



FLORIDA GREEN
BUILDING COALITION

Setting the Standards for Green Building in Florida

Florida Green Development Certification Standard



REFERENCE GUIDE

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FLORIDA GREEN DEVELOPMENT STANDARD

REFERENCE GUIDE

VERSION 7, REVISED 1/6/11
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This reference guide is intended to serve two purposes: to provide information on green development practices and to provide details on how to earn points for complying with the Florida Green Development Designation Standard.

The goal of the FGBC Green Development Standard is to recognize those developers who have *far exceeded* the minimum Florida law requirements. The standard requires substantial environmental stewardship beyond typical practice, yet it allows for developers to choose how to meet the standard from a variety of methods. No one development will be able to get every item – there will be some that do not apply to every site or every type of development. However, there are enough items to choose from that every developer, through planning and dedication to green development, should be able to comply with the standard. This level of planning can only be done through knowledge of the site as well as applying best management practices regarding wildlife preservation, stormwater, transportation, landscaping, and utilities.

In some instances the developer may be required, by local laws, to meet criteria for which FGBC gives credit. In other instances it may prove that the developer would have to fight to change or obtain waivers from local ordinances in order to meet the FGBC criteria. Again, one need not obtain every point, and every point may not be possible for your given development. The reference guide includes photos with examples of developments that have accomplished the requirement for earning points towards the green designation.

This standard was developed by the Florida Green Development Working Committee of the Florida Green Building Coalition. The committee had active participation from one or more architects, builders, consultants, developers, ecologists, educators, energy raters, government agencies, landscape architects, planners, Realtors, researchers, and water-management district personnel. The Coalition board must approve the standard. The board, according to the bylaws, must consist of various industry and public groups.

There are many other documents that you may be interested in reviewing. Most of these can be found at FloridaGreenBuilding.org:

- The FGBC green land development standard and application form
- The FGBC green home development standard, application and reference guide
- The FGBC green commercial and municipality standard documents, application and reference guide
- A form for requesting a modification to a green standard
- Bylaws and membership information for the Florida Green Building Coalition

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This document was developed by volunteers in order that the state could have a green development standard. The following FGBC members formed the core group who attended almost every meeting in creating the first version of this standard:

- ◆ Allen Garner, UF -Cooperative Extension Service, Palmetto, committee chair
- ◆ Patti Glenn, GreenSmart™ Newberry
- ◆ Bill Lites, Glatting Jackson Kercher Anglin, Inc. Orlando
- ◆ Rob Vieira, Florida Solar Energy Center, Cocoa
- ◆ Bill Watkins, St. Johns River Water Management District, Palatka.



FGBC Committee at Willow Walk. Shown front row: Allen Garner, Bill Lites, Patti Glenn, middle row: Charley Fahien Bill Watkins, John Curtis, back row: Ken Fonorow.
Photo: Rob Vieira

Thanks to these volunteers and their organizations as well as to the many others who made specific recommendations for improving the standard (any omissions are unintentional):

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- Ed Miatta, Abacoa Partnership for Community, Jupiter
- John Rinehart, Oakland Park, Oakland/Winter Garden
- Trey Starkey, Longleaf, New Port Richey
- Greg Vine, Sorento Cay, Venice

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CATEGORY 1: PROTECT ECOSYSTEMS AND CONSERVE NATURAL RESOURCES

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.

P-1 Redevelop an already developed site (0 - 40 pts).

Some sites have been developed. Often, harm to the environment is minimized by choosing such sites instead of pasture and forested land to develop.

Earn three points for each 10% of the development (by land area) that is undergoing redevelopment from some other form of built environment. Earn one bonus point for each 10% of the site that is redeveloped from being a designated brownfield site.

Submittal: 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.

P-2 Conservation areas (0-60 pts). Minimum of 10 points required for receiving credit in P-4, P-5.

Preserving land in a natural state allows for natural ecosystems to sustain their existence, particularly if large areas remain intact. 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 also important. Earn 1 point for each 1% of total buildable acreage that is being preserved in 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 credit is 60 points.

The formula for computing preserved land is as follows:

$$\frac{\text{Non-state required land preserved (acres)}}{\text{Total development size - state required land preserved (acres)}} \times 100$$

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For example, if a development site was 1000 acres and 150 acres were designated wetlands, 180 acres water retention, 400 acres buildings and roads, 70 acres recreational open space, and 200 acres were preserved lands not mandated for protection, the formula would be:

$$\frac{200 \text{ acres}}{1000 \text{ acres} - 150 \text{ acres}} \times 100 = \frac{200}{850} \times 100 = 0.235 \times 100 = 23.5\%$$

Note that recreational open space and water retention areas are not included in the preserved areas.

Submittal: Include copies of any environmental permits, comp plan category, covenants, deed restrictions and marketing material that provide assurances that the land will be kept as conservation area over time. Provide a scaled site plan with a graphic scale that depicts area of site to be preserved with area calculations supporting the requested points.

Reference: Water Star

P-3 Develop management plan for preserved/conserved, created or restored wetlands/uplands (2 or 16 pts) - required for receiving credit for P-2 ⇒ P-8.

The management plan must address how:

- exotic species will be removed and kept from being reestablished;
- prescribed burns or other management activities which replicate the appropriate ecosystem will be conducted;
- significant wildlife species will be protected;
- people will be educated to respect wildlife, and as appropriate, for water quality treatment efficiency;
- interference from domestic animals will be addressed;
- the site will be monitored for detrimental changes;
- the maintenance will be perpetually funded;
- appropriate persons (volunteers, contractors, etc) will be selected to perform the maintenance.

Earn the 16 points for a well thought out preservation/conservation management plan in conjunction with meeting 10% minimum buildable land set aside in P-2. Earn just 2 points for the management plan with less than 10% set aside.

Submittal: Provide a scaled site plan with graphic scale that depicts the area of the site to be preserved/restored, area calculations supporting the points requested, and a written management plan.

Reference: Water Star

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P-4 Provide a vegetation & tree, topographical, soil, and wildlife/habitat study prior to design (0-18 pts).

Prerequisites: P-3 and 10% set aside on P-2

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. Earn three points for each of these (tree, topo, soil, wildlife) surveys submitted; earn one additional point for a wetland survey (if wetlands are present); earn an additional three (3) points for submitting all of them. 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.



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.*

Submission: The complete tree, topographical, soil, wetland (if any), *and* wildlife study with habitat designations; a site plan showing how the design tried to preserve the most significant resources. Indicate measures taken for tree preservation

P-5 Preserve the most valuable spaces for biodiversity (0 - 8 pts).

Prerequisites: P-3 and 10% set aside on P-2.

Biodiversity simply refers to the number of individual and number of species within a given area. A highly diverse area would have numbers of many more native species than a less diverse area. Species are included from a number of different taxa, including plants (e.g., trees, shrubs, and forbs) and animals (e.g., insects, mammals, birds, amphibians and reptiles, and fish). A number of different natural community types could be found on a property and certain areas may be of higher quality than others. Community types include a variety of terrestrial communities (e.g., xeric uplands and mesic flatlands) and wetland communities (e.g., swamps and marshes). Descriptions of a natural community will follow Florida Land Use Cover and Forms Classification System. Because of historical factors, certain parcels in a development (for a given community type) may be of high quality with many representative endemic species and little exotic vegetation. From habitat/wildlife surveys, land portions for a given community type should be ranked from 1 (poor quality) to 5 (high quality) based on biodiversity. At least 10% of the site must be preserved to receive any credit and a management plan must be submitted with this credit. Earn 1 pts for community type 2, 3 pts for type 3, 5 pts for type 4 and 8 pts for type 5.

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Issues to consider for whether an area on the development is considered to be of high quality: 1) Is the natural community type rare within the county and is the conservation status fairly high according to state rankings? (see <http://www.fnai.org/gisdata.cfm>), 2) Is the number of endemic species high and disturbance low?, and 3) Is the parcel situated next to existing natural habitat?

Submittal: Wildlife survey, management plan and explanation as to why the credit is deserved showing that the highest diversity communities available on the property were preserved.

P-6: On Site Conservation Plan for a Specific Wildlife Species (15 points)

Prerequisite: P-3

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.

Submittal: Wildlife surveys, management plan includes proposed management activities, monitoring of the species and habitat, and explanation of why the credit is deserved..

P-7 Maintain or provide wildlife corridors (0-18 points).

Prerequisite: P-3

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. By not allowing a natural way for animals to get to where they need to go, the species may not survive in that area. (even though some land is preserved). 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.

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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 2 pts for a wildlife corridor that is at least 20 feet wide *minimum, averaging 50-foot wide*, that connects two or more wildlife habitat areas within the project, or connects to wildlife habitat outside of the project. Each area being connected must be ≥ 2500 square feet in area. Earn 5 points if 50 foot wide *minimum* averaging 250-feet, 10 pts. if 75-foot wide *minimum* averaging 500 feet, 16 pts. if 100-foot wide or larger *minimum* averaging 1000 feet. Earn two bonus points for designing corridor to not go across any roads **or** which provide sub-roadway wildlife crossings

Submittal: Dimensioned site plan showing onsite and offsite corridors; a management plan that includes habitat maintenance of the corridor; Covenants, deed restrictions and marketing material that provide assurances that the corridor(s) will be maintained over time, and explanation of why the credit is deserved.

References: Army Core of Engineers WRAP; Lake County Development Guideline Draft

P-8 Preserve upland buffers to enhance preserved wetlands (12 pts).

Prerequisite: P- 3

Upland habitats surrounding wetlands are important for biodiversity and the overall health of the wetlands. Earn two points if there is a thirty-three (33) foot average/fifteen-foot minimum buffer preserved around all wetlands within the developed project, eight points if there is a fifty (50) foot minimum buffer. Obtain an additional four points if the quality of the existing buffer is improved by planting/reforesting non-native areas with native species; or, if there is a LID discharge spreader swale installed on the upslope side of the buffer to capture pretreated water and discharge it via sheet flow through the upland buffer. 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. For example, if there are four wetland areas and ne has a 50-foot minimum upland buffer and two have 33-foot average/fifteen foot minimums and one has the minimum regulatory buffer, then $0.25 \times 8 + .50 \times .2 + .25 \times 0 = 3$ points This category can be considered regardless of obtaining 10% set-aside under P-2.

Submittal: Dimensioned site plan based on wetland survey showing buffers, planting plan and spreader swale (as appropriate); Covenants, deed restrictions and marketing material that provide assurances that the buffers will be maintained over time, and explanation and calculation of why the credit is deserved.

Reference: Water Star

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P-9 Preserve or provide ground water recharge areas (12 pts).

Water recharge of the aquifer generally occurs from some of the highest, sandier areas. Preserving these areas is important to preserving the future quantity and quality of water. Earn one point for each 1% acreage that is preserved for a prime aquifer recharge area that meets the following requirements. Maximum 12 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 3 acres to receive any points.

Submittal: Show water recharge area on site plan with infiltration testing location(s); Provide infiltration test results, provide Water Management District documentation, and describe how protection of the designated area will maintain or enhance the recharge.

P-10 Reuse or Recycle Materials on Site (0 -10 pts).

Trees could be used for lumber or mulch for public areas or for future construction activities. Any existing buildings could have valuable resources recycled to the construction industry. Earn one point for each 10% of possible total “material” being reused. No points for mulching any invasive species unless via a process that assures no seed survival.

Submittal: Indicate materials being reused and upon what data the % calculation was based..

P-11 Treating stormwater from neighboring sites or in pre-existing developments (0-8 pts).

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 stormwater system is handling. Maximum of 8 points.

Submittal: A site plan showing the location of proposed improvements that would satisfy this objective; Stormwater calculations by a registered P.E. documenting the % exceeding regulations.

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P-12 Low Impact Development Techniques 0 – 8 pts

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 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 each 10% improvement in water quality beyond what was achieved without the LIDs. No points can be claimed here that are part of the calculation in P-11. Maximum of 8 points. View the LID Appendix to this standard for supplying a LID device application throughout the development and include performance monitoring on it's treatment efficiency documentation of performance based on applicable research/literature.

Submittal: LID locations and types, monitoring program (if applicable) and water management district or local government rules or correspondence indicating the minimum requirement that is being exceeded. Stormwater calculations by a registered P.E. documenting the % exceeding regulations.

P-13 Conserve land via stormwater areas that are dry most of the time after a stormwater event and can serve as other amenities (0-10 pts).

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 10% of stormwater area designed for dual land use. Earn two bonus points if a dual use area that preserves existing vegetation or utilizes the planting of new native vegetation. Maximum ten points credit.

Submittal: Dimensioned, scaled site plan with a graphic scale depicting the size and location of dual use areas, also provide area calculations and indicate the expected period of dryness for each stormwater retention area.



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

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P-14 Non-listed environmental benefits (0 - 5pts)

Provide description of any significant environmental benefits achieved, beyond typical new development, that are not covered in the above categories. The points attributed should be computed, if possible, relative to environmental benefit achieved by other measures. Note, that one will only receive discretionary points for projected environmental results; not for meeting existing code in a creative manner: or for money spent to alter some existing land feature, or other troubles one went through to obtain an already listed green feature.

Submittal: Detailed description and projected environmental benefit.

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CATEGORY 2: CIRCULATION

About 35% of the state’s primary energy use goes towards transportation, and motor vehicles emit several pollutants that EPA classifies as known or probable human carcinogens. EPA estimates that mobile (car, truck, and bus) sources of air toxics account for as much as half of all cancers attributed to outdoor sources of air toxics. Surfaces for transportation and parking of vehicles decreases pervious surface area and leads to runoff that has to be controlled to prevent pollution to our water bodies. Solutions include locating residences where there are schools, shopping and office areas nearby; providing adequate alternatives to the private automobile, and minimizing road areas. Green road design should assure close access to destinations, pedestrian infrastructure, building orientation, street trees, minimal street lighting and green road construction materials.



C-1 Pedestrian structure (0- 12 pts)

Earn 2 pts. if $\geq 4'$ sidewalk is continuous on one-side of each street; earn 3 pts if pervious nature trail is used instead of traditional material. Alternatively, earn 2 points in cases of 1 acre or more average lot size if a non durable surface is used in lieu of a paved sidewalk. Earn 6 pts if $\geq 4'$ minimum width continuous sidewalk is used on both sides of street in neighborhoods with average lot sizes of less than 1 acre. Sidewalks must be installed at the time streets are built and extend along all roads, including those past conservation areas, water retention areas and non-residential property so as to make a continuous transportation system for bicyclists, wheelchair pedestrians and others. Earn one bonus point if 70% of the sidewalks will be shaded by street trees or other design considerations. Bonus points available for **additional** miles of pedestrian/bicycling trails available to all property owners in development as a percentage of road miles in development:

| | |
|------------|-------|
| 1-14.9% | 1 pt |
| 15 - 29.9% | 2 pts |
| 30 - 39.9% | 3 pts |
| 40 - 49.9% | 4 pts |
| 50 - 59.9 | 5 pts |
| ≥ 60 | 6 pts |



Trails midblock provided additional alternatives for pedestrians.
Development: Seaside, Developer: Robert Davis, Photo: Vieira

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Example: Suppose a development has 4' sidewalks along both sides of each street, and has 1.6 miles of streets. Suppose they also have preserved an old Florida settler walking dirt trail that extends for 0.8 miles within their development. The percentage of additional pedestrian/bicycling trails would be $100 \times (0.8)/1.6 = 50\%$. They would earn 5 bonus points to add to their 6 basic sidewalk points for a total of 11 points.

Submittal: Dimensioned, scaled site plan with a graphic scale highlighting the sidewalks, pathways and trails. For the bonus points of additional miles of trails, specify their location and include linear footage calculations for each trail requesting credit and linear footage or miles of all roadways.

C-2 Road design (0-6pts)

Does not exceed “street design guidelines for healthy neighborhoods” for road widths based on volume or uses published TND standards (3 pts) and accepted transportation engineering practice. If the development does not contain any *full pavement* cul-de-sacs earn one additional point (1pt). If road design self-enforces speed limits of 25 mph (or under) in residential areas through short narrow roads, many stops, or other traffic calming methods add (2 pts). Wide radius curves and typical width roads will generally not qualify for these traffic calming points.

*Healthy Neighborhood Street Design**

| Street Type | Max. Width | Max. Design Speed | Max. Corner Radius | Max. Ctrline Radius | Curb | Median | Max. Street Lgth | Veh. Volume | Walk Way | Bike Lanes | Trees | 2-Way Traffic | Parking |
|--------------|------------|-------------------|--------------------|---------------------|--------|--------|------------------|-------------|----------|------------|-------|---------------|---------|
| Trail | 8-14' | 20 mph | n/a | 95' | no | n/a | n/a | n/a | n/a | n/a | yes | yes | no |
| Alley | 10-12' | 10 mph | 15' | 50' | no | n/a | 400' | 200 | no | no | no | yes | no |
| Lane | 16-18' | 20 mph | 15' | 90' | option | no | 600' | 200 | both | no | yes | option | 1 side |
| Street Sides | 26' | 20 mph | 15' | 90'-120' | option | no | 1,320' | 600 | both | no | yes | yes | 2 |
| Avenue | varies | 30 mph | 15-25' | 250' | yes | option | n/a | 3-2K | both | yes | yes | yes | option |
| Main Street | varies | 15-25 mph | 15-25' | 600' | yes | option | 2,600' | 3-1K | both | option | yes | yes | option |
| Boulevard | varies | 30-35 mph | 25' | 500' | yes | yes | n/a | 20-40K | both | yes | yes | yes | option |
| Parkway | varies | 45+ mph | 25' | 1,000'+ | no | yes | n/a | 20-60K | no | trails | yes | yes | no |

Notes:

- 1) Ideal speeds and width are given.
- 2) Flexibility is permitted, but design speeds must be adhered to.
- 3) These guidelines are not recommended for Conventional Neighborhood Development.
- 4) Traditional Neighborhood design layout, a strict adherence to TND principles of mixed use, walking and bicycling emphasis, a central place, trip containment, open-street parking, trails, traffic volumes and speeds are all linked.
- 5) Multiple entries aid fire response times.

* *Street Design Guidelines for Healthy Neighborhoods*, by Dan Burden, The Center for Livable Communities, January 1999.

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References:

Dan Burden, et. al., “Street Design Guidelines for Healthy Neighborhoods,” Center for Livable Communities, Sacramento, CA (1-800-290-8202), 1999.

ITE Transportation Planning Council Committee 5P-8, “Traditional Neighborhood Development Street Design Guidelines, Washington D.C., Publication Number RP-027, (1-202-554-8050), 1997.

Submittal: Dimensioned site plan depicting the size and location of roads (signed and sealed by a P.E.) and describing how each meets the requirements of this category.



Narrow, brick street and trees ensure slow speeds beyond relying on posted limits.
Development: Seaside, Developer: Davis, Photo: Vieira

C-3 Street trees (0-6 pts)

Street trees make more of a “room” out of the street and help with traffic calming as well as provide great relief from Florida’s hot sun when walking, bicycling, or getting into a parked car. Trees help clean the air and by shading the street can help reduce the “heat island” effect that increases the temperature of the surrounding area. They can reduce air conditioning bills by reducing the temperature and sometimes through direct shading of nearby residences.



Plant native shade trees along streets.
Development: Longleaf, Developer: Frank and Trey Starkey, Photo: Vieira

Earn the 2 points by planting all streets with native shade trees such that: (1) Ample room is provided for their survival as recommended by the Architectural Graphic Standards 10th edition; and that (2) at reasonably expected maturity, the trees will provide canopy coverage of 70% or more of the required portion of the Right of Way (ROW)” for all streets. Earn 4 points for 80% or more of required portion of the ROW coverage, 6 points for 90% or more of required portion of the ROW coverage. Trees should not interfere with overhead utilities, which may preclude the ability to earn these points. The “required portion of the ROW” consists of the first 8” of roadway pavement and a greater than or equal distance adjacent to the pavement on each side.

Submittal: site plan showing tree species and locations.

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C-4 Street lights (0-10 pts)

Lighting accounts for 20% to 25% of all electricity consumed in the United States. Lighting uses energy, has the potential to alter wildlife habits and reduces the visibility of stars and sky.

Earn 4 points for installing bulbs that produce ≥ 95 lumens per watt on $\geq 80\%$ or more of street lights. Earn 2 points if $\geq 80\%$ of lights are motion activated, 2 bonus point if $\geq 80\%$ or more of lights are such that they are full cut-off luminaires if the bulb(s) in the fixture exceed 26W (Dark-sky friendly specs). Two bonus points if $\geq 80\%$ of lights are solar-powered.

Receive 5 pts for no street lights in development if: the development includes road building efforts and two or more intersections and property owners are not forced to have exterior lighting operating

References:

Primer on lighting:

<http://www1.eere.energy.gov/buildings/ssl/factsheets.html>

Type of lamps and their lumens per watt: <http://www.darksky.org/mc/page.do?sitePageId=118983>

Government efforts to reduce lighting:

http://www.energy.ca.gov/efficiency/lighting/outdoor_reduction.html

Street lighting study (from New Zealand):

<http://www1.eere.energy.gov/buildings/ssl/>

International Dark-Sky Association: <http://www.darksky.org/>

Submittal: Street light specifications to include lumens per Watt, control system, and dark-sky friendly specifications.



Luminaires should light below, not above.

*Development: Town of Tioga,
Developer: Dubros, Photo: Vieira*

C-5 Parking (0-7 pts)



This parking was planned around the trees. . . to the point of curbing individual parking spots.

Development: La Cita (Titusville), Developer: EKS, Photo: Vieira

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Earn 1 pt. if ordinance requires bicycle parking at all community facilities and businesses to be located closer than all non-handicap parking, 2 pts if shared parking is incorporated in plan between residents, business, religious institutions, up to 5 pts for requiring incorporation of preserved or planted shade trees in parking areas (1 pt for 1 tree per 4 parking spots, 2 pts for 1 tree per 2 parking spots, 4 pts for 1 tree per 1 parking spot, 5 pts for 2 trees per 1 parking spot).

Trees must be planted in areas large enough to support the trees for their lifetime in accordance with space requirements given in the Architectural Graphic Standards, 10th edition, or signed off by a certified arborist.

Submittal: Site plan, description of why developer should receive points for shared parking, written documentation for the bicycle parking point, written documentation for the tree provision.

C-6 Connections (0-6 pts)

Multiple connections usually result in fewer vehicle miles traveled saving energy and pollution.

Earn four points by having at least four different connections to off site, surrounding road(s) and pedestrian network(s). The connections must be to more than one roadway (that is, four connections to the same arterial does not provide the purpose of this, which is to allow traffic to flow freely in all directions, thus reducing distances traveled to destinations).

Earn two bonus points if all connections have public access - minimum of two connections to different roadways (no gated entries).

Submittal: Site plan showing locations of connections; if connections will occur in future phases show connection to future phase and the planned connection from future phase to surrounding network

C-7 Orientation (8 pts)

The path of the sun is well known, and in mid-summer east and west building facades receive over twice as much solar heat gain as south and north sides. Northeast, Northwest, Southeast and Southwest orientations are not much better than east and west. Thus orienting streets so the most exposed sides of the house (generally the front and the back) are close to due north and south will save energy for building owners. Even on narrow lots which may necessitate much longer sides than front and back; the front and back will generally tend to be exposed to the sun more because adjacent buildings will shade the sides.

Earn two points if $\geq 60\%$ of buildable lots are designed to face (rear or front) within 30-degrees of due north or due south, four points for $\geq 70\%$, six points for $\geq 80\%$, and 8 pts for $\geq 90\%$.

Submittal: Site plan showing locations of lot/road orientation to a line of true north with 30 degree window lines either side of true north. Lots qualifying will be indicated and a count of qualifying lots vs. total lots will be provided.

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C-8 Road/trail/ parking construction materials (0-10 pts)

Pervious road and trail materials will generally reduce stormwater runoff creating a potential environmental benefit. To ensure that these pervious pavements work as they are intended, they should be constructed according to the design and specifications of an engineer with experience in this type of material or one that has successfully completed a course in this type of design, such as those certification programs offered by the National Ready Mixed Concrete Research Foundation and Rinker Materials. Also, there are various recycled materials that can be used as part of road and trail construction.



If 25% (by area) of roads and trails is pervious, earn 3 pts; if 50% or more earn 6 pts; also earn 1 pt for each 25% of road construction material made of at least 10% recycled content.

Submittal: Material used and calculation of % perviousness.

C-9 Access (0-20 pts if part residential, generally no points if there is no residential)

Walking, bicycling and even some new electric vehicles usually only substitute for automobiles if distances to destinations is kept short. Safe walk or bike trip as defined here is to mean a sidewalk or other off-road path that *does not cross at grade a three-lane or four-lane roadway with a posted speed of over 30 miles per hour or cross a two-lane road with a posted speed of more than 35 miles per hour.*

School access: Earn 1 pt if 50% of all **housing units are** within 1 mile and can access a school grounds by walking and biking safely (see definition). 2pts if 100% of housing units meet this criteria. Double the points for inclusion of all K-12 schools meeting the criteria. Earn one bonus point for each K-12 school site donated by the developer to help accomplish this purpose (limit: four school access bonus points).

Retail access: Receive 1 point if 50% of **housing units are** within ½ mile safe walk, 2 points if 50% of all housing units are within a 1/4 mile safe walk, 3 points if 100% of housing units are within 1/2-mile safe walk, 4 points if 100% within 1/4 mile safe walk. Receive two bonus points if development includes a pedestrian friendly retail center (such as a traditional town center or retail on pedestrian trails).

Transit access: Receive 1 point if 50% of **housing units** are within ½ mile safe walk, 2 points if 50% of all housing units are within a 1/4 mile safe walk, 3 points if 100% of housing units are within 1/2-mile safe walk, 4 points if 100% within 1/4 mile safe walk To receive credit there must be shade /rain shelter and bench at any “hub” waiting area.

Pools and parks: Pools and parks are other frequented destinations and access to community pools may reduce the number of pools needed (see Amenities section for environmental benefits). Receive 1 point if 50% of **housing units** are within 1/4 mile safe walk of a pool and a park space, 2 points if 50% of all

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housing units are within a 1/8 mile safe walk, 3 points if 100% of housing units are within 1/4-mile safe walk, 4 points if 100% within 1/8 mile safe walk

Employer access: Earn 1 point if number of jobs within 1/2 mile radius is \geq 50% of the total number of housing units, 2 points if \geq 100% of housing units, double points for “safe walk” to job destinations.

Submittal: A scaled site plan with a graphic scale depicting: 1/8 mile, 1/4 mile, 1/2 mile and 1 mile radius, School sites and type, employer locations and number of employees (for newly constructed commercial buildings provide estimates and basis for estimates), transit type and schedule, and also submit tabulated data of requested points. Maximum points allowed for this category: 20.

C-10 Non-listed environmental benefits (0 - 5pts)

Provide description of any significant environmental benefits achieved, beyond typical new development, that are not covered in the above categories. The points attributed should be computed, if possible, relative to environmental benefit achieved by other measures. Note, that one will only receive discretionary **points** for projected environmental results; not for meeting existing code in a creative manner or for money spent to alter some existing land feature, or other troubles one went through to obtain an already listed green feature.



Submittal: Detailed description and projected environmental benefit.

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CATEGORY 3: GREEN UTILITY PRACTICES

A developer makes many decisions regarding utilities (water, sewer, reclaimed, gas, electric, cable, phone). How much land will the utilities take, which utilities are to be provided? These decisions may have environmental consequences regarding land use, tree plantings, and irrigation choices for parcel owners. Like some other decisions, a local government or a utility company may not allow for some of the suggestions herein, and at other locations some of these suggestions may be mandatory. FGBC rewards developers who fight for these greener utility methods.

U-1 Minimize disturbance due to utilities (0 to 15 points)

Preserving land and trees when laying the utilities can help the environment. Underground utilities leave room above ground for tree canopies to grow without interfering with utility lines. Earn four points if all utilities are underground. Earn eight bonus points if all compatible underground utilities are coordinated to be carried in a common sleeve (earn credit even if gas line or electric is not in this common sleeve), **or** earn 8 bonus pts. if R.O.W. for utilities has been reduced by 30% from the standard practice in your jurisdiction. This reduces disturbance during construction and for later maintenance. Earn three bonus points for making special provisions to save existing trees while laying utilities (must include a tree survey with submittal and have saved at least 12" of tree caliber of trees two-inch or larger).

Submittal: Enclose any written agreements with utilities, photos or other documentation of utility location, tree survey overlay with utility lines for tree protection credit. If claiming points for R.O.W. reduction, include written documentation from local jurisdiction indicating typical R.O.W.

U-2 Deliver Green Power (0-25 points)

Energy use in buildings and common areas usually has significant environmental impact off-site. Green power comes from renewable resources such as wind and solar. Earn 2 points for each ten percent of the development's power demand that will be delivered with green power either produced on-site or purchased as part of a green-pricing agreement with a utility. Receive two points if property buyers will receive some financial incentive from the developer or homeowner's association (of at least \$200 value or 1% of the retail price of the property - whichever is less) to comply with requirements to participate in the green pricing program for at least 12 months.

Earn five points for delivering common areas with 100% green power or for not using any power in common areas.

Maximum 25 points.

Submittal: Agreement with utility or calculation showing how you arrived at the point credit and documentation defining applicable incentives.

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U-3 Supply an irrigation system that uses stormwater or reuse water (0-15 pts)

Irrigation water does not have to be of the quality of potable water. Building in a central irrigation system has many benefits. First, the watering can be controlled from a central point so water conservation measures such as a rain sensor may control the entire system. In some instances, a system that runs from local water retention/detention areas can be used. In some municipalities a central reuse may be available for connection.

Earn eight points for connecting each parcel to a stormwater or reuse system. Earn two points for connecting all irrigated common areas. Earn five bonus points for any system that would turn off the irrigation for the entire development based on a single rain gauge, authority, and valve or for any development that has all irrigation controlled by in ground moisture sensors.

Submittal: Irrigation plan indicating controls and % by source(s) of irrigation water.

Reference: Florida Water Star or Water Star Gold



U-4 Irrigation meter system (5 pts)

Earn five points for a system of metering the reuse water, well water or potable irrigation water on each parcel. Even reuse water can be in limited supply during some times of year.

U-5 Water irrigation budget (10 pts)

Limit withdrawal for irrigation by parcel owners and to common areas based on a budget expressed, and enforced, in gallons per month. The quantity should be based on needs of the plant material and taking into account the efficiency of the irrigation delivery system. Moisture sensors must also be installed to further prevent overwatering

Submittal: Description of irrigation budget, basis of budget, documentation of moisture sensors, description of control system and how shut-off will work.

Reference: Florida Water Star

U-6 Sub-meter parcels by end user (5 pts)

If there are any commercial or multi-family properties, arrange for each end-user (not projects) to receive a meter for the utility. This will tend to encourage conservation and allow the end-user to receive benefits for efficient operating behavior and conservation measures. Reference: Florida Water Conservation Initiative, Florida Department of Environmental Protection (DEP), pp. 71 -74.

Submittal: Sub-metering plan.

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U-7 Non-listed environmental benefits (0 - 5pts)

Provide description of any significant environmental benefits achieved, beyond typical new development, that are not covered in the above categories. The points attributed should be computed, if possible, relative to environmental benefit achieved by other measures. Note, that one will only receive discretionary **points** for projected environmental results; not for meeting existing code in a creative manner or for money spent to alter some existing land feature, or other troubles one went through to obtain an already listed green feature.

Submittal: Detailed description and projected environmental benefit.

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CATEGORY 4: AMENITIES

The amenities the developer provides and how they are provided can help or hinder the sustainability of occupants. FGBC gives credit for amenities that are likely to have a beneficial impact on the environment relative to typical practice. Nature parks and common preservation areas earn points under category 1. Some of the amenities described in this category allow for common areas of intense use instead of many parcels trying to provide many less-efficient amenities.



A-1 Neighborhood parks (0-4 pts)

Develop neighborhood parks that are within: 1/4 mile of 50% of households and earn 1 pt, within 1/8 mile of 50% of households earn 2 pts, within 1/4 mile of 100% of households earn 3 pts, within 1/8 mile of 100% of households earn 4 pts. Neighborhood parks are to contain playground equipment that uses green construction materials (i.e., recycled content or recyclable materials) with seating areas and native shade trees.



A large village green in the center of this neighborhood provides plenty of space for community activities. A separate playground park is on other side of community center building. *Development: Longleaf, Developers: Starkeys, Photo Vieira*

A-2 Community or Regional Park (2 pts)

Earn 2 points for developing a community or regional park in plan – generally a regional park will be 10 acres or more and designed to serve a large part of the surrounding community. It will contain recreational facilities such as ball fields, court recreation, playgrounds and water body access.

A-3 Community pool (0-4 pts for developments with single family residences)

Swimming pools require water, energy and chemicals to operate. By providing one or more pools for the development to share instead of having many individual pools, precious resources can be conserved.



Instead of each home building a pool, a community pool saves real estate, chemicals, water and energy. *Development: Longleaf, Developers: Starkeys, Photo: Vieira*

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Earn one point for providing a common pool available to each resident, 2 points if there is a common pool for each 300 households, 3 points if there is one for each 200 households and four points if there is one for each 100 households. These points not available if deed restrictions require individual pools for any single family lots.

A-4 Community food plot, garden parks (0-10 pts)

Increase development densities to leave or create agricultural greenbelt or community plot as part of the development plan. Growing food and plants locally can reduce environmental harm from shipping of plants and in some cases may be the most appropriate use of the land.

Earn five points for incorporating an area(s) totaling at least 5 acres or 5% of the site (whichever is less) with an established or planned agricultural area. Earn five bonus points if agricultural area is deed restricted to be farmed organically.

Submittal: Dimensioned site plan with a graphic scale and area calculations that identify agricultural area(s). Provide deed restrictions or other methods that will assure the area remains agricultural use (and organic, if credit is sought) even if development pressures increase in future years.

A-5 Compost/Mulch facility (3 pts)

Everyone may not choose to invest their real estate and time in creating their own compost pile for yard waste material. Compost piles help create useful fertilizer out of waste product. Although some municipalities have a municipality-wide facility, one within the development is more convenient for regular use.

Earn 2 points for developing a mulching/compost facility within development and compost facility management plan. Earn an additional point for placing the compost/mulch facility adjacent to the community food plot/garden.

Submittal: A compost facility management plan that indicates how propagation of exotic seeds will be controlled. Also indicate location and management of mulch facility.

A-6 Golf Course is Audubon International certified or equivalent, minimally treated or absent (6 pts)

Golf courses usually use extensive amounts of chemicals and water to keep the playing surface in shape for the wear it takes. To become Audubon International (FGBC does not specifically endorse this for-profit group) certified, a course in the planning stages must successfully complete and implement a natural resource management plan to the Audubon Signature Program's specifications. Existing golf courses can qualify under the Audubon Cooperative Sanctuary Program for Golf Courses. Alternatively, earn the points for any golf course that has 40-percent or less of its total acreage in maintained area (irrigated or chemically-treated or concrete or buildings) and has a pest control and chemical control

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plan for the treated acreage. For developments with multiple golf courses, points can be credited as a percentage of total golf courses (e.g., earn three points if one of two courses meets the criteria).

Also earn six points if development is over 300 acres and no golf course is planned in present, past or future phases.

Submittal: Site plan showing locations and total acreage of golf course(s) (or lack thereof) and the acreages of improved and unimproved rough for each; Pest and chemical control plan; or Audubon International certification for each golf course.



Natural resource management is key to obtaining certification by Audubon International.
Course: West Bay Club, Ft. Myers, Developer: Atlantic Gulf Communities Corporation, Photo: Ron Dodson, Audubon Intl.

A-7 Landscape criteria and management plan for common areas and amenities (0-6pts)

Earn up to a maximum of 6 points from the following options: Earn two points for using all Florida Friendly plant material that are soil, water, and climate appropriate for non-recreational areas. Earn four points for using 80% or more Florida native plants that are soil, water and climate appropriate for non-recreational areas or reach the Gold level of the Florida Water Star program. Earn two points for a detailed management plan for “green” management of amenities that is consistent with the applicable sections of the “Declaration Exhibit Florida Friendly Development Covenants, Conditions and Restrictions”.

Submittal: Site plan depicting qualifying non-recreational areas and plant lists and percentage count by area covered and numbers. Amenity management plan that details how the management plan is designed to go well beyond typical practice in reducing the needs for water, fertilizer, pest control or other measures.

Reference: *Florida Native Plant Society: FNPS.org*; Florida-Friendly Landscaping, Covenants, Conditions and Restrictions http://www.law.ufl.edu/conservation/pdf/florida_friendly.pdf

A-8 Non-listed environmental benefits (0 - 5pts)

Provide description of any significant environmental benefits achieved, beyond typical new development, that are not covered in the above categories. The points attributed should be computed, if possible, relative to environmental benefit achieved by other measures. Note, that one will only receive discretionary **points** for projected environmental results; not for meeting existing code in a creative manner or for money spent to alter some existing land feature, or other troubles one went through to obtain an already listed green feature.



Submittal: Detailed description and projected environmental benefit.

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CATEGORY 5: COVENANTS AND DEED RESTRICTIONS

Developers can exercise considerable influence and control over purchasers by incorporating environmentally sound practices into covenants and restrictions for individual purchasers. There are many good programs available that are detailed in the home and commercial green standards. In lieu of giving credit for each individual item, FGBC is simply giving credit for referencing those standards in various ways; and in making sure that the covenants and deed restrictions do not prohibit a purchaser from qualifying for points for the home and commercial standard.

CDR-1 Green Construction Standards 0- 40 pts

Select one of the following:

Include information making property purchasers *aware* of other appropriate FGBC green standards (i.e., green home, green commercial building) - 1 pt

or

Include information *encouraging* lot purchasers to comply with the appropriate green standard- 2 pts

or

Providing some tangible *incentive* (of at least \$200 value or 1% of the retail price of the property - whichever is less) to comply with the appropriate green standard- 4 pts

or

Requiring each residential property owner to comply with the FGBC green home standard and each residential high rise to comply with the FGBC residential high-rise standard and for each non-residential building to comply with either a FGBC or USGBC standard - 40 pts

or

Requiring each property owner via the CDRs, *to comply with one or more minimum components of the FGBC green home or FGBC or USGBC green commercial standard* as described below either through prescriptive measures or the flexibility within the standard, scoring points per section as follows. The CDRs must include sufficient educational information to aid the buyer in making environmentally sound choices. For details, refer to the FGBC green home and the FGBC or USGBC commercial designation reference guides. Credit for the water and site categories listed below may also be achieved by incorporating the applicable sections of Florida Yards and Neighborhoods' "Florida-Friendly Landscaping, Covenants, Conditions and Restrictions" within the CDRs.



This Lake County FGBC certified green home received so much publicity that the custom builder had to close his doors to new business for a while!
Builder: Fallman Construction, Photo: Steven Spencer, FSEC

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Meet minimum given in FGBC Home and Commercial Standard Categories:

1. Energy – 13 pts.
2. Water – 5 pts.
3. Lot choice – no additional pts.
4. Site – 3 pts.
5. Health – 3 pts.
6. Materials – 3 pts.
7. Disaster Mitigation – 2 pts.

Reference: Florida-Friendly Landscaping, Covenants, Conditions and Restrictions
http://www.law.ufl.edu/conservation/pdf/florida_friendly.pdf

CDR-2 No language that prohibits green practices - 5 pts

Earn these points only if the CDRs do not prohibit:

Using available water-efficient or pest-resistant grasses and plants, using solar systems on south-facing roof regardless of the direction of the street, driveways that use porous pavers, not installing irrigation systems, not installing any turf,

or

Any other language that obviously prohibits the ability for site purchasers to obtain credit for any green home or green commercial building point criteria.

The development also earns these points if there are no covenant and deed restrictions.

CDR-3 Non-listed environmental benefits (0 - 5pts)

Provide description of any significant environmental benefits achieved, beyond typical new development, that are not covered in the above categories. The points attributed should be computed, if possible, relative to environmental benefit achieved by other measures. Note, that one will only receive discretionary **points** for projected environmental results; not for meeting existing code in a creative manner or for money spent to alter some existing land feature, or other troubles one went through to obtain an already listed green feature.

Submittal: Detailed description and projected environmental benefit

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CATEGORY 6: PROVIDE EDUCATIONAL INFORMATION TO HELP ACHIEVE AND PROMOTE GREEN LIVING PRACTICE

Educating all members of the development team, builders and future occupants about green practices can lead to increased awareness and environmental benefit. Providing these groups with green building information in the form of workshops, signs and written material on-site will earn credit towards the designation.

E-1 Staff training (0 - 14 pts)

Earn one point for each member of the development team (e.g., planner, engineer, architect, landscape architect, builder, marketing staff, administrator, sales) that is a member of FGBC, or has earned six hours or more of CEU credits in a green development or green construction course within 36 months of date of submittal so long as the lead designer/ decision-maker is one of the members receiving credit. Earn four points for regular cross-training among team members (developer, engineering, design, sales, marketing etc.). Maximum credit 14 points.



Submittal: FGBC membership list confirming memberships if membership points are claimed. For each claimed CEU submit a course agenda, team member attending, their role on the development team, number of CEUs credited. Cross-training should be documented by attendance by all team members at a green seminar/conference/workshop that was six hours or longer.

E-2 Dedicated on-site green specialists for parcel owners (0-16 pts)

If the developer or development association, such as homeowners association, has a dedicated ecologist or environmental scientist position working on-site conducting research and providing tours to residents and visitors, earn four points. Position must devote at least 8 hours per week to the development and adjacent area (e.g., if development is on a water body or natural area the position may spend some of the time investigating or touring the adjacent water body or natural area).

Similarly, if the developer or development association has a dedicated “green” landscape specialist, “green” design/construction specialist, and/or “green” interior design specialist available on-site to provide services to parcel owners earn four points each (only earn credit for each different person that is available regardless of how many fields that individual’s expertise is in).

Submittal: Documentation of the hiring or plan to hire the specialist for the position, including advertised minimum requirements or resume of specialist regarding “green” practice experience.

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E-3 On-site “Green” buyer training or buyer incentives for off-site training (0- 8 pts)

Earn up to eight points for offering courses for potential or existing purchasers regarding green construction and operation practices. Earn one point for each hour of unique training provided quarterly or more often.

Submittal: Courses, who is training, qualifications of trainers, how courses are marketed, frequency of courses, and any incentives for buyers taking off-site training.

E-4 Environmental education in marketing material (0-5 pts)

Earn three points if 10% of the marketing dollars spent is aimed towards *educating* the recipients of the environmental consequences of their actions or of the environmental features contained. Marketing material consists of any sales office material, signs, displays, newsletters, brochures, other media sales material and any other efforts aimed at marketing the development. Credit will not be given if marketing material provides exaggerating claims regarding the environmental benefits of development features. Earn two points for including contract addendums that specify green terms and conditions.

Submittal: Any brochures, photos of signs and a description of all other marketing plans including the portion devoted towards environmental education. Include sample contracts for contract addendum points.



Use garage walls for educational displays.
Development: Venetian, Developer: WCI, Photo: Vieira

E-5 In-house green practices (0 - 10 pts)

The developer should lead by example, not just as a marketing scheme.

Mission: Earn two points for having a mission statement that clearly states the development company’s dedication towards being an exemplary environmental steward in all aspects of their business and having the mission statement printed on all written marketing material.

Printing: Earn one point if all marketing material is printed on at least 25% recycled content paper, or two points if all marketing material is printed on 100 % recycled content paper. Earn one point if no paper has been bleached. Earn one point if all inks are soy-based.

Purchasing: Earn two points if the development company has a “green” purchasing policy consistent with state recommendations.

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Recycling coordinator: Earn two points if the developer has an assigned person responsible for assuring recycling of recyclable materials from all aspects of the business.

Submittal: Written purchasing policy including writing the printing policy on the brochures (i.e., “Printed on 100% recycled content paper using soy inks”). Mission statement, description of recycling coordinator.

E-6 Demonstration green buildings (4 pts)

Earn the four points if the first building (Residential or commercial) built earns a green designation as an example for others and for a period of at least two months upon completion is open to perspective purchasers in the development.

Submittal: Description of subject property and receipt of appropriate FGBC green designation application.



Demonstrate green building practices.
Development: Oakland Park, Developer: Castle & Cooke,
Photo: Vieira

E-7 Outdoor environmental education signs (0 - 22 pts)

The development may continue to function for hundreds of years, long after initial sales and construction. Long-lasting outdoor signs can be used to educate every generation that lives there of the environmental consequences of their actions. Earn two points for each for the following items (up to 20 pts):

- Signs that show where stormwaters drain
- Signs that indicate the environmental benefit of pedestrian transportation
- Signs that indicate wildlife corridors and/or indicate or educate about the indigenous wildlife likely to be found in the development
- Signs that educate about the need/benefit of conserving water
- Signs that educate about the need/benefit of conserving energy
- Signs that indicate the benefit of outdoor lighting that does not brighten the sky
- Signs that educate about the types of native plants and any environmental benefits
- Signs that educate about minimizing impact on preserved, created or restored areas and how to enhance the environment.
- Signs that educate on how to create and maintain habitats for native species in their yards.
- Any other signs that are for environmental education (bird nests, butterfly gardens, organic gardening. etc.).



Use outdoor signs to educate.
Development: Lakewood Ranch, Developer SMR,
Photo: Vieira

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Earn two bonus points if all signs are made of long-lasting green materials. One green spec is: A kit of parts that could be bolted together, with a pin set type pre - cast concrete pier, then the posts from a wood-plastic composite and the sign itself either a naturally resistant species such as, OR pine with ACQ pressure treatment, or the same wood - plastic composite with recycled content used in the posts.

Submittal: Indicate planned placement of signs in site plan and provide copies of text/graphics of signs. Signs must be of sufficient size and placement to serve their educational purpose. Indicate the green specification that the sign material is meeting if credit is sought.

E-8 Green web site: (0-7 points)

A Web site will be constructed that will highlight environmental information and management strategies pertinent to the community. This Web site will indicate what the developer has done to earn the FGBC designation (2 pts), the current monitoring and maintenance plan (2 pts), and contain content or links to content for advise on proper environmental maintenance of common parcels (1 pt) and green construction (1 pt) and operation (1 pt) of individual parcels. This Web site should be set up originally by the developer and could be maintained by the homeowner association or an outside organization. Ideally, the Web site would be linked to interpretive signs where the Web site would provide more in-depth information.

Submittal: web address

E-9 Monitoring program (0-9 pts)

A monitoring program will be set up by the developer, allowing homeowners to monitor wildlife (2 pts), energy (2 pts) and water use (2pts), and water body quality (2 pts). Monitoring will help the neighborhood keep track of environmental variables over time. Results will give residents an important feedback about how various management strategies affect environmental parameters. One bonus point for making the data available on the neighborhood/development web site.

Submittal: Monitoring plan.

E-10 Non-listed environmental benefits (0 - 5pts)

Provide description of any significant environmental benefits achieved, beyond typical new development, that are not covered in the above categories. The points attributed should be computed, if possible, relative to environmental benefit achieved by other measures. The development will only receive discretionary **points** for projected environmental results; not for meeting existing code in a creative manner or for money spent to alter some existing land feature, or other troubles one went through to obtain an already listed green feature.

Submittal: Detailed description and projected environmental benefit.