforts**



Meet Teresa. Read her story
at voaflorida.org/success

Volunteers of America Green Building

Information from Volunteers of America Florida:

- Design is already focused on “Accessibility, Adaptability, Universal Design and Visitability Features so adopting the FGBC Green Home Standards only makes sense.”
- “Our funders such as Florida Housing Finance Corporation and HUD already require us to adopt many of the same green building features that FGBC recommends for both new construction and rehabs.”
- “Having the Green Home Certification provides another set of eyes, beyond our construction manager”

Volunteers of America Green Building

Information from Volunteers of America Florida:

- “energy efficiency and durability of materials is even more important because it saves money in operations (utility costs, landscaping costs, etc) and allows you to serve even more of the most vulnerable population.”
- “Using energy efficient systems, appliances and fixtures as well as drought resistant landscaping can create a substantial cost savings.”
- “very often those in the most need have financial and physical barriers so the incorporation of porches and the proximity to public transportation, public green space (parks) and existing infrastructure like hospitals, grocery stores, and jobs becomes even more important.”

Volunteers of America Green Building

Excerpt about the design approach to the recent Jacksonville Development.

- *“In an effort to improve the housing experience of the formerly homeless, the Volunteers of America has directly asked many of their formerly homeless clients what they would like to see included in future housing developments.”*

Green Housing Features

- H6.1 Controlled Mechanical Ventilation



Durability and Disaster Mitigation

Green housing features

- DM 3.2 Fire Sprinkler System



Green Housing features

- DM5 Termites



For example:

- Building above known flood levels
- Building to withstand wind impacts
- Incorporating LID and green infrastructure
- ----

Durability and Disaster Mitigation

Durable Materials, Exterior Finish Materials

- Finish systems and materials capable of withstanding the local climate moisture and heat impacts.

Low Maintenance Finishes

- Reduces the need for harsh maintenance chemicals and reduces sources of air and water pollution

Durability and Disaster Mitigation

Hurricane - wind, rain, storm surge

- Impact resistant protection of windows, doors, skylights
- Garage doors – Are impact resistant or have impact resistant shutters or screens installed
- Anchoring – All structures are properly anchored
- Secondary water protection installed on roof
- Exterior Structures Properly Anchored
- Adhesive Applied to Roof
- Provides added protection from uplift caused by high winds.

Green Housing features

- DM1.6 Secondary Water Protection installed on roof



Durability and Disaster Mitigation

Hurricane - wind, rain, storm surge

- Install a safe room to provide protection from high winds, hurricanes, tornadoes and flying debris
- Unvented or No Attic reduces the risk of roof lifting during a hurricane
- Attached Garage and Exterior Door Protection or Impact Resistant Type

Durability and Disaster Mitigation

Raised Slab or Pier Foundation

- Finished floor level at least 24" above 100 year flood plain
- Bottom of slab or first floor at least 8" above the top of backfilled dirt, graded for proper drainage
- Garage floor and driveway properly sloped to drain out. Garage floor at least 4" lower than living floor

Durability and Disaster Mitigation

Fire Resistant Design

- Fire resistant exterior wall cladding
e.g. brick, aluminum, stone, fiber-cement etc.
- Fire resistant roof covering or sub-roof
e.g. metal, concrete, fiber-cement, tile
- Fire resistant soffit and vent material
e.g. metal, concrete, fiber cement, and tile.

Fire Sprinkler System

- Fire Sprinkler System covers 100% of living area

Durability and Disaster Mitigation

Installed surge suppression or lightning protection system

- Lightning Protection

 - Can protect home from a direct hit

 - Reduces electrical equipment damage and therefore E Waste

- Surge Protection

 - Can protect electrical equipment damage

Durability and Disaster Mitigation

Mold Prevention

- Wood products have factory or field applied antimicrobial treatment that complies with ASTM D3273

Reduces moisture impacts of wood in the structure.

Durability and Disaster Mitigation

Benefits:

- Safety and protection
- Less maintenance
- Reduced Insurance Premiums
- Cost benefits

Low-Impact Development and Resiliency

Comply with Fortified for Safer Living Standards

- Home earns a certification under the Fortified for Safer Living Standard, a program of the Institute for Home and Business Safety.

Low-Impact Development

CATEGORY 1: PROTECTION

Development of land from its natural state to one that is used by man may be harmful to wildlife, our air and our water. Choosing the most appropriate sites and preserving as much acreage of natural land as possible helps to mitigate some of the negative environmental aspects of development.

P1 Redevelopment

Requirement: Development of land from its natural state to one that is used by man may be harmful to wildlife, our air and our water. Choosing the most appropriate sites and preserving as much acreage of natural land as possible helps to mitigate some of the negative environmental aspects of development. Earn one point for each 10% of site that is redeveloped to accommodate the project.

Points: 0-10

Intent: Minimize harm to the environment by choosing to develop sites other than pasture and forested land.

Submittals: A scaled site plan with a graphic scale depicting the area of the site to be redeveloped, accompanied by area calculations for the requested points.



This mixed-use project helped revitalize a downtown area using a previously developed site.

Development: Union Street Station (Gainesville), Developer: McGurn Investment Company. Photo: Rob Vieira. FSEC.

P5 Conservation Areas

Requirement: Restoring and maintaining land area from a previously developed, significantly disturbed, invaded by exotics or pasture use to its historical natural habitat or other more appropriate habitat relating to current soils, and adjacent habitats is important. Earn one point for each 3% of total buildable acreage that is being preserved or restored to its natural state (required stormwater retention areas and off-site mitigation areas do not count, nor does any land that must be left undeveloped due to other state or federal governmental agencies - see formula). Land being sold for construction purposes or land just temporarily preserved until the next planned phase will not be considered conservation area. Maximum 30 points.

P6 Site Study

Requirement: All too often valuable natural resources are lost because designs are made prior to surveying the natural features of the land. Designs should be made to preserve the most valuable resources, and an inventory of the site must first be made to determine those natural features. Top soil and natural habitats should be maintained to the maximum extent possible.



This esplanade is a featured part of the development due to planning around surveyed trees.

Development: Town of Tioga (Gainesville), Developer: Dubros Corporation, Photo: Vieira.

Earn one point for providing a tree & vegetation survey of the site. Earn one point for providing a topographic survey of the site. Earn one point for providing a soil survey of the site. Earn one point for providing a wildlife/habitat study. All surveys and studies must be performed prior to design of the project and must be accompanied by a narrative describing how the data influenced design and implementation of the development. Indicate how the site plan preserves the most significant resources from each study. Tree surveys must include all trees that are equal or greater than 4" dbh and any strands of smaller caliper trees. Earn two (2) bonus points if tree survey is signed off by a certified arborist, horticulturist, botanist, ecologist, forester, regarding correct identity of the trees. Site must preserve at least 12" of caliper per acre or 500' caliper total to claim tree survey credit.



Low-Impact Development

P8 **Specific Wildlife**

Requirement: Several different state listed species may occur on the property and require some mitigation. Also, some non-listed wildlife species on or near the property may be of importance to the community and county. Credits will be given to a developer who conserves a particular species on site. In many instances, an on-site conservation strategy (that includes management and habitat preservation) is the best strategy for a particular wildlife species. For example, with gopher tortoises, the developer can bury them, transport them to another site, provide on-site habitat and management, or in rare cases pay money to a mitigation bank. Kestrels nest trees might be preserved in situ or alternative artificial nesting structures may be used in replacement. By far, the best solution is to provide habitat and management where the species are found to occur.

In addition, many developments are situated next to critical wildlife habitat and management plans need to be implemented that protect these habitats. Credits will be given if a management plan helps protect nearby wildlife. For example, a developer retains a large buffer between homes where gopher tortoises reside or where a kestrel nest tree exists, or a breeding colony of water birds might be further protected by a large buffer. In all these examples a management plan that incorporates through education and deed restrictions protection of these species in situ, and which restricts pets from the managed areas will be the best environmental solution for development to proceed. The management plan should include some type of monitoring – whether by the homeowners or by a consultant.

Earn one point for preserving a specific species on site. Earn one additional point for submitting a management plan that includes monitoring of species.

P9 **Wildlife Corridors**

Requirement: Many species of wildlife need a larger area than that bordering a property. In some cases species travel long distances in search of food, shelter or water. Large areas are needed and restricting those areas too tightly can lead to excessive predator advantage. Credit is given for a combination of average and minimum corridor widths. Corridors should follow natural features/habitats that contribute to the value of the corridor and are best if they include dry and wet areas.

Ponds, berms and landscape tracts can be used as part of the corridor widths, however they must be planted with native species (for ponds plant the littoral shelves/slopes to a depth of 3 feet).

Earn one point for preserving 20' minimum, 50' average corridor. Earn two points for 50' minimum, 250' wide corridor. Earn three points for 75' minimum, 500' average corridor. Earn one point if corridor crosses no roadways or provides wildlife overpass or underpass. All crossing, if crossing roadway, must have appropriate signage and speed limits to assure protection of wildlife.

P10 **Upland Buffers**

Requirement: Upland habitats surrounding wetlands are important for biodiversity and the overall health of the wetlands. Earn one point for 15' minimum, 33' wide wetland buffer around all wetlands. Earn two points for 25' minimum, 50' average buffer around all wetlands. Earn three points for providing 50' minimum buffer around all wetlands. If a spreader swales is proposed, it shall not be maintained by the addition of pesticides or fertilizers. There must be a total of three acres or 3% of the development (whichever is less) of wetland preserved to receive credit. For a development with more than one preserved wetland area, points may be scaled based on the percentage of wetlands that have an upland buffer.

Low-Impact Development

P11

Preserve Recharge

Requirement: Water recharge of the aquifer generally occurs from some of the highest, sandier areas. Earn one point for each 5% of site acreage preserved for a prime aquifer recharge area. Maximum three points.

Prime aquifer recharge areas means those areas which are not class I or secondary aquifer recharge areas and which have the following characteristics:

- a. Highly permeable soils allowing rapid infiltration as documented by geotechnical infiltration testing; and
- b. Have a potentiometric surface greater than 5 feet below the high water table as documented by topography/Water Management District mapping of the potentiometric surface of the designated area or other District map showing the designated area as potential a high recharge location. There must be a minimum of three acres to receive any points.

Low-Impact Development

P13 **Neighbors Stormwater**

Requirement: If the development is overcoming a deficit in stormwater treatment that previously existed in the vicinity of the development upstream of the development, by accepting and treating such drainage onsite, then it is providing a much needed service beyond the typical minimum requirement. Similarly, if a development is exceeding the treatment requirements of current stormwater regulations then the site is further reducing what would be the normally anticipated stormwater pollutant load and there is a substantial environmental benefit. Earn one point for each 10% beyond the minimum required for the development that the system is managing. Cannot include offsite improvements required as part of development (turn lanes, roadway widening, etc.). Maximum three points.

P14 **LID**

Requirement: Site plan shall demonstrate integrated management practices to reduce stormwater runoff and develop strategies for infiltration treatment and attenuation on a micro scale, stormwater detention/retention facilities shall be designed to complement these practices, be integrated with the site aesthetic/recreational features, and not to be the sole mitigation approach as an end-of-pipe treatment. Low Impact Development (LID) techniques such as ecologically enhanced stormwater basins, rain gardens, spreader swales, enlarged littoral shelves, collection or local treatment of roof runoff, increased residence time, increased time of concentration, and other methods can achieve this objective. Earn one point for a 10% improvement in water quality or 10%; earn two points for a 25% improvement in water quality; earn three points for a 50% improvement in water quality. No points can be claimed here that are part of the calculation in P-13 Maximum of three points. View the LID Appendix to this standard for supplying a LID device application throughout the development and include performance monitoring on its treatment efficiency documentation of performance based on applicable research/literature.







Low-Impact Development

P15

Multi-Use SWMA

Requirement: By using stormwater retention designed to be dry some of the time, the land may serve dual purposes: such as a neighborhood ball field or park during much of the year, particularly where infiltration rates allow treatment volume freeboard recovery. Much of Florida's dry season occurs during cooler weather making outdoor activity pleasant. During the summer rainy season (for most of the state) temperatures are hotter and outdoor activity may not be occurring as much. By using the area for two purposes land is conserved providing environmental benefit. Earn one point for each 33% of stormwater management area designed for dual use. Maximum three points credit.



This serves as a potential neighborhood field due to having multiple grades (lowest area to lower left). During peak storms the field will be wet.

Development: Town of Tioga, Developer: Dibros, Photo: Vieira

Resiliency discussion

For More Information

Florida Green Building Coalition

Email: info@floridagreenbuilding.org

Visit: www.FloridaGreenBuilding.org