Home Innovation RESEARCH LABS

NGBS Scoring for New Construction
ICC 700-2012 National Green Building Standard™

2012

Revised April 07, 2017

DESIGNERS REPORT - NATIONAL GREEN BUILDING STANDARD

Builder/Applicant:	Gulf Bay Builders	**Builder Phone:**	813-494-6101
Mailing (physical) Address w/ Zip Code of Home:	2610 North Highland Ave Unit A, Tampa, Tampa 33602	**Single-Family or Multi-Unit:**	Single-Family
Community/Lot #:	Unit A	**# of units:**	
Climate Zone:	2	**Square Footage:**	1229
County:	Hillsborough	**Project Description:**	The Renegade Model
		HERS Index:	56

Practice	PointsAvailable	PointsClaimed	Designer Notes
500 LOT DESIGN, PREPARATION AND DEVELOPMENT			
501 LOT SELECTION			
501.1 Lot. The lot is selected to minimize environmental impact by one or more of the following:			
501.1(1) The builder selects a lot within an NGBS certified green community or equivalent on which to build.	**6**		
501.1(2) An infill lot is selected.	**8**	8	
501.1(3) An infill lot is selected that is a greyfield.	**7**		
501.1(4) An EPA-recognized brownfield lot is selected.	**9**		
501.1(5) A lot with an average slope calculation of less than 15% is selected.	**9**	9	
501.2 Multi-modal transportation. A range of multi-modal transportation choices are promoted by one or more of the following:			
501.2(1) A lot is selected within 1/2 mile (805 m) of pedestrian access to a mass transit system or within 5 miles (8046 m) of a mass transit station with provisions for parking.	**4**	4	
501.2(2) Walkways, street crossings, and entrances designed to promote pedestrian activity are provided. New buildings are connected to existing sidewalks and areas of development.	**5**	5	
501.2(3) A lot is selected within 1/2 mile (805 m) of 6 or more community resources [e.g., recreational facilities (such as pools, tennis courts, basketball courts), parks, grocery store, post office, place of worship, community center, daycare center, bank, school, restaurant, medical/dental office, laundromat/dry cleaner]	**4**	4	
501.2(4) Bicycle use is promoted by building on a lot located within a community that has rights-of-way specifically dedicated to bicycle use in the form of paved paths or bicycle lanes or on an infill lot located within 1/2 mile of a bicycle lane designated by the jurisdiction.	**5**		
502 PROJECT TEAM, MISSION STATEMENT AND GOALS			
502.1 Project team, mission statement, and goals. A knowledgeable team is established and team member roles are identified with respect to green lot design, preparation, and development. The project's green goals and objectives are written into a mission statement.	**4**		
503 LOT DESIGN			
503.1 Natural resources. Natural resources are conserved by one or more of the following:			
503.1(1) A natural resources inventory is completed under the direction of a qualified professional.	**5**		
503.1(2) A plan is implemented to conserve the elements identified by the resource inventory as high-priority resources.	**6**		
503.1(3) Items listed for protection in the resource inventory plan are protected under the direction of a qualified professional.	**4**		
503.1(4) Basic training in tree or other natural resource protection is provided for the on-site supervisor.	**4**	4	
503.1(5) All tree pruning on-site is conducted by a Certified Arborist.	**3**		
503.1(6) Ongoing maintenance of vegetation on the lot during construction is in accordance with TCIA A300 or locally accepted best practices.	**4**		
503.1(7) Where a lot adjoins a landscaped common area, a protection plan from construction activities next to the common area is implemented.	**5**		
503.2 Slope disturbance. Slope disturbance is minimized by:			
503.2(1) The use of terrain adaptive architecture including terracing, retaining walls, landscaping, or other re-stabilization techniques.	**5**		
503.2(2) Hydrological/soil stability study is completed and used to guide the design of all buildings on the site.	**4**		
503.2(3) All or a percentage of driveways and parking are aligned with natural topography to reduce cut and fill.			
503.2(3)(a) 10% to 25%	**3**		
503.2(3)(b) 25% to 75%	**4**		
503.2(3)(c) greater than75%	**6**		
503.2(4) Long-term erosion effects are reduced through the design and implementation of terracing, retaining walls, landscaping, or restabilization techniques.	**5**		
503.2(5) Underground parking uses the natural slope for parking entrances.	**5**		
503.3 Soil disturbance and erosion. Soil disturbance and erosion are minimized by one or more of the following: (also see Section 504.3)			
503.3(1) Construction activities are scheduled to minimize length of time that soils are exposed.	**5**		
503.3(2) At least 75% of total length of the utilities on the lot are designed to use one or more alternative means: **(a)** tunneling instead of trenching **(b)** use of smaller (low ground pressure) equipment or geomats to spread the weight of construction equipment **(c)** shared utility trenches or easements **(d)** placement of utilities under paved surfaces instead of yards	**5**	5	use of smaller equipment
503.3(3) Limits of clearing and grading are demarcated on the lot plan.	**5**	5	
503.4 Storm water management. A storm water management design includes one or more of the following low-impact development techniques: (For lots in a development, the points for items (1), (2), and (3) may be awarded for the lot when there is a community storm water management plan implemented and the builder does not violate that plan with respect to water leaving the lot.)			
503.4(1) Natural water and drainage features are preserved and used.	**6**	6	
503.4(2) Facilities that minimize concentrated flows and simulate flows found in natural hydrology by the use of vegetative swales, french drains, wetlands, drywells, rain gardens, and similar infiltration features.	**6**		
503.4(3) All or a percentage of impervious surfaces are minimized and permeable materials are used for driveways, parking areas, walkways, and patios.			
503.4(3)(a) less than 25%	**2**		
503.4(3)(b) 25 to 75%	**4**		
503.4(3)(c) greater than 75%	**6**		
503.4(4) A minimum of 50 percent of the roof is vegetated (green roof) using technology capable of withstanding the climate conditions of the jurisdiction and the microclimate conditions of the building site. Invasive plant species are not permitted.	**5**		
503.4(5) Stormwater management practices that manage rainfall on-site and prevent the off-site discharge from all storms up to and including the volume of the 95th percentile storm event.	**6**		
503.4(6) Conduct a hydrologic analysis that results in the design of a stormwater management system that maintains the pre-development (i.e., stable, natural) runoff hydrology of the lot throughout the development or redevelopment process. Post-construction runoff rate, volume, and duration cannot exceed predevelopment rates.	**7**		

503.5 A landscape plan for the lot is developed to limit water and energy use while preserving or enhancing the natural environment. (Where "front" only or "rear" only plan is implemented, only half of the points [rounding down to a whole number] are awarded for items 1-6)	**No landscape plan type selected.**		
503.5(1) Where a lot is less than 50% turf, a plan is formulated to restore or enhance natural vegetation that is cleared during construction. Landscaping is phased to coincide with achievement of final grades to ensure denuded areas are quickly vegetated.	**0**		
503.5(2) Turf grass species, other vegetation, and trees are selected and specified on the lot plan that are native or regionally appropriate for local growing conditions.	**0**		
503.5(3) The percentage of turf areas that is designed to be mowed is limited and shown on the lot plan. The percentage is based on the landscaped area of the lot not including the home footprint, hardscape, and any undisturbed natural areas.			
503.5(3)(a) 0% or EPA WaterSense Water Budget Tool is used to determine the maximum percentage of turf areas	**0**		
503.5(3)(b) greater than 0% to less than 20%	**0**		
503.5(3)(c) 20% to less than 40%	**0**		
503.5(3)(d) 40% to 60%	**0**		
503.5(4) Plants with similar watering needs are grouped (hydrozoning) and shown on the lot plan.	**0**		
503.5(5) Summer shading by planting installed to shade a minimum of 30% of building walls. To conform to summer shading, the effective shade coverage is the arithmetic mean of the shade coverage calculated at 10 am for eastward facing walls, noon for southward facing walls, and 3 pm for westward facing walls on the summer solstice 5 years after planting.	**0**		
503.5(6) Vegetative wind breaks or channels are designed to protect the lot and immediate surrounding lots as appropriate for local conditions.	**0**		
503.5(7) On-site (or community generated) tree trimmings or stump grinding of regionally appropriate trees are used on the site to provide protective mulch during construction or for landscaping.	**3**		
503.5(8) An integrated pest management plan is developed to minimize chemical use in pesticides and fertilizers.	**4**	4	
503.6 Wildlife habitat. Measures are planned that will support wildlife habitat and include at least two of the following:			
503.6(1) Plants and gardens that will encourage wildlife, such as bird and butterfly gardens.	**3**		
503.6(2) Inclusion of a certified "backyard wildlife" program.	**3**		
503.6(3) Lots are adjacent to wildlife corridors, fish and game parks, or preserved areas and are designed with regard for this relationship.	**3**		
503.6(4) Outdoor lighting techniques are utilized with regard for wildlife.	**3**		
503.7 Environmentally sensitive areas.			
503.7(1) The lot does not contain any environmentally sensitive areas that are disturbed by the construction.	**4**	4	
503.7(2) Compromised environmentally sensitive areas are mitigated or restored.	**4**		
504 LOT CONSTRUCTION			
504.1 On-site supervision and coordination is provided during clearing, grading, trenching, paving on the lot, and installation of utilities on the lot to ensure that specified green development practices are implemented. (*also see Section 503.3*)	**4**	4	
504.2 Designated trees and vegetation are preserved by one or more of the following:			
504.2(1) Fencing or equivalent is installed to protect trees and other vegetation.	**3**		
504.2(2) Trenching, significant changes in grade, and compaction of soil and critical root zones in all "tree save" areas as shown on the lot plan are avoided.	**5**		
504.2(3) Damage to designated existing trees and vegetation is mitigated during construction through pruning, root pruning, fertilizing, and watering.	**4**		
504.3 On-site soil disturbance and erosion are minimized by one or more of the following in accordance with the SWPPP or applicable plan: (also see Section 503.3)			
504.3(1) Sediment and erosion controls are installed on the lot and maintained in accordance with the storm water pollution prevention plan, where required.	**5**		
504.3(2) Limits of clearing and grading are staked out on the lot.	**5**	5	
504.3(3) "No disturbance" zones are created using fencing or flagging to protect vegetation and sensitive areas on the lot from construction activity.	**5**		
504.3(4) Topsoil from either the lot or the site development is stockpiled and stabilized for later use and used to establish landscape plantings on the lot.	**5**		
504.3(5) Soil compaction from construction equipment is reduced by distributing the weight of the equipment over a larger area (laying lightweight geogrids, mulch, chipped wood, plywood, OSB, metal plates, or other materials capable of weight distribution in the pathway of the equipment).	**4**		
504.3(6) Disturbed areas on the lot that are complete or to be left unworked for 21 days or more are stabilized within 14 days using methods as recommended by the EPA, or in the approved storm water pollution prevention plan, where required.	**3**		
504.3(7) Soil is improved with organic amendments and mulch.	**3**	3	
504.3(8) Utilities on the lot are installed using one or more alternative means (e.g., tunneling instead of trenching, use of smaller equipment, use of low ground pressure equipment, use of geomats, shared utility trenches or easements).	**5**	5	Use of smaller equipment
504.3(9) Inspection reports of storm water best management practices are available.	**3**		
505 INNOVATIVE PRACTICES			
505.1 Driveways and parking areas. Driveways and parking areas are minimized by one or more of the following:			
505.1(1) Off-street parking areas are shared or driveways are shared. Waivers or variances from local development regulations are obtained to implement such practices, if required.	**5**		
505.1(2) In a multi-unit project, parking capacity is not to exceed the local minimum requirements.	**0 - Not a Multi-Unit project**		
505.1(3) Structured parking is utilized to reduce the footprint of surface parking areas.			
505.1(3)(a) 25% to less than 50%	**4**		
505.1(3)(b) 50% to 75%	**5**		
505.1(3)(c) greater than 75%	**6**		
505.2 Heat island effect is mitigated by the following:			
505.2(1) Hardscape: Not less than 50 percent of the surface area of the hardscape on the lot meets one or a combination of the following methods. **(a)** Shading of hardscaping: Shade is provided from existing or new vegetation (within five years) or from trellises. Shade of hardscaping is to be measured on the summer solstice at noon. **(b)** Light-colored hardscaping: Horizontal hardscaping materials are installed with a solar reflectance index (SRI) of 29 or greater. The SRI shall be calculated in accordance with ASTM E1980. A default SRI value of 35 for new concrete without added color pigment is allowed to be used instead of measurements. **(c)** Permeable hardscaping: Permeable hardscaping materials are installed.	**5**	5	b) Light-colored Hardscaping

505.2(2) Roofs: Not less than 75% of the exposed surface of the roof meets one or a combination of the following methods. **(a)** Minimum initial SRI of 78 for a low-sloped roof (a slope less than or equal to 2:12) and a minimum initial (SRI) of 29 for a steep-sloped roof (a slope of more than 2:12). The SRI shall be calculated in accordance with ASTM E1980. Roof products shall be labeled and certified. **(b)** Roof is vegetated using technology capable of withstanding the climate conditions of the jurisdiction and the microclimate conditions of the building site. Invasive plant species are not permitted.	**5**		
505.3 Density. The average density on the lot on a net developable area basis is:			
505.3(1) 7 to less than 14 dwelling units per acre (per 4047 m^2)	**5**		
505.3(2) 14 to less than 21 dwelling units per acre (per 4047 m^2)	**8**		
505.3(3) 21 or greater dwelling units per acre (per 4047 m^2)	**11**		
505.4 Mixed-use development. The lot contains a mixed-use building.	**8**		
505.5 Community garden(s). A portion of the lot is established as a community garden(s), available to residents of the lot, to provide for local food production to residents or area consumers.	**3**		
600 RESOURCE EFFICIENCY			
601 QUALITY OF CONSTRUCTION MATERIALS AND WASTE			
601.1 Conditioned floor area, is limited.			
601.1(1) less than or equal to 1,000 square feet (93 m^2)	**15**		
601.1(2) less than or equal to 1,500 square feet (139 m^2)	**12**	12	
601.1(3) less than or equal to 2,000 square feet (186 m^2)	**9**		
601.1(4) less than or equal to 2,500 square feet (232 m^2)	**6**		
Multi-Unit Building Note: For a multi-unit building, use a weighted average of the individual unit sizes in qualifying for available points.			
601.2 Structural systems are designed or construction techniques are implemented that reduce & optimize material usage.			
601.2(1) Minimum structural member or element sizes necessary for strength and stiffness in accordance with advanced framing techniques or structural design standards are selected.	**3**	3	
601.2(2) Higher-grade or higher-strength of the same materials than commonly specified for structural elements and components in the building are used and element or component sizes are reduced accordingly.	**3**	3	trusses
601.2(3) Performance-based structural design is used to optimize lateral force-resisting systems.	**3**		
601.3 Building dimensions and layouts are designed to reduce material cuts & waste. This practice is used for a minimum of 80% of the following areas:			
601.3(1) floor area	**3**		
601.3(2) wall area	**3**	3	SIPS
601.3(3) roof area	**3**	3	
601.3(4) cladding or siding area	**3**		
601.3(5) penetrations or trim area	**1**		
601.4 Detailed framing or structural plans, material quantity lists and on-site cut lists for framing, structural materials, and sheathing materials are provided.	**4**		
601.5 Precut, preassembled, panelized, or precast assemblies are utilized for a minimum of 90% for the following system or building. ***Points can be claimed for 601.5(1-3) OR 601.5(4) OR 601.5(5).***			
601.5(1) floor system	**4**		
601.5(2) wall system	**4**	4	SIPS
601.5(3) roof system	**4**	4	Trusses
601.5(4) modular construction above grade	**13**		
601.5(5) manufactured home construction above grade	**13**		
601.6 Stories above grade are stacked, such as in 1½-story, 2-story, or greater structures. The area of the upper story is a minimum of 50% of the area of the story below, based on areas with a minimum ceiling height of 7 feet (2134 mm).			
601.6(1) 1 stacked story	**4**		
601.6(2) 2 stacked stories	**6**		
601.6(3) 3 or more stacked stories	**8**		
601.7 Building materials/assemblies do not require additional site applied material for finishing.	**MAX = 12**	5	
601.7(1) 90% or more of material	**5 points per material or assembly**	1 materials or assemblies	windows
601.7(2) 50% to <90% of material	**2 points per material or assembly**		
601.7(3) 35% to <50% of material	**1 point per material or assembly.**		
601.8 Frost-protected shallow foundations, pier and pad foundations, post foundations, etc.	**3**		
601.9 Adobe, concrete, log, earth systems provide sufficient structural and thermal characteristics (>75% of the exterior wall area)	**4**		
602 ENHANCED DURABILITY AND REDUCED MAINTENANCE			
602.1.1 Capillary breaks			
602.1.1.1 A capillary break and vapor retarder are installed at concrete slabs in accordance with ICC IRC Sections R506.2.2 and R506.2.3 or ICC IBC Sections 1910 and 1805.4.1.	**Mandatory**	Met	
602.1.1.2 Add a capillary break on footing to prevent moisture migration into foundation wall.	**3**		
602.1.2 Enhanced foundation waterproofing is installed: (1) rubberized coating, or (2) drainage mat	**4**		
602.1.3 Foundation Drainage			
602.1.3.1 Where required by the ICC IRC or IBC for habitable and usable spaces below grade, exterior drain tile is installed.	**Mandatory**	No habitable or usable space below grade	
602.1.3.2 Interior and exterior foundation perimeter drains are installed and sloped to discharge to daylight, dry well, or sump pit.	**4**		
602.1.4 Crawlspaces			
602.1.4.1 Vapor retarder in unconditioned vented crawlspace is in accordance with the following, as applicable. Joints of vapor retarder overlap a minimum of 6 inches (152 mm) and are taped.			
602.1.4.1(1) Floors. Minimum 6 mil vapor retarder installed on the crawlspace floor and extended at least 6 inches up the wall and is attached and sealed to the wall.	**6**		
602.1.4.1(2) Walls. Damp-proof walls are provided below finished grade.	**Mandatory, if there is a crawlspace that extends below finished grade**	No crawlspace	
602.1.4.2 Crawlspace that is built as a conditioned area is sealed to prevent outside air infiltration and provided with conditioned air at a rate not less than 0.02 cfm (.009 L/s) per square foot of horizontal area and one of the followine is implemented:			
602.1.4.2(1) Concrete slab over 6 mil polyethylene or polystyrene sheeting lapped a minimum of 6 inches (152 mm) and taped or sealed at the seams.	**8**		
602.1.4.2(2) 6 mil polyethylene sheeting, lapped a minimum of 6 inches (152 mm), and taped at the seams.	**Mandatory, if there is a crawlspace that extends below finished grade**	No crawlspace	
602.1.5 Continuous physical foundation termite barrier used with or without low toxicity treatment is installed in geographical areas that have subterranean termite infestation potential determined.	**4**	4	
602.1.6 Termite-resistant materials are used as follows:			
602.1.6(1) Areas of slight to moderate termite infestion probability	**2**		
602.1.6(2) Areas of moderate to heavy termite infestion probability	**4**		
602.1.6(3) Areas of very heavy termite infestion probability	**6**	6	
602.1.7 Moisture Control Measures			

602.1.7.1 Moisture control measures are in accordance with the following conditions.			
602.1.7.1(1) Building materials with visible mold are not installed or are cleaned or encapsulated prior to concealment and closing.	**2**	2	
602.1.7.1(2) Insulation in cavities is dry in accordance with manufacturer's installation instructions when enclosed (e.g., with drywall).	**Mandatory** **2 points if applicable**	Met 2	
602.1.7.1(3) The moisture content of lumber is sampled to ensure it does not exceed 19% prior to the surface and/or wall cavity enclosure.	**4**	4	
602.1.7.2 Moisture content of subfloor, substrate, or concrete slabs is in accordance with the appropriate industry standard for the finish flooring to be applied.	**2**	2	
602.1.8 Where required by the ICC IRC or IBC, a water-resistive barrier and/or drainage plane system is installed behind exterior veneer and/or siding.	**Mandatory, if applicable**	Met	
602.1.9 Flashing is provided to minimize water entry into wall and roof assemblies and to direct water to exterior surfaces or exterior water-resistive barriers for drainage. Flashing details are provided in the construction documents and are in accordance with the fenestration manufacturer's instructions, the flashing manufacturer's instructions, or as detailed by a registered design professional.			
602.1.9(1) Flashing are installed at all of the following locations, as applicable: (a) around exterior fenestrations, skylights and doors (b) at roof valleys (c) at deck, balcony, porch or stair to building intersections (d) at roof-to-wall intersections, at roof-to-chimney intersections, at wall-to-chimney intersections, and at parapets. (e) at ends of and under masonry, wood, or metal copings and sills (f) above projecting wood trim (g) at built-in roof gutters (h) drip edge is installed at eaves and rake edges	**Mandatory, if applicable**	Met	
602.1.9(2) All window head and jamb flashing are self-adhered flashing complying with AAMA 711-07.	**2**	2	
602.1.9(3) Pan flashing is installed at sills of all exterior windows and doors.	**3**		
602.1.9(4) Seamless, preformed kickout flashing, or prefabricated metal with soldered seams is provided at all roof-to-wall intersections. The type and thickness of the material used for roof flashing including but not limited kickout and step flashing is commensurate with the anticipated service life of the roofing material.	**3**		
602.1.9(5) A rainscreen wall design is used for exterior wall assemblies.			
(a) A system designed with minimum ¼" inch air space exterior to the water-resistive barrier, vented to the exterior at top and bottom of the wall and integrated with flashing details.	**4**		ZIP
(b) Either a cladding material or a water-resistive barrier with enhanced drainage, meeting 75% drainage efficiency requirement of ASTM	**2**	2	
602.1.9(6) Through wall flashing is installed at transitions between wall cladding materials, or wall construction types.	**2**		
602.1.9(7) Flashing is installed at expansion joints in stucco walls.	**2**		
602.1.10 Entries at exterior door assemblies are covered			
602.1.10(1) 1 exterior door	**2**	2	
602.1.10(2) 2 exterior doors	**4**		
602.1.10(3) 3 or more exterior doors	**6**		
602.1.11 Tile backing materials installed under tiled surfaces in wet areas are in accordance with ASTM C1178, C1278, C1288, or C1325.	**Mandatory, if applicable**	Met	
602.1.12 Roof overhangs are provided over a minimum of 90% of exterior walls to protect the building envelope.	**4**		
602.1.13 In areas where there has been a history of ice forming along the eaves causing a backup of water, an ice barrier is installed in accordance with the ICC IRC or IBC at roof eaves and extends at a minimum of 24 inches (610 mm) inside the exterior wall line of the building.	**Mandatory, if applicable**	No regional history of ice dams	
602.1.14 Architectural features that increase the potential for water intrusion are avoided.			
602.1.14(1) No roof configurations that create horizontal valleys in roof design.	**2**	2	
602.1.14(2) No recessed windows and architectural features that trap water on horizontal surfaces.	**2**	2	
602.1.14(3) All horizontal ledgers are sloped away to provide gravity drainage as appropriate for the application.	**Mandatory** **1 point if applicable**	Met 1	
602.2 A minimum of 90% of roof surfaces, not used for roof penetrations and associated equipment, on-site renewable energy systems such as photovoltaics or solar thermal energy collectors, or rooftop decks, amenities and walkways, are constructed of one or both of the following:			
(1) products accordance with the ENERGY STAR® cool roof certification or equivalent	**3**		
(2) a vegetated roof system	**3**		
(3) Both	**3**		
602.3 A gutter and downspout system or splash blocks and effective grading are provided to carry water a minimum of 5 feet (1524 mm) away from perimeter foundation walls.	**4**		
602.4.1 Finished grade at all sides of a building is sloped to provide a minimum of 6 inches (150 mm) of fall within 10 feet (3048 mm) of the edge of the building. Where lot lines, walls, slopes, or other physical barriers prohibit 6 inches (152 mm) of fall within 10 feet (3048 mm), the final grade is sloped away from the edge of the building at a minimum slope of 2%.	**Mandatory**	Met	
602.4.2 The final grade is sloped away from the edge of the building at a minimum slope of 5%.	**1**	1	
602.4.3 Water is directed to drains or swales to ensure drainage away from the structure.	**1**		
603 REUSED OR SALVAGED MATERIALS			
603.1 Existing buildings and structures are reused, modified, or deconstructed in lieu of demolition. ***(1 point per 200 ft² reused)***	**MAX = 12**		
603.2 Reclaimed and/or salvaged materials and components are used. The total material value and labor cost of salvaged materials is equal to or exceeds 1 percent of the total construction cost. ***(Points awarded per 1% of salvaged materials used based on the total construction cost.)***	**MAX = 9**		
603.3 Facilitation for sorting and reuse of scrap building material (e.g., provide a central storage area or dedicated bins).	**4**		
604 RECYCLED CONTENT BUILDING MATERIALS			
604.1.1 Building materials w/ recycled content are used. (MINOR Components)			
25 - <50%	**1**		
50 - <75%	**2**		
75%+	**3**		
604.1.2 Building materials w/ recycled content are used. (MAJOR Components)			
25 - <50%	**2**	2	Concrete 25%, drywall 75%
50 - <75%	**4**		
75%+	**6**		
605 RECYCLED CONSTRUCTION WASTE			
605.1 A construction waste management plan is developed, posted at the jobsite, and implemented with a goal of recycling or salvaging a minimum of 50% (by weight) of construction waste.	**6**	6	
605.2 On-site recycling of 50% by weight of C& D waste (e.g., grinding/application for soil amendment).	**7**		
605.3 Construction materials (e.g., wood, cardboard, metals, drywall, plastic, asphalt roofing shingles, or concrete) are recycled offsite.			
2 types	**3**		concrete, cardboard, metal, wood, drywall
3 types	**4**		
4 types	**5**		
5+ types	**6**	6	
606 RENEWABLE MATERIALS			
606.1 Biobased products are used.	**MAX = 8**		
two types @ 0.5% of material cost	**3**		
two types @ 1% of material cost	**6**		
each additional material at 0.5%	**1 per type**		
606.2 Wood or wood-based product types are certified to the requirements of a recognized product program:			
606.2(1) Min. 2 products used for minor elements	**3**		

606.2(2) Min. 2 products used for major elements	**4**		
606.3 Materials used for major components are manufactured using a min. of 33% of the primary manufacturing process energy from renewable sources, combustible waste sources, or renewable energy credits (RECs).			
1 material	**2**		
2 materials	**4**		
3+ materials	**6**		
607 RECYCLING & WASTE REDUCTION			
607.1(1) A built-in collection space in each kitchen and an aggregation/pick-up space in a garage, covered outdoor space, or other area for recycling containers.	**3**		
607.1(2) Compost facility provided on-site.	**3**		
607.2 A minimum of one food waste disposer is installed at the primary kitchen sink.	**1**	1	
608 RESOURCE-EFFICIENT MATERIALS			
608.1 Products containing fewer materials are used to achieve the same end-use requirements as conventional products, including but not limited to: (1) lighter, thinner brick with bed depth < 3 inches and/or brick with coring > 25% (2) engineered wood or engineered steel products (3) roof or floor trusses			
1 product	**3**		Engineered Wood Products, Roof Trusses
2 products	**6**	6	
3+ products	**9**		
609 REGIONAL MATERIALS			
609.1 Regional materials are used for major elements or components of the building.			
1 type	**2**		concete, drywall, SYP framing, Hardi, Jeldwen
2 types	**4**		
3 types	**6**		
4 types	**8**		
5+ types	**10**	10	
610 LIFE CYCLE ANALYSIS			
610.1 A life cycle analysis (LCA) tool is used to select environmentally preferable products or assemblies, or an LCA is conducted on the entire building.	**15 points for 610.1.1** **10 points max. for 610.1.2**		
610.1.1 A whole-building LCA is performed using a life cycle assessment and data compliant with ISO 14044 or other recognized standards.	**15**		
610.1.2 An environmentally preferable product or assembly is selected for an application based upon the use of an LCA tool that incorporates data methods compliant with ISO 14044 or other recognized standards that compare the environmental impact of products or assemblies.	**10 points max. for 610.1.2(1) & (2)**		
610.1.2(1) Two or more products with the same intended use are compared based on LCA and the product with at least a 15% average improvement is selected. Number of points awarded is based on the number of environmental impact measures compared.	**MAX = 10** **Points per Table 610.1.2(1)**		
# of comparions with 4 impact measures:			
# of comparions with 5 impact measures:			
610.1.2(2) Building assembly LCA. A building assembly with improved environmental impact measures compared to an alternative assembly of the same function is selected.	**MAX = 10** **Points per Table 610.1.2(2)**		
# of impact measures in LCA for exterior walls:			
# of impact measures in LCA for roof/ceilings:			
# of impact measures in LCA for interior walls or ceilings:			
# of impact measures in LCA for intermediate floors:			
611 INNOVATIVE PRACTICES			
611.1 Product manufacturer's operations and business practices include environmental management system concepts, and the production facility is ISO 14001 certified or equivalent. The aggregate value of building products from ISO 14001 certified or equivalent production facilities is 1% or more of the estimated total building materials cost.			
1% - <2%	**1**		Simpson Fasteners
2% - <3%	**2**	2	
3% - <4%	**3**		
4% - <5%	**4**		
5% - <6%	**5**		
6% - <7%	**6**		
7% - <8%	**7**		
8% - <9%	**8**		
9% - <10%	**9**		
10+%	**10**		
611.2 One or more of the following products are used for at least 30% of the floor or wall area of the entire dwelling unit, as applicable. Certification third-party agency is ISO Guide 65 accredited.	**MAX = 9**		
(1) 50% or more of carpet installed (by square feet) is third-party certified to NSF/ANSI 140.	**3**		
(2) 50% or more of resilient flooring installed (by square feet) is third-party certified to NSF/ANSI 332.	**3**		
(3) 50% or more of the insulation installed (by square feet) is third-party certified to EcoLogo CCD-016.	**3**		
(4) 50% or more of interior wall coverings installed (by square feet) is third-party certified to NSF/ANSI 342.	**3**		
(5) 50% or more of the gypsum board installed (by square feet) is third-party certified to ULE ISR 100.	**3**		
(6) 50% or more of the door leafs installed (by number of door leafs) is third-party certified to ULE ISR 102.	**3**		
(7) 50% or more of the tile installed (by square feet) is third-party certified to ANSI A138.1 Specifications for Sustainable Ceramic Tiles, Glass Tiles and Tile Installation Materials.	**3**		
611.3 Universal design elements. Dwelling incorporates one or more of the following universal design elements.	**MAX = 9**		
(1) Any no-step entrance into the dwelling which is accessible from a substantially level parking or drop-off area (no more than 2%) via an accessible path which has no individual change in elevation or other obstruction of more than 1-1/2 inches in height, whose pitch does not exceed 1 in 12 and which provides a minimum 32-inch wide clearance into the dwelling.	**3**		
(2) Minimum 36-inch wide accessible route from the no-step entrance into at least one visiting room in the dwelling and into at least one full or half bathroom which has a minimum 32 inch clear door width and a 30 inch by 48 inch clear area inside the bathroom outside the door swing.	**3**		
(3) Minimum 36-inch wide accessible route from the no-step entrance into at least one bedroom which has a minimum 32 inch clear door width.	**3**		
(4) Blocking or equivalent installed in the accessible bathroom walls for future installation of grab bars at commode and bathing fixture, if applicable.	**1**		
700 ENERGY EFFICIENCY			
701 MINIMUM ENERGY EFFICIENCY REQUIREMENTS			
User must select either *Performance (701.1.1)* , *Prescriptive (701.1.2)* , or *Alternative Bronze (701.1.3)* compliance path.			
701.1 The building shall comply with either Section 702 or Section 703			
701.1 The building shall comply with either Section 702 (Performance Path) or Section 703 (Prescriptive Path). Items listed as "mandatory" in Section 701.4 apply to both the Performance and Prescriptive Paths. As an alternative, an ENERGY STAR® 2.0 Qualified Home or equivalent can claim 30 points from 701.1.3 and meet the Bronze level for Chapter 7. **701.1.1 Minimum Performance Path requirements.** A building complying with Section 702 shall exceed the ICC IECC by 15%, & shall include a min. of 2 practices from Sec. 704, OR meet 701.1.2 OR 701.1.3. **701.1.2 Minimum Prescriptive Path requirements.** A building complying with Sec. 703 shall obtain a minimum of 30 points from Sec. 703, & shall include a min. of 2 practices from Sec. 704. **701.1.3 Alternative Bronze Level compliance.** Any ENERGY STAR Qualified Home achieves the Bronze Level for Chapter 7.	**Performance Path** **OR** **Prescriptive Path** **OR** **Alternative Bronze Level Compliance**	Performance Path	

701.1.3 Alternative Bronze Level compliance. Any ENERGY STAR 2.0 Qualified Home or equivalent achieves the Bronze Level for Chapter 7. If 30 points claimed for practice 701.1.3, this chapter and this project cannot achieve a level higher than Bronze. If points claimed for this practice, skip the following sections: * 701.3 - Adopting Entity review * 701.4 - Mandatory Practices * 702 - Performance Path * 703 - Prescriptive Path Points can be claimed in Section 704 that count toward additional points needed for the project	**30**		
701.2 Emerald Level points. The Performance Path shall be used to achieve the Emerald Level.			
701.3 Adopting Entity review. A review by third party shall be conducted to verify design and compliance with Chapter 7 points.	**Mandatory**	Met	Two Trails Inc.
701.4 Mandatory practices.			
701.4.1 HVAC systems.			
701.4.1.1 Space heating/cooling sized per Manual J, Equipment sized per Manual S	**Mandatory**	Met	
701.4.1.2 Radiant/hydronic heating system designed using industry-approved guidelines	**Mandatory**	N/A	
701.4.2 Duct systems.			
701.4.2.1 Ducts are air sealed with materials in conformance with UL 181A or UL 181B specifications	**Mandatory**	Met	
701.4.2.2 Building cavities are not used as supply ducts	**Mandatory**	Met	
701.4.2.3 Duct system is sized and designed in accordance with ACCA Manual D or equivalent	**Mandatory**	Met	
701.4.3 Insulation and air sealing.			
701.4.3.1 Building Thermal Envelope. The building thermal envelope is durably sealed to limit infiltration. See details in chapter 7 tab.	**Mandatory**	Met	
701.4.3.2 Air sealing and insulation. Grade 3 insulation installation is not permitted. The compliance of the building envelope air tightness and insulation installation is demonstrated in accordance with Section 701.4.3.2(1) or 701.4.3.2(2)			
701.4.3.2(1) Testing option. Building envelope tightness and insulation installation is considered acceptable when air leakage is less than seven air changes per hour (ACH) when tested with a blower door at a pressure of 33.5 psf (50 Pa)	**Mandatory**		
701.4.3.2(2) Visual inspection option. Building envelope tightness and insulation installation are considered acceptable when the components listed below applicable to the method of construction, are field verified. See details in chapter 7 tab.		Met	
701.4.3.3 Fenestration air leakage. Windows, skylights and sliding glass doors have an air infiltration rate of no more than 0.3 cfm per square foot (1.5 L/s/m2), and swinging doors no more than 0.5 cfm per square foot (2.6 L/s/m2)	**Mandatory**	Met	
701.4.3.4 Recessed lighting. Recessed luminaires installed in the building thermal envelope are sealed to limit air leakage between conditioned and unconditioned spaces.	**Mandatory**	Met	
701.4.4 High-efficacy lighting. A minimum of 50% of the total hard-wired lighting fixtures, or the bulbs in those fixtures, qualify as high efficacy or equivalent.	**Mandatory**	Met	
701.4.5 Boiler supply piping. Boiler supply piping in unconditioned space is insulated.	**Mandatory**	N/A	
702 PERFORMANCE PATH			
702.1 Points from Section 702 (Performance Path) shall not be combined with points from Section 703 (Prescriptive Path).			
702.2.1 ICC IECC analysis. Energy efficiency features are implemented to achieve energy cost performance that meets the ICC IECC.	**Mandatory**	Met	
702.2.2 A documented analysis shows performance in excess of 2009 IECC by at least 15%:			
	30 - 100	53	26.72% Improvement over 2009 IECC
703 PRESCRIPTIVE PATH			
703.1 Building envelope			
703.1.1 UA improvement. The total building thermal envelope UA is less than or equal to the total UA resulting from the U-factors provided in Table 703.1.1(a). Where insulation is used to achieve the UA improvement, the insulation installation is in accordance with Grade 1 requirements as graded by a third-party. Total UA is documented using a RESCheck or equivalent report to verify the baseline and the UA improvement.			
5 to <10%	**per Table 703.1.1**		
10% to <15%			
15% to <20%			
20% or greater			
703.1.2 The insulation installation is graded by a third party and in accordance with Sections 703.1.2.1, 703.1.2.2, and/or 703.1.2.3, as applicable. Grade 2 is permitted only for Bronze. Points are not available if points awarded in 703.1.1.			
Grade 1	**7**		
Grade 2	**4**		
703.1.3 Mass walls. More than 75% of the above-grade exterior opaque wall area of the building is mass walls.			
≥3 inch to <6 inch	**5**		
> 6 inch	**3**		
703.1.4 A radiant barrier with an emittance of 0.05 or less is used in the attic.	**3**		
703.1.5 Building envelope leakage. The maximum building envelope leakage rate is in accordance with Table 703.1.5. (Also see Section 902.2.1)			
Max Envelope Leakage Rate (ACH50) = 5	**3**		
Max Envelope Leakage Rate (ACH50) = 4	**4**		
Max Envelope Leakage Rate (ACH50) = 3	**5**		
Max Envelope Leakage Rate (ACH50) = 2	**6**		
Max Envelope Leakage Rate (ACH50) = 1	**5**		
703.1.6 Fenestration			
703.1.6.1 NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights, and tubular daylighting devices (TDDs) on an area-weighted average basis are in accordance with Table 703.1.6.1.	**Mandatory**	N/A	
703.1.6.2 The NFRC-certified (or equivalent) U-factor and SHGC of windows, exterior doors, skylights, and tubular daylighting devices (TDDs) are in accordance with Table 703.1.6.2(a), (b), or (c).			
Table 703.1.6.2(a): Enhanced Fenestration Specifications	**5**		
Table 703.1.6.2(b): Enhanced Fenestration Specifications	**9**		
Table 703.1.6.2(c): Enhanced Fenestration Specifications	**0**		
703.2 HVAC equipment efficiency			
703.2.1 Combination space heating and water heating system (combo system) is installed using either a coil from the water heater connected to an air handler to provide heat for the building or dwelling unit, or a space heating boiler using an indirect-fired water heater. Devices have a combined annual efficiency of 0.80.	**4**		
703.2.2 Furnace and/or boiler efficiency is in accordance with Tables 703.2.2(1), 703.2.2(2), 703.2.2(3), 703.2.2(4).	**Points per Table 703.2.2(1) or Table 703.2.2(2) or Table 703.2.2(3) or Table 703.2.2(4)**		
703.2.3 Heat pump heating efficiency is in accordance with Table 703.2.4. Refrigerant charge is verified for compliance with manufacturer's instructions.			
8.2 HSPF (11.5 EER)	**1**		
9.0 HSPF (12.5 EER)	**3**		
9.5 HSPF	**4**		
10.0 HSPF	**4**		

703.2.4 Cooling efficiency is in accordance with Table 703.2.4. Refrigerant charge is verified for compliance with manufacturer's instructions.			
≥ 14 SEER (11.5 EER)	**3**		
≥ 15 SEER (12.5 EER)	**5**		
≥ 17 SEER (12.5 EER)	**8**		
≥ 19+ SEER (12.5 EER)	**11**		
≥ 19+ SEER	**14**		
703.2.5 Water source cooling and heating efficiency is ≥ 15 EER, ≥ 4.0 COP.	**18**		
703.2.6 Ground source heat pump is installed by a Certified Geothermal Service Contractor in accordance with Table 703.2.6.			
14.1 EER 3.3 COP	**14**		
15 EER 3.5 COP	**16**		
16.2 EER 3.6 COP	**18**		
24 EER 4.3 COP	**28**		
28 EER 4.8 COP	**32**		
703.2.7 ENERGY STAR, or equivalent, ceiling fan(s) are installed.	**1**		
703.2.8 Whole-building or whole-dwelling unit fan(s) with insulated louvers and a sealed enclosure is installed.	**5**		
703.2.9 In multi-unit buildings, an advanced electric and fossil fuel submetering system is installed to monitor electricity and fossil fuel consumption for each unit.	**1**	N/A	
703.3 Duct Systems			
703.3.1 All space heating is provided by a system(s) that does not include air ducts.	**4**		
703.3.2 All space cooling is provided by a system(s) that does not include air ducts.	**7**		
703.3.3 Ductwork is in accordance with all of the following: (1) Building cavities are not used as return ductwork. (2) Heating and cooling ducts and mechanical equipment are installed within the conditioned building space. (3) Ductwork is not installed in exterior walls.	**11**		
703.3.4 Duct Leakage. The entire central HVAC duct system, including air handlers and register boots, is tested by a third party for total leakage at a pressure differential of 0.1 inches w.g. (25 Pa) and maximum air leakage is equal to or less than 6 percent of the system design flow rate.			
Ductwork entirely outside the building's thermal envelope	**9**		
Ductwork entirely inside the building's thermal envelope	**3**		
Ductwork inside and outside the building's thermal envelope	**6**		
703.4 Water heating system			
703.4.1 Water heater Energy Factor (EF) is in accordance with the tables in 703.4.1.	**Points per Table 703.4.1(1)(a) or Table 703.4.1(1)(b) or Table 703.4.1(2) or Table 703.4.1(3) or Table 703.4.1(4)**		
703.4.2 Desuperheater is installed by a qualified installer or is pre-installed in the factory.	**8**		
703.4.3 Drain-water heat recovery system is installed in multi-family units.	**2**	N/A	
703.4.4 Indirect-fired water heater storage tanks heated from boiler systems are installed.	**1**		
703.4.5 Solar water heater. SRCC (Solar Rating & Certification Corporation) OG 300 rated, or equivalent, solar domestic water heating system is installed. Solar Energy Factor (SEF) as defined by SRCC) is in accordance with Table 703.4.5.			
≥SEF 1.3	**10**		
≥SEF 1.51	**12**		
≥SEF 1.81	**14**		
≥SEF 2.31	**17**		
≥SEF 3.01	**19**		
703.5 Lighting and appliances			
703.5.1 Hard-wired lighting is in accordance with one of the following:			
703.5.1(1) A minimum of 75% of the total hard-wired luminaires qualify as ENERGY STAR or equivalent.	**4**		
703.5.1(1) A minimum of 95% of the total hard-wired luminaires qualify as ENERGY STAR or equivalent.	**6**		
703.5.1(2) A minimum of 80% of the exterior lighting wattage has a minimum efficiency of 40 lumens per watt or is solar-powered.	**1**		
703.5.2 Recessed luminaires. The number of recessed luminaires that penetrate the thermal envelope are less than 1 per 400 square feet (37.16 m2) of total conditioned floor area and are in accordance with Section 701.4.3.4.	**2**	1229 s.f. total floor area	
703.5.3 Appliances. ENERGY STAR or equivalent appliance(s) are installed.			
Refrigerator	**2**		
Dishwasher	**1**		
Washing machine	**4**		
703.5.4 Induction cooktop. Induction cooktop is installed.	**1**		
703.6 Passive solar design			
703.6.1 Sun-tempered design. Building orientation, sizing of glazing, and design of overhangs are in accordance with Sections 703.6.1(1-9).	**0**		
703.6.2 Window shading. Automated solar protection is installed to provide shading for windows.	**1**		
703.6.3 Passive cooling design features are in accordance with at least 3 from (1)-(6) below, but no more than 4.			
Exterior shading is provided on east and west windows using one or a combination of the following: **(a) Vine-covered trellises with the vegetation separated a minimum of 1 foot (305 mm) from face of building** **(b) moveable awnings or louvers** **(c) covered porches** **(d) attached or detached conditioned/unconditioned enclosed space that provides**	**2**		
Overhangs are installed to provide shading on south-facing glazing in accordance with Section 703.6.1(7). ***Points not awarded if points are taken under Section 703.6.1***	**1**		
Windows and/or venting skylights are located to facilitate cross ventilation.	**1**		
Solar reflective roof or radiant barrier is installed in climate zones 1, 2, or 3 and roof material achieves a 3-year aged criteria of 0.50.	**2**		
Internal exposed thermal mass is a minimum of three inches (76 mm) in thickness. Thermal mass consists of concrete, brick, and/or tile that are fully adhered to a masonry base or other masonry material and is in accordance with one or a combination of the following: **(a) A minimum of 1 square foot (0.09 m2) of exposed thermal mass of floor per 3 square feet (2.8 m2) of gross finished floor area.** **(b) A minimum of 3 square feet (2.8 m2) of exposed thermal mass in interior walls**	**1**		
Roofing material is installed with a minimum 0.75 inch (19 mm) continuous air space offset from the roof deck from eave to ridge.	**1**		
703.6.4 Passive solar heating design. In addition to the sun-tempered design features in Section 703.6.1, all of Sections 703.6.4 (1-3) are implemented.	**0**		
704 ADDITIONAL PRACTICES			
704.2 Lighting			
704.2.1 Occupancy sensors. Occupancy sensors are installed on indoor lights, and photo or motion sensors are installed on outdoor lights to control lighting.			
25% of lighting	**1**		
50% of lighting	**2**		

704.2.2 TDDs and skylights. Tubular daylighting device (TDD) or a skylight with sealed, insulated, low-E glass is installed in rooms without windows.	**2**		
704.2.3 Occupancy sensors are installed on indoor lights, and photo or motion sensors are installed on outdoor lights to control lighting.	**1**		
704.3 Return ducts and transfer grilles. Return ducts or transfer grilles are installed in every room with a door. Return ducts or transfer grilles are not required for bathrooms, kitchens, closets, pantries, and laundry rooms.	**5**	5	
704.4 HVAC design and installation			
704.4.1 HVAC contractor and service technician are certified by a nationally or regionally recognized program (e.g., North American Technician Excellence, Inc. (NATE), Air Conditioning Contractors of Americas Quality Assured Program (ACCA/QA), Building Performance Institute (BPI), Radiant Panel Association, or manufacturers' training program).	**1**	1	
704.4.2 Performance of the heating and/or cooling system is verified by the HVAC contractor in accordance with all of the following: **(1) Start-up procedure is performed in accordance with the manufacturer's instructions.** **(2) Refrigerant charge is verified by super-heat and/or sub-cooling method.** **(3) Burner is set to fire at input level listed on nameplate.** **(4) Air handler setting/fan speed is set in accordance with manufacturer's instructions** **(5) Total airflow is within 10 percent of design flow** **(6) Total external system static does not exceed equipment capability at rated airflow**	**3**	3	
704.4.3 Manufacturer's label or printed specifications for sealed air handler (except furnaces) indicates the leakage is less than or equal to 2 percent of design airflow at a pressure of 1-inch of water (250 Pa). Air handlers are tested with inlets, outlets, and condensate drain ports sealed, and filter box in place.	**4**		
704.5 Installation and performance verification			
704.5.1 Third-party on-site inspection is conducted to verify compliance with all of the following, as applicable. Minimum of two inspections are performed. One inspection after insulation is installed and prior to covering, and another inspection upon completion of the building. Where multiple buildings or dwelling units of the same model are built by the same builder, a representative sample inspection of a minimum of 15 percent of the buildings or dwelling units is permitted. (1) Ducts are installed in accordance with the ICC IRC or IMC and ducts are sealed. (2) Building envelope air sealing is installed. (3) Insulation is installed in accordance with Section 703.1.2. (4) Windows, skylights, and doors are flashed, caulked, and sealed in accordance with manufacturer's instructions and in accordance with Section 701.4.3.	**5**	5	
704.5.2 Testing. Testing above mandatory requirements is conducted to verify performance.			
704.5.2.1 Building envelope leakage testing.			
A blower door test and a visual inspection are performed as described in 701.4.3.2.	**5**	5 5 expected ACH50 result	
Third-party verification is completed.	**5**	5	Two Trails, Inc.
704.5.2.2 HVAC airflow testing. Balanced HVAC airflows are demonstrated by flow hood or other acceptable flow measurement tool by a third party. Test results are in accordance with both of the following: (1) Measured flow at each supply and return register is within 25% of design flow. (2) Total airflow is within 10% of design flow.	**8**		
704.5.3 Insulating hot water pipes. Insulation with a minimum thermal resistance (R-value) of at least R-3 is applied to the following, as applicable: (a) piping larger than 3/4-inch outside diameter (b) piping serving more than one dwelling unit (c) piping branches serving kitchen sinks (d) piping located outside the conditioned space (e) piping from the water heater to a distribution manifold (f) piping located under a floor slab (g) buried piping (h) piping in recirculation systems other than demand recirculation systems (i) all other piping except the piping that meets the length requirements of Table 704.5.3	**1**		
705 INNOVATIVE PRACTICES			
705.1 Energy consumption control. A whole-building or whole-dwelling unit device is installed that controls or monitors energy consumption.	**MAX = 7**	**1**	
705.1(1) programmable communicating thermostat	**1**	*1*	
705.1(2) energy monitoring device	**2**		
705.1(3) energy management control system	**4**		
705.2 Renewable energy service plan is provided as follows:			
705.2(1) Builder uses renewable energy service plan for interim electric service. The builder's local **administrative office** has renewable energy service.	**2**		
705.2(2) The buyer of the building selects a renewable energy service plan provided by the utility			
<50% of dwelling's projected electricity & gas use is provided by renewable	**5**		
50% or more of dwelling's projected electricity & gas use provided by renewable energy	**1**		
705.3 Smart Appliances and Systems. Smart appliances and systems are installed as follows.			
Refrigerator	**3-5 appliances = 1pt** **6+ appliances = 2pts**		
Freezer			
Dishwasher			
Clothes Dryer			
Clothes Washer			
Room Air Conditioner			
HVAC Systems			
Service Hot Water Heating Systems			
705.4 Pumps			
705.4.1 Pool, spa, and water features equipped with filtration pumps as follows.			
705.4.1(1) Two-speed pump(s) is installed.	**1**		
705.4.1(2) Electronically controlled variable-speed pump(s) is installed (efficiency of 90 percent or greater).	**3**		
705.4.2 Sump pump(s) with electrically commutated motors (ECMs) or permanent split capacitor (PSC) motors installed (efficiency of 90% or greater).	**1**		
705.5 Additional renewable energy options. Renewable energy system(s) is installed on the property (e.g., solar photovoltaic panels, building integrated photovoltaic system, wind energy system, on-site micro-hydro power system, active solar space heating system, solar thermal hydronic heating system, photovoltaic hybrid heating system).	**1 point per 100 watts per 2000 SF**	1229 s.f. total floor area	
705.6 Parking garage efficiency. Structured parking garages are designed to require no mechanical ventilation for fresh air requirements.	**2**		
800 WATER EFFICIENCY			
801 INDOOR AND OUTDOOR WATER USE			
801.1 Indoor hot water usage.			
801.1 Indoor hot water supply system is in accordance with one of the practices listed in items (1) through (5). The maximum length from the source of hot water to the termination of the fixture supply is determined in accordance with Tables 801.1(1) or 801.1(2), or 50 feet, whichever is less. - Where more than one water heater is used or where more than one type of hot water supply system, including multiple circulation loops, is used, points are awarded based on the system that qualifies for minimum number of points. - Systems with circulation loops are eligible for points only if pumps are demand controlled. Circulation systems with timers or aquastats and constant-on circulation systems are not eligible to receive points. -The points are awarded only if the pipes are insulated in accordance with Section 704.5.3.			

(1) The maximum volume from the water heater to the termination of the fixture supply at furthest fixture is 128 ounces (1 gallon or 3.78	**11**		
(2) The maximum volume from the water heater to the termination of the fixture supply at furthest fixture is 64 ounces (0.5 gallon or 1.89	**17**		
(3) The maximum volume from the water heater to the termination of the fixture supply at furthest fixture is 32 ounces (0.25 gallon or 0.945	**29**		
(4) A demand controlled hot water priming pump is installed on the main supply pipe of the circulation loop and the maximum volume from this supply pipe to the furthest fixture is 24 ounces (0.19 gallons	**35**		
(4)(a) 801.1(4) is met AND the volume in the circulation loop (supply) from the water heater or boiler to the branch for the furthest fixture is no more than 128 ounces (1 gallon or 3.78 liters).	**39**		
801.1.1(5) A central hot water recirculation system is implemented in multi-unit buildings in which the hot water line distance from the recirculating loop to the engineered parallel piping system (i.e., manifold system) is less than 30 feet (9144 mm) and the parallel piping to the fixture fittings contains a maximum of 64 ounces (1.89 liters) (115.50 cubic inches) (0.50 gallons)	**9**		
801.1.1(6) Tankless water heater(s) with at least 0.5 gallon (1.89 liters) of storage are installed or a tankless water heater that ramps up to at least 110F within 5 seconds is installed. The storage may be internal or external to the tankless water heater.	**4**		
801.2 ENERGY STAR or equivalent water conserving appliances are installed.			
801.2(1) dishwashers (multiples all must comply)	**2**	2	
801.2(2)(a) washing machine with a water factor of >6.0	**13**	13	
801.2(2)(b) washing machine with a water factor of ≤6.0	**24**		
801.3 Showerheads are in accordance with the following:			
801.3(1) The total maximum combined flow rate of all showerheads controlled by a single valve at any point in time in a shower compartment is 1.6 to less than 2.5 gpm. Maximum of two valves are installed per shower compartment. The flow rate is tested at 80 psi (552 kPa) in accordance with ASME A112.18.1. Showerheads are served by an automatic compensating valve that complies with ASSE 1016 or ASME A112.18.1 and specifically designed to provide thermal shock and scald protection at the flow rate of the showerhead			
1 fixture	**4**		
2 fixtures	**5**	5	
3 fixtures	**6**		
4+ fixtures	**7**		
801.3(2) All shower compartments in the dwelling units and common areas meet the requirements of 801.3(1).			
2.0 to <2.5 gpm	**11**	11	
1.6 to <2.0 gpm	**14**		
801.3(3) Any control that can shut off water flow without affecting temperature is installed.			
1 shutoff	**1**		
2 shutoffs	**2**	2	
3 shutoffs	**3**		
801.4 Faucets.			
801.4.1 Water-efficient lavatory faucets with 1.5 gpm (5.68 L/m) or less maximum flow rate when tested at 60 psi (414 kPa) in accordance with ASME A112.18.1 are installed:			
801.4.1(1) ALL lavatory faucets per bathroom comply.			
1 bath	**1**		
2 baths	**2**	2	
3+ baths	**3**		
801.4.1(2) ALL lavatory faucets per dwelling unit comply.	**6**	6	
801.4.2 Self-closing valve, motion sensor, metering, or pedal-activated faucet is installed to enable intermittent on/off operation.			
1 fixture	**1**		
2 fixtures	**2**		
3+ fixtures	**3**		
801.5 Water closets and urinals are in accordance with the following:			
801.5(1) Water closets and urinals installed meet the following conditions: (a) All water closets are 1.28 gallons per flush or less and all urinals are 0.5 gallons per flush or less, OR (b) All water closets and urinals are waterless or composting.	**Required for Gold or Emerald Level**	Not Eligible for Gold or Emerald	
801.5(2) A water closet is installed with an effective flush volume of 1.28 gallons (4.85 L) or less when tested in accordance with ASME A112.19.2/CSA B45.1 (all water closets) or when tested in accordance with ASME A112.19.14 (all dual flush water closets), and is in accordance with EPA WaterSense Tank-Type High-Efficiency Toilet.			
1 fixture	**2**		
2 fixtures	**4**		
3+ fixtures	**6**		
801.5(3) All water closets are in accordance with Section 801.5(2).	**11**		
801.5(3)(a) Dual flush (or other) water closets are used that have a flush volume of 1.2 gallons or less and comply with 801.5(2); and all other water closets comply with 801.5(2)			
1 fixture	**1**		
2 fixtures	**2**		
3+ fixtures	**3**		
801.5(3)(b) One or more urinals are installed with a flush volume of 0.5 gallons (1.9L) or less when tested in accordance with ASME A112.19.2 and all other water closets comply with 801.6(2).	**8**		
801.5(3)(c) One or more composting or waterless toilets and/or urinals are installed and all other water closets comply with 801.6(2).	**6**		
801.6 Irrigation systems.			
801.6.1 Multi-stream, multi-trajectory rotating nozzles are installed in lieu of spray nozzles for turf or landscaping.	**6**		
801.6.2(1) Drip irrigation is installed for landscape beds.	**4**		
801.6.2(2) Subsurface drip is installed for turf grass areas.	**4**		
801.6.3 Landscape Plan & Implementation are executed by a certified WaterSense Professional or equivalent as approved by adopting entity.	**5**	5	
801.6.4 Drip Irrigation Zones Implemented show plant type by name and water use or need for each emitter.	**10**		
801.6.5 The irrigation system(s) is controlled by a smart controller.			
(1) Evapotranspiration (ET) based irrigation controller with a rain sensor or soil moisture sensor based controller.	**8**		
(2) No irrigation is installed and a landscape plan is developed in accordance with Section 503.5, as applicable.	**15**		
801.7.1 Rainwater is used for irrigation in accordance with one of the following:			
(1) Rainwater is diverted for landscape irrigation without impermeable water storage.	**5**		
(2) Rainwater is diverted for landscape irrigation with impermeable water storage.			
(a) 50-499 gallon storage capacity	**5**		
(b) 500-2499 gallon storage capacity	**10**		
(c) 2500+ gallon storage capacity	**15**		
(d) All irrigation demands are met by rainwater capture	**25**		
801.7.2 Rainwater is used for interior demand in the following way (system is designed by a professional certified by The American Rainwater Catchment Systems Association or equivalent).			
1 fixture for partial domestic demand	**5**		
2 fixtures for partial domestic demand	**10**		
3+ fixtures for partial domestic demand	**15**		
Rainwater provides for total domestic demand	**25**		
801.8 Water filter is installed to reduce sediment and protect plumbing fixtures for the whole building or whole dwelling unit.	**1**		
802 INNOVATIVE PRACTICES			
802.1 Reclaimed, gray, or recycled water is used as permitted by applicable code.			
1 water closet	**5**		

2 water closets	**10**		
3 water closets	**15**		
4+ water closets	**20**		
Irrigation system	**10**		
802.2 One of following automatic shutoff water supply devices is installed. Where a fire sprinkler system is present, installer is to ensure the device will not interfere with the operation of the fire sprinkler system.			
Excess water flow automatic shutoff	**2**		
Leak detention system with automatic shutoff	**2**		
802.3 An Engineered Biological System or Intensive Bioremediation System is installed and the treated water is used on site. Design and implementation is approved by appropriate regional authority.	**20**		
802.4 Where a humidifier is required, a recirculating humidifier is used in lieu of a traditional "flow through" type.	**1**		
802.5 Advanced wastewater (aerobic) treatment system is installed and treated water is used on site.	**20**		
900 INDOOR ENVIRONMENTAL QUALITY			
901 POLLUTANT SOURCE CONTROL			
901.1 Space and water heating options.			
901.1.1 Natural draft furnaces, boilers or water heaters are not located in conditioned spaces, including conditioned crawlspaces. Natural draft furnaces, boilers and water heaters are permitted to be installed within the conditioned spaces if located in a mechanical room that has an outdoor air source, and is otherwise sealed and insulated to separate it from the conditioned space(s).	**5**		
901.1.2 Air handling equipment or return ducts are not located in the garage, unless placed in isolated, air-sealed mechanical rooms with an outside air source.	**5**	5	
901.1.3 The following combustion space heating or water heating equipment is installed within conditioned space:			
(1)(a) All furnaces or all boilers are power vent	**3**		
(1)(b) All furnaces or all boilers are direct vent	**5**		
(2)(a) All water heaters are power vent	**3**		
(2)(b) All water heaters are direct vent	**5**	5	
901.1.4 Gas-fired fireplaces and direct heating equipment is listed and is installed in accordance with the NFPA National Fuel Gas Code or ICC International Fuel Gas Code or the applicable local gas appliance installation code. Gas-fired fireplaces and direct heating equipment are vented to the outdoors.	**Mandatory, if applicable**	No gas fireplace or heating equipment	
901.1.5 Natural gas and propane fireplaces are direct vented, have permanently fixed glass fronts or gasketed doors, and comply with CSA ANSI Z21.88/CSA 2.33 or CSA ANSI Z21.50b/CSA 2.22b.	**7**		
901.1.6 Heat pump air handler is installed in conditioned or unconditioned space.			
(1) Unconditioned space	**2**		
(2) Conditioned space	**5**	5	
901.2 Solid fuel-burning appliances.			
901.2.1 Solid fuel-burning fireplaces, inserts, stoves and heaters are code compliant and are in accordance with the following requirements:			
901.2.1(1) Site-built masonry wood-burning fireplaces are equipped with outside combustion air and a means of sealing the flue and the combustion air outlets to minimize interior air (heat) loss when not in operation.	**Mandatory 4 points if applicable**	No site built wood burning 0	
901.2.1(2) Factory-built, wood-burning fireplaces are in accordance with the certification requirements of UL 127 and are EPA certified.	**Mandatory 6 points if applicable**	No factory-built wood-burning 0	
901.2.1(3) Wood stove and fireplace inserts, as defined in UL 1482 Section 3.8, are in accordance with the certification requirements of UL 1482 and are in accordance with the emission requirements of the EPA	**Mandatory 6 points if applicable**	No wood stove or fireplace inserts 0	
901.2.1(4) Pellet (biomass) stoves and furnaces are in accordance with the requirements of ASTM E1509 or are EPA certified.	**Mandatory 6 points if applicable**	No pellet stove or furnace 0	
901.2.1(5) Masonry heaters are in accordance with the definitions in ASTM E1602 and ICC IBC, Section 2112.1.	**Mandatory 6 points if applicable**	No masonry heater 0	
901.2.2 Fireplaces, wood stoves, pellet stoves, or masonry heaters are not installed.	**7**	7	
901.3 Garages are in accordance with the following:			
901.3(1)(a) Where installed in the common wall between the attached garage and conditioned space, the door is tightly sealed and gasketed.	**Mandatory 2 points if applicable**	Met 2	
901.3(1)(b) A continuous air barrier is provided between walls and ceilings separating the garage space from the conditioned living spaces.	**Mandatory 2 points if applicable**	Met 2	
901.3(1)(c) For one- and two-family dwelling units, a 100 cfm (47 L/s) or greater ducted, or 70 cfm (33 L/s) cfm or greater unducted wall exhaust fan is installed and vented to the outdoors, designed and installed for continuous operation, or has controls (e.g., motion detectors, pressure switches) that activate operation for a minimum of 1 hour when either human passage door or roll-up automatic doors are operated.	**4**	8	
901.3(2) A carport is installed, the garage is detached from the building, or no garage is installed.	**10**		
901.4(1) Structural plywood used for floor, wall, and/or roof sheathing is compliant with DOC PS 1 and/or DOC PS 2. OSB used for floor, wall, and/or roof sheathing is compliant with DOC PS 2. The panels are made with moisture resistant adhesives. The trademark indicates these adhesives as follows: Exposure 1 or Exterior for plywood, and Exposure 1 for OSB.	**Mandatory**	Met	
901.4(2)-(6) Wood materials. A minimum of 85% of material within a product group (i.e., wood structural panels, countertops, composite trim/doors, custom woodwork, and/or component closet shelving) is manufactured in accordance with the following:	**10 points maximum**	10	
901.4(2) Particleboard and MDF (medium density fiberboard) is manufactured and labeled in accordance with CPA A208.1 and CPA A208.2, respectively.			
countertops	**2**		
composite trim	**2**	2	
custom woodwork	**2**	2	
shelving	**2**	2	
901.4(3) Hardwood plywood in accordance w/ HPVA HP-1 & HUD Title 24, Part 3280.			
countertops	**2**		
composite trim	**2**		
custom woodwork	**2**		
shelving	**2**		
901.4(4) Particleboard, MDF, or hardwood plywood is in accordance with CPA 2.			
countertops	**3**		
composite trim	**3**		
custom woodwork	**3**		
shelving	**3**		
901.4(5) Composite wood or agrifiber panel products contain no added urea-formaldehyde or are in accordance with the CARB Composite Wood Air Toxic Contaminant Measure Standard.			
countertops	**4**		
composite trim	**4**		
custom woodwork	**4**		
shelving	**4**		
901.4(6) Non-emitting products.			
countertops	**4**	4	
composite trim	**4**		
custom woodwork	**4**		
shelving	**4**		

901.5 Cabinets. A minimum of 85 percent of installed cabinets are in accordance with one or any combination of the following.		composite wood	
(1) All parts of the cabinet are made of solid wood or non-formaldehyde emitting materials such as metal or glass.	**3**	3	
(2) The composite wood used in wood cabinets are in accordance with CARB Composite Wood Air Toxic Contaminant Measure Standard or equivalent as certified by a third-party program such as but not limited to, those in Appendix D.	**5**		
901.6 Carpets. Carpets are in accordance with the following:			
901.6(1) Wall-to-wall carpeting is not installed adjacent to water closets and bathing fixtures.	**Mandatory**	Met	
901.6(2)(a) Carpet in accordance with the emission levels of CDPH/EHLB Standard Method v1.1.	**6**		
901.6(2)(b) Carpet adhesives in accordance with the emission levels of CDPH/EHLB Standard Method v1.1.	**2**		
901.7 Hard-surface flooring. Minimum of 10% of the conditioned floor space has pre-finished hard-surface flooring installed & a minimum of 85% of all prefinished installed hard-surface flooring is in accordance with the emission concentration limits of CDPH/EHLB Standard Method v1.1.	**6**	6	
901.8 Wall coverings. Minimum of 10% of the interior wall surfaces are covered & a minimum of 85% of wall coverings are in accordance with the emission concentration limits of CDPH/EHLB Standard Method v1.1.	**4**		
901.9 Architectural coatings. A minimum of 85% of the architectural coatings are in accordance with either Section 901.9.1 or Section 901.9.3, not both. A minimum of 85% of architectural colorants are in accordance with Section 901.9.2.			
901.9.1 Site-applied interior architectural coatings, which are inside the water proofing envelope, are in accordance with one or more of the following: (1) Zero VOC as determined by EPA Method 24 (2) GreenSeal GS-11 Standard for Paints and Coatings (3) CARB Suggested Control Measure for Architectural Coatings	**5**	5	
901.9.2 Architectural coating colorant additive VOC content is in accordance with Table 901.9.2.	**1**		
901.9.3 Site-applied interior architectural coatings, which are inside the water proofing envelope, are in accordance with the emission levels of CDPH/EHLB Standard Method v1.1	**8**		
901.10 Adhesives and sealants. Interior low-VOC adhesives and sealants located inside the water proofing envelope: A minimum of 85% of site-applied products used within the interior of the building are in accordance with one of the followine, as applicable.			
901.10(1) CDPH/EHLB Method V1.1	**8**		
901.10(2) GreenSeal GS-36	**5**	5	
901.10(3) SCAQMD Rule 1168	**5**		
901.11 Insulation. Emissions of 85 percent of wall, ceiling, and floor insulation materials are in accordance with the emission levels of CDPH/EHLB Standard Method v1.1 except footnote b in Table 4.1 does not apply (i.e., allowable maximum formaldehyde concentration is 16.5 µg/m3 (13.5 ppb)).	**4**	4	
901.12 Carbon monoxide (CO) alarms. Where not required by local codes, a carbon monoxide (CO) alarm is installed in a central location outside of each separate sleeping area in the immediate vicinity of the bedrooms.	**3**	3	
901.13 Building entrance pollutants control. Pollutants are controlled at all main building entrances.			
901.13(1) Exterior grilles or mats	**1**		
901.13(2) Interior grilles or mats	**1**		
901.14 Non-smoking areas. Environmental tobacco smoke is minimized by one or more of the following:			
(1) All interior common areas of a multi-unit building are designated as non-smoking areas with posted signage.	**1**		
(2) Exterior smoking areas of a multi-unit building are designated with posted signage and located a minimum of 25 feet from entries, outdoor air intakes, and operable windows.	**1**		
902 POLLUTANT CONTROL			
902.0 Intent. Pollutants generated in the building are controlled.			
902.1 Spot ventilation.			
902.1.1 Spot ventilation is in accordance with the following:			
902.1.1(1) All bathrooms are vented to the outdoors - rate = 50 cfm or 20 cfm if continuous operation	**Mandatory**	Met 0	
902.1.1(2) Clothes dryers are vented to the outdoors	**Mandatory**	Met	
902.1.1(3) Kitchen exhaust units ducted outdoors & rate of 100 cfm or 25 cfm if continuous operation	**8**	8	
902.1.2 Bathroom or laundry exhaust fan is provided w/ an automatic timer or humidistat.			
902.1.2(1) 1 automatic timer/humidistat devices installed	**5**		timer
902.1.2(2) 2 automatic timer/humidistat devices installed	**7**	7	
902.1.2(3) 3 automatic timer/humidistat devices installed	**9**		
902.1.2(4) 4 or more automatic timer/humidistat devices installed	**11**		
902.1.3 Kitchen range, bathroom, and laundry exhaust are verified to specification. Ventilation airflow at the point of exhaust is tested to a minimum of 100 cfm (47.2 L/s) intermittent or 25 cfm (11.8 L/s) continuous for kitchens, and 50 cfm (23.6 L/s) intermittent or 20 cfm (9.4 L/s) continuous for bathrooms and/or laundry.	**8**		
902.1.4 Exhaust fans are ENERGY STAR, as applicable.	**MAX = 12**	6	
902.1.4(1) ENERGY STAR fans	**2 points per fan**	3 fans	
902.1.4(2) ENERGY STAR fans operating at 1 sone or less	**3 points per fan**		
902.2 Building ventilation systems.			
902.2.1 Whole building ventilation system is implemented per Appendix B.	**Mandatory where the maximum air infiltration rate is less than 5 ACH50.**	ready for continuous operation	
902.2.1(1) Exhaust or supply fan(s) ready for continuous operation and with appropriately labeled controls.	**3**	3	
902.2.1(2) Balanced exhaust and supply fans with supply intakes located in accordance with the manufacturer's guidelines to not introduce polluted air back into the building.	**6**		
902.2.1(3) Heat-recovery ventilator	**7**		
902.2.1(4) Energy-recovery ventilator	**8**		
902.2.2 Ventilation airflow is tested to achieve the design fan airflow at point of exhaust in accordance with section 902.2.1.	**8**		
902.2.3 MERV filters 8 or greater are installed on central forced air systems and are accessible. Designer or installer is to verify that the HVAC equipment is able to accommodate the greater pressure drop of MERV 8 filters.	**3**	3	
902.3 Radon control measures per ICC IRC Appendix F.			
902.3(1) Buildings located in Zone 1 - radon detection system installed	**Mandatory**	Not Zone 1	
902.3(1)(a) passive radon system is installed	**7**		
902.3(1)(b) active radon system is installed	**10**		
902.3(2) Buildings located in Zone 2			
902.3(2)(a) passive radon system for zone 2	**7**	7	
902.4 One of the following HVAC system protection measures is performed.			
902.4(1) HVAC supply registers (boots), return grilles, and rough-ins are covered during construction activities to prevent dust and other pollutants from entering the system.	**3**	3	
902.4(2) Prior to owner occupancy, HVAC supply registers (boots), return grilles, and duct terminations are inspected and vacuumed. In addition, the coils are inspected and cleaned and the filter is replaced if necessary.	**3**		
902.5 Central vacuum system vented to the outside.	**3**		
902.6 Living space contaminants. The living space is sealed to prevent unwanted contaminants.The living space is sealed in accordance with Section 701.4.3.1 to prevent unwanted contaminants.	**Mandatory**	Met	
903 MOISTURE MANAGEMENT: VAPOR, RAINWATER, PLUMBING, HVAC			

903.1 Plumbing			
903.1.1 Cold water pipes in unconditioned spaces are insulated to a minimum of R-4 with pipe insulation or other covering that adequately prevents condensation.	**2**		
903.1.2 Plumbing is not installed in unconditioned spaces.	**5**		
903.2 Duct insulation. Ducts are in accordance with one of the following.			
903.2(1) All HVAC ducts, plenums, and trunks are in conditioned space.	**1**		
903.2(2) All HVAC ducts, plenums, and trunks are in conditioned space. All HVAC ducts are insulated to a minimum of R4.	**3**	3	
903.3 Relative humidity. In climate zones 1A, 2A, 3A, 4A, and 5A as defined by Figure 6(1), equipment is installed to maintain relative humidity (RH) at or below 60% using one of the following:			
903.3(1) Additional dehumidification system(s)	**7**		
903.3(2) Central HVAC system equipped with additional controls to operate in dehumidification mode	**7**		
904 INNOVATIVE PRACTICES			
904.1 Humidity monitoring system. A humidity monitoring system is installed with a mobile base unit that displays a reading of temperature and relative humidity at the base unit with a minimum of two remote units. One remote unit is placed permanently inside the conditioned space in a central location, excluding attachment to exterior walls, and another remote unit is placed permanently outside of the conditioned space.	**2**		
904.2 Kitchen exhaust. Kitchen exhaust unit(s) that equal or exceeds 400 cfm (189 L/s), and make-up air is provided.	**2**		
1000 OPERATION, MAINTENANCE AND BUILDING OWNER EDUCATION			
1001 BUILDING OWNERS' MANUAL FOR ONE- AND TWO-FAMILY DWELLINGS			
1001.1 A building owner's manual is provided that includes the following conditions, as available and applicable. *(Points awarded per two items. Points awarded for both mandatory and non-mandatory items.) NOT AVAILABLE FOR MULTI-UNIT BUILDINGS*	**1 point per 2 items including (1)-(3)** **MAX = 8**	3	
1001.1(1) A green building program certificate or completion document.	**Mandatory**	Met	
1001.1(2) List of green building features (can include the national green building checklist).	**Mandatory**	Met	
1001.1(3) Product manufacturer's manuals or product data sheet for installed major equipment, fixtures, and appliances.	**Mandatory**	Met	
1001.1(4) Maintenance checklist.	**0.5**		
1001.1(5) Information on local recycling programs.	**0.5**	Met	
1001.1(6) Information on available local utility programs that purchase a portion of energy from renewable energy providers.	**0.5**		
1001.1(7) Explanation of the benefits of using energy efficient lighting systems (e.g., compact fluorescent light bulbs, LED) in high usage areas.	**0.5**		
1001.1(8) A list of practices to conserve water and energy.	**0.5**	Met	
1001.1(9) Local public transporation options.	**0.5**	Met	
1001.1(10) A diagram showing the location of safety valves and controls for major building systems.	**0.5**		
1001.1(11) Where frost-protected shallow foundations are used, owner is informed of precautions.	**0.5**		
1001.1(12) List of local service providers that offer regularly scheduled service & maintenance contracts to assure proper performance of equipment & the structure	**0.5**		
1001.1(13) Photo record of framing with utilities installed.	**0.5**		
1001.1(14) List of common hazardous materials often used around the building and instructions for proper handling and disposal of these materials.	**0.5**		
1001.1(15) Information on organic pest control, fertilizers, deicers, and cleaning products.	**0.5**		
1001.1(16) Information on native landscape materials and/or those that have low-water requirements.	**0.5**		
1001.1(17) Information on methods of maintaining the building's relative humidity in the range of 30% to 60%.	**0.5**		
1001.1(18) Instructions for inspecting the building for termite infestation.	**0.5**		
1001.1(19) Instructions for maintaining gutters and downspouts and importance of diverting water a minimum of 5 feet away from foundation.	**0.5**		
1001.1(20) A narrative detailing the importance of maintenance and operation in retaining the attributes of a green-built building.	**0.5**		
1001.1(21) Where storm water management measures are installed on the lot, information on the location, purpose, and upkeep of these measures.	**0.5**		
1002 TRAINING OF BUILDING OWNERS ON OPERATION AND MAINTENANCE FOR ONE- AND TWO-FAMILY DWELLINGS AND MULTI-UNIT BUILDINGS			
1002.1 Building owners are familiarized with the role of occupants in achieving green goals. On-site training is provided to the responsible party(ies) regarding equipment operation and maintenance, control systems, and occupant actions that will improve the environmental performance of the building. These include: **(1) HVAC filters** **(2) thermostat operation and programming** **(3) lighting controls** **(4) appliances operation** **(5) water heater settings and hot water use** **(6) fan controls**	**8**	8	
1003 CONSTRUCTION, OPERATION, AND MAINTENANCE MANUALS AND TRAINING FOR MULTI-UNIT BUILDINGS			
1003.0 Intent. Manuals are provided to the responsible parties (owner, management, tenant, and/or maintenance team) regarding the construction, operation, and maintenance of the building. Manuals are to include information regarding those aspects of the building's construction, maintenance, and operation that are within the area of responsibilities of the respective recipient. *NOT AVAILABLE FOR SINGLE-FAMILY DWELLINGS.*			
1003.1 A building construction manual, including five or more of the following, is compiled and distributed in accordance with the intent of this practice. *NOT AVAILABLE FOR SINGLE-FAMILY DWELLINGS.*	**1 point per 2 items including (1)-(3)** **MAX = 4** **5+ items must be Met**		
1003.1(1) A narrative detailing the importance of constructing a green building, including a list of green building attributes included in the building.	**Mandatory**	NA	
1003.1(2) A local green building program certificate as well as a copy of the National Green Building Standard™ and the individual measures achieved by the building.	**Mandatory**	NA	
1003.1(3) Warranty, operation, and maintenance instructions for all equipment, fixtures, appliances, and finishes.	**Mandatory**	NA	
1003.1(4) Record drawings of the building.	**0.5**		
1003.1(5) A record drawing of the site including stormwater management plans, utility lines, landscaping with common name & genus/species of plantings.	**0.5**		
1003.1(6) A diagram showing the location of safety valves and controls for major building systems.	**0.5**		
1003.1(7) A list of the type and wattage of light bulbs installed in light fixtures.	**0.5**		
1003.1(8) A photo record of framing with utilities installed. Photos are taken prior to installing insulation and clearly labeled.	**0.5**		
1003.2 Operations manuals are created and distributed to the responsible parties in accordance with 1003.0. Between all of the operation manuals, five or more of the following options are included. *NOT AVAILABLE FOR SINGLE-FAMILY DWELLINGS.*	**1 point per 2 items including (1)-(3)** **MAX = 5** **5+ items must be Met**		
1003.2(1) A narrative detailing the importance of operating and living in a green building.	**Mandatory**	N/A	
1003.2(2) A list of practices to conserve water and energy.	**Mandatory**	N/A	
1003.2(3) Information on methods of maintaining the building's relative humidity in the range of 30% to 60%.	**0.5**	N/A	
1003.2(4) Information on opportunities to purchase renewable energy from local utilities or national green power providers and information on utility and tax incentives for the installation of on-site renewable energy systems.	**0.5**		
1003.2(5) Informtation on local and on-site recycling and hazardous waste disposal programs and, if applicable, building recycling and hazardous waste handling and disposal procedures.	**0.5**		
1003.2(6) Local public transportation options.	**0.5**		

1003.2(7) Explanation of the benefits of using compact fluorescent light bulbs, LEDs, or other high-efficiency lighting.	**0.5**		
1003.2(8) Information on native landscape materials and/or those that have low water requirements.	**0.5**		
1003.2(9) Information on radon mitigation, if applicableInformation on the radon mitigation system, where applicable.	**0.5**		
1003.2(10) A procedure for educating tenants in rental properties on the proper use, benefits, and maintenance of green building systems including a maintenance staff notification process for improperly functioning equipment	**0.5**		
1003.3 Maintenance manuals are created and distributed to the responsible parties in accordance with 1003.0. Between all of the maintenance manuals, five or more of the following options are included. *NOT AVAILABLE FOR SINGLE-FAMILY DWELLINGS.*	**1 point per 2 items including 1003.3(1)** **MAX = 4** **5+ items must be Met**		
1003.3(1) A narrative detailing the importance of maintaining a green building. This narrative is included in all responsible parties' manuals.	**Mandatory**	N/A	
1003.3(2) A list of local service providers that offer regularly scheduled service and maintenance contracts to assure proper performance of equipment and the structure.	**0.5**		
1003.3(3) User-friendly maintenance checklist including: **(a)** HVAC filters **(b)** thermostat operation and programming **(c)** lighting controls **(d)** appliances and settings **(e)** water heater settings **(f)** fan controls	**0.5**		
1003.3(4) List of common hazardous materials often used around the building and instructions for proper handling and disposal of these materials.	**0.5**		
1003.3(5) Information on organic pest control, fertilizers, deicers, and cleaning products.	**0.5**		
1003.3(6) Instructions for maintaining gutters and downspouts and importance of diverting water a minimum of 5 feet away from foundation.	**0.5**		
1003.3(7) Instructions for inspecting the building for termite infestation.	**0.5**		
1003.3(8) A procedure for rental tenant occupancy turnover that preserves the green features.	**0.5**		
1003.3(9) An outline of a formal green building training program for maintenance staff.	**0.5**		