

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold

Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:



This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		Verifier Notes:
			AT ROUGH	AT FINAL	
<b>500 LOT DESIGN, PREPARATION AND DEVELOPMENT</b>					
<b>501 LOT SELECTION</b>					
<b>501.1 Lot. The lot is selected to minimize environmental impact by one or more of the following:</b>					
(1) An infill lot is selected	4				maybe
(2) A greyfield lot, OR an EPA-recognized brownfield lot	5				<input type="checkbox"/> Greyfield <input type="checkbox"/> Brownfield
<b>501.2 Mass Transportation: A range of mass transportation choices are promoted by one or more of the following:</b>					
(1) Access to mass transit	3				
(2) Pedestrian activity promoted	3				
(3) Community resources (6 or more) close by	3				<input type="checkbox"/> recreational facilities <input type="checkbox"/> parks <input type="checkbox"/> grocery store <input type="checkbox"/> post office <input type="checkbox"/> place of worship <input type="checkbox"/> community center <input type="checkbox"/> other _____ <input type="checkbox"/> day care center <input type="checkbox"/> bank <input type="checkbox"/> school <input type="checkbox"/> restaurant <input type="checkbox"/> medical/dental office <input type="checkbox"/> laundromat/dry cleaner
<b>502 PROJECT TEAM, MISSION STATEMENT AND GOALS</b>					
502.1 A knowledgeable team & mission statement.	4	4	4		
<b>503 LOT DESIGN</b>					
<b>503.1 Natural resources on the building site are conserved by one or more of the following:</b>					
(1) A natural resources inventory	5	5	5		Called in Bruce Paden tree service to assess standing trees and devise
(2) Conservation of high priority resources	6	6	6		<a href="#">site plan uses foot print of old house removed by others prior to construction to keep</a>
(3) Protected under the direction of a qualified professional	4	4	4		established and protected trees per tree service recommendation.
(4) Basic training natural resource protection for the on-site supervisor.	4	4	4		M. Chandler has ten years training w/ Haw River Assembly and also plant taxonomy training from UNC
(5) All tree pruning by a Certified Arborist	2	2	?		Trees and shrubs were pruned and transplanted out of harms way. (by a Certified
(6) Maintenance of vegetation per TCIA A30C	3				
<b>503.2 Slope disturbance is minimized by one or more of the following: (Points awarded only if there are developable steep slopes on the lot.)</b>					
(1) All or a percentage of development on steep slopes is avoided.					
(a) less than 25% of the slope is undisturbed	2*			4	
(b) 25% to 75% of the slope is undisturbed	3*				
(c) >75% of the slope is undisturbed	4*	4			
(2) Hydrological/soil stability study completed/used					
(a) < 25% of roads aligned to reduce cut/fill	1*			5	<a href="#">Drive was placed on top of old drive from previous use as farm. French drains were used extensively to control erosion</a>
(b) 25-75% of roads aligned to reduce cut/fil	3*				
(c) >75% of roads aligned to reduce cut/fil	5*	5			
(4) Erosion reduced through use of terracing, retaining walls, landscaping and restabilization	6	6	6		<a href="#">site includes terracing and retention wall.</a>
(5) Underground parking uses natural slope	4				
<b>503.3 Soil disturbance and erosion are minimized by one or more of the following: (also see 504.3)</b>					
(1) Construction schedule minimizes soil exposure	5				
(2) Alternate utilities installation	5				<input type="checkbox"/> tunneling instead of trenching <input type="checkbox"/> use of smaller (low ground pressure) equipment or geomats to spread the <input type="checkbox"/> share utility trenches or easements <input type="checkbox"/> utilities under paved surfaces instead of yards
(3) Clearing/grading limits shown on the plan	5	5	5		<a href="#">site plan uses foot print of old house removed by others prior to construction to keep</a>
\					
(1) Natural water/drainage features are preserved	6	6	6		existing swale and water collection preserved/ enhanced
(2) Storm water plan used to minimize concentrated flows & simulates natural flows	6	6	6		all water from roof collected and directed to existing drainage swale and small lake on property.
(3) All or a percentage of impervious surfaces are minimized and permeable materials are used for driveways, parking areas, walkways, and patios.					
(a) less than 25 % of hardscape is permeable	1*				
(b) 25-75% of hardscape is permeable	3*				
(c) greater than 75% of hardscape is permeable	5*				
(4) >75 % of the roof is vegetated (green roof).	3				

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold

Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET: Gold



This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED								
			AT ROUGH	AT FINAL							
<b>503.5 A landscape plan limits water &amp; energy use &amp; preserves/enhances the natural environment.</b>											
(1) A plan to restore/enhance natural vegetation and to ensure denuded areas are quickly vegetated	5	5	5		elaborate landscape plan by Caroline Severson was developed during construction to restore site w/ native plants.						
(2) Native or regionally appropriate grass, vegetation, & trees are used	4	4	4		Landscaping focused on weeding invasive species and restoring native plants.						
(3) A percentage of all turf areas are limited											
(a) 0 percent of the lot is turf	4*										
(b) turf percent of lot is less than 25 percent	3*	3									
(c) turf is 25% to less than 50% of lot	2*		3		no grass planted; all mulched						
(d) turf is 50 percent to 75 percent of lot	1*										
(4) Plants with similar watering needs are grouped	5				yes						
(5) Trees will provide summer shading of streets, parking, & buildings to moderate temperatures	5	5			trees preserved esp to west of building and parking.						
(6) Vegetative wind breaks designed	4										
(7) On-site tree trimmings/grinding used for mulch & cut trees are recycled for lumber or pulp	3	3			cut trees sold for lumber except for those saved for firewood and used for decorative posts and vanity base						
(8) Pest management plan to minimize chemicals	4	4	0		Additional termite flashing and systems used, but soil treatment used as well						
<b>503.6 Measures planned to support wildlife habitat.</b>	4										
<b>503.7 Mixed-use development is incorporated.</b>	6										
<b>503.8 (1) Environmentally sensitive areas avoided</b>	3	3	3		avoided development in ravine preserving tree copse						
<b>503.8 (2) Compromised environmentally sensitive areas are mitigated or restored</b>	3										
<b>503.9(1) density is 7 to &lt; 14 dwelling units/acre</b>	4*										
<b>503.9(2) density is 14 to &lt; 21 dwelling units/acre</b>	7*										
<b>503.9(3) density is 21 or greater dwelling units/acre</b>	10*										
<b>504 LOT CONSTRUCTION</b>											
<b>504.1 On-site supervision provided during clearing, grading, paving, &amp; utility installation to ensure specified green practices are followed. (See 503.3)</b>	4	4	4								
<b>504.2 Trees and Vegetation. Designated trees and vegetation are preserved by one or more of the following:</b>											
(1) Fencing to protect trees & vegetation.	3										
(2) Trenching, grading, & compaction avoided in "tree save" areas	4	4	4								
(3) Pruning, fertilizing, and watering used to mitigate damage to trees/vegetation	4	4	4								
<b>504.3 Soil disturbance and erosion. On-site soil disturbance and erosion are minimized by one or more of the following: (also see Section 503.3)</b>											
(1) Limits of clearing/grading are staked out	5	5	5		yes						
(2) "No disturbance" zones for vegetation	5	5	5		yes						
(3) Sediment/erosion controls are installed	5	5	5		added based on rough inspection						
(4) Topsoil stockpiled/stabilized for later use	5	5	5		yes						
(5) Measures taken to reduce soil compaction	3										
(6) Disturbed areas stabilized within 14 days	3										
(7) Soil improved with organic amendments	3	3	3		4 trucks containing 20yds each of mulch applied to site to amend soil						
(8) Alternative utility installation	5				<input type="checkbox"/> tunneling instead of trenching <input type="checkbox"/> use of smaller equipment <input type="checkbox"/> use of low ground pressure equipment <input type="checkbox"/> use of geomats <input type="checkbox"/> shared utility trenches or easements						
<b>505 INNOVATIVE PRACTICES</b>											
<b>505.1 Driveways or parking areas are shared.</b>	4										
<b>505.2 Heat island mitigation. Heat island mitigation. Any combination of the following strategies are provided for a minimum of 50 percent of the horizontal surface area of the hardscape:</b>											
(1) Shading of hardscaping provided to reduce heat island	4				<input type="checkbox"/> Shading of hardscaping provided to reduce heat island. <input type="checkbox"/> Horizontal hardscaping has solar reflectance index of 29 or greater						
(2) Horizontal hardscaping has solar reflectance index of 29 or greater											
		Pts Claimed	119	83	36	GREEN LEVEL: BRONZE SILVER GOLD EMERALD				This Section	
		Points Awarded		105	0	Points needed for:	39	66	93	119	GOLD
		TOTAL AWARDED		105		Points above/below:	66	39	12	-14	

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build  
 Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC  
 Community/Lot #: \_\_\_\_\_

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units = \_\_\_\_\_

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>600 RESOURCE EFFICIENCY</b>					
<b>601 QUALITY OF CONSTRUCTION MATERIALS AND WASTE</b>					
<b>601.1 Conditioned floor area, is limited.</b>					
(1) less than or equal to 1,000 square feet (93 m <sup>2</sup> )	15				3193  <input type="checkbox"/> Square footage = <u>3193</u> Enter a negative integer (1 point for every 100 ft2 over 4000)
(2) less than or equal to 1,500 square feet (139 m <sup>2</sup> )	12				
(3) less than or equal to 2,000 square feet (186 m <sup>2</sup> )	9				
(4) less than or equal to 2,500 square feet (232 m <sup>2</sup> )	6				
(5) greater than 4,000 square feet (For every 100 square feet over 4,000 square feet, one point is to be added in Table 303, Category 7.)	Mandatory				
<b>Multi-Unit Building Note: For a multi-unit building, use a weighted average of the individual unit sizes in qualifying for available points.</b>					
601.2 Structural systems/advanced framing techniques optimize material usage.	3 Points each MAX PTS. = 9	9	9		<input checked="" type="checkbox"/> floor <input checked="" type="checkbox"/> roof <input checked="" type="checkbox"/> ext. Walls <input checked="" type="checkbox"/> int. Walls <input type="checkbox"/> single top plate <input checked="" type="checkbox"/> no headers in non-bearing walls <input checked="" type="checkbox"/> ladder blocking at wall intersections <input checked="" type="checkbox"/> 2 stud corners <input checked="" type="checkbox"/> right sized headers
<b>601.3 Building Dimensions/layouts designed to reduce material cuts &amp; waste.</b>					
(1) floor area	3	3	3		
(2) wall area	3				
(3) roof area	3				
(4) cladding or siding area	3				
(5) penetrations or trim area	1				
601.4 Detailed framing/structural plans, material lists, on-site cut lists for framing/structural matls	4	4	4		
<b>601.5 Precut/preassembled components, panelized, or precast assemblies are utilized for a minimum of 90% of that construction (601.5 MAX PTS. = 13)</b>					
(1) floor system	4	4	4		1 joists
(2) wall system	4	4	0		not a panelized or pre-assembled wall system;
(3) roof system	4	4	4		trusses in majority of roof
(4) modular construction above grade	13				
(5) manufactured home construction above grade	13				
<b>601.6 Stories above grade are stacked.</b>					
(1) first stacked story	4				
(2) for each additional stacked story (MAX PTS. =4)	2 each				
<b>601.7 Building materials/assemblies do not require additional site applied material for finishing. (MAX PTS. = 12)</b>					
(1) 90 percent or more of material (Points awarded for each material or assembly.)	5 each*	10			<input type="checkbox"/> pigmented, stamped, decorative, or final finish concrete or masonry <input checked="" type="checkbox"/> trim not requiring paint or stain
(2) 50 percent to less than 90 percent of material (Points awarded for each material. 4 mt/ls max.)	2 each*		10		<input checked="" type="checkbox"/> window, skylight, and door assemblies not requiring paint/stain on exterior and/or interior <input checked="" type="checkbox"/> wall coverings/systems not requiring paint/stain or other type of finishing
601.8 Frost-protected shallow foundations, pier and pad foundations, post foundations, etc.	3				<input type="checkbox"/> Frost-protected shallow foundations <input type="checkbox"/> Pier and pad foundations <input type="checkbox"/> Post foundations <input type="checkbox"/> Other similar foundation types
601.9 Adobe, concrete, log, earth systems provide sufficient structural and thermal characteristics (>75 percent of the exterior wall area)	4				<input type="checkbox"/> adobe <input type="checkbox"/> concrete and/or masonry <input type="checkbox"/> logs <input type="checkbox"/> rammed earth
<b>602 ENHANCED DURABILITY AND REDUCED MAINTENANCE</b>					
<b>602.1 Entries at exterior door assemblies are covered (MAX PTS. = 5)</b>					
(1) main entrance door	3				
(2) additional covered door assembly	1 each	5	5		
602.2 Roof overhangs are provided per table (See VRG)	4	4	4		37" overhangs including gutters
<b>602.3 Foundation drainage.</b>					
602.3.1 Where required by the ICC IRC or IBC for habitable and usable spaces below grade, exterior drain tile is installed	Mandatory		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NA		
602.3.2 Interior & exterior foundation perimeter drains sloped to discharge to daylight, dry well, or sump pit	4	4	4		yes
602.4 Drip edge is installed at all eaves & gable edges.	3	3	3		verified on site and in photos
602.5 Gutter/downspout/splash blocks grading carry water a min of 5' from perimeter foundation.	4	4	4		yes
602.6 Finish grade at all sides is sloped a minimum of 6 inches (150 mm) of fall within 10'	Mandatory			<input type="checkbox"/>	yes

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
602.7 Continuous physical termite barrier installed in areas w/ termites per figure in VRG.	4	4	4		metal flashing installed on top of foundation wall b/w block and sill plate
<b>602.8 Termite-resistant materials are used as follows (per figure in VRG):</b>					
(1) Slight to moderate termites - foundation, all structural walls, floors, concealed roof spaces, decks, and exterior claddings within the first 2 feet	2*				
(2) Moderate to heavy termites - foundation, all structural walls, floors, concealed roof spaces, decks, and exterior claddings within the first 3 feet	4*				
(3) Very heavy termites - foundation, all structural walls, floors, concealed roof spaces, exterior decks, and exterior claddings	6*				
602.9 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		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NA		
602.10 When ice damming is a problem, ice barrier at roof eaves extends at a min. of 24" inside the ext. wall.	Mandatory		<input type="checkbox"/> OK <input checked="" type="checkbox"/> NA		
602.11 Enhanced foundation waterproofing is installed.	4	4	4		<input checked="" type="checkbox"/> Rubberized coating <input type="checkbox"/> Drainage mat
602.12 Flashing details on plans & installed at ALL as applicable: (1) exterior fenestrations/doors; (2) roof valleys; (3) deck/balcony intersections; (4) roof/wall and roof/chimney intersections; (5) drip cap above windows/doors not flashed or protected by overhangs.	6	6	6		<a href="#">tear sheets provided on site.</a>
602.13 Energy Star Cool Roof or landscaped roof.	3				<input type="checkbox"/> ES Cool Roof <input type="checkbox"/> landscape Roof
<b>602.14 Occupant recycling is facilitated by one or more of the following methods:</b>					
(1) A built-in collection space in each kitchen & an aggregation/pick-up space in garage or other area	3	3	3		yes
(2) Compost facility provided on-site	3	3	3		yes
<b>603 REUSED OR SALVAGED MATERIALS</b>					
603.1 Existing buildings and structures are reused, modified, or deconstructed in lieu of demolition. (MAX PTS=12)	1 per 200ft <sup>2</sup> reused				yes, but prior to our involvement in the project
603.2 Material and labor cost of salvaged materials is equal to or exceeds 1 % of the total construction cost.	3			3	bark siding, reclaimed pine floors and beams (Jamie added on 5/3/10)
603.3 Central storage area or dedicated bins for sorting and reuse of scrap building material.	4	4	4		during construction sorting and salvage was encouraged through recycling bins provided
<b>604 RECYCLED CONTENT BUILDING MATERIALS</b>					
604.1 Building materials w/ recycled content are used. Points per table in VRG	Points per material.	2	2		List major mat'l's: Spider insulation; List minor mat'l's: fly ash concrete for ICF's & exterior slabs,
<b>605 RECYCLED CONSTRUCTION WASTE</b>					
605.1 Construction waste management plan posted at the jobsite & implemented with a goal of recycling a min of 50% of construction and land-clearing waste.	6			6	yes, very little framing waste due to recycling program at wall panel and truss and I-joist plant. On-going waste and smart ordering plan implemented. Plan posted in permit box.
605.2 On-site recycling of 50% by weight of C&D waste (e.g., grinding/application for soil amendment)	7				no, focus is on waste reduction and prevention rather than re-use.
<b>605.3 Recycled construction materials are recycled offsite. ( MAX PTS. = 6)</b>					
	3 pts for 2 materials; 1 for each additional type	3	4		<input checked="" type="checkbox"/> Wood <input checked="" type="checkbox"/> Cardboard <input checked="" type="checkbox"/> Metal <input type="checkbox"/> Drywall <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Shingles <input type="checkbox"/> Concrete <input type="checkbox"/> Other,
<b>606 RENEWABLE MATERIALS</b>					
606.1 Biobased products are used:	MAX PTS. = 8				<input checked="" type="checkbox"/> Certified wood - advantech subfloor, wrenwood lumber and trim <input checked="" type="checkbox"/> Engineered wood <input type="checkbox"/> Bamboo <input type="checkbox"/> Cotton <input type="checkbox"/> Cork <input type="checkbox"/> Straw <input type="checkbox"/> Fiber from crops <input type="checkbox"/> Min Biobased per CFR2902
(1) Two types used, each >0.5% of total mat'l cost	3				<input checked="" type="checkbox"/> Other biobased w/ >50% biobased content <b>Bark Siding recycled from furniture logs rather than shredded for fuel or mulch</b>
(2) Two types used, each >1% of total mat'l cost	6	6		6	
(3) For each additional mat'l >0.5% of total mat'l cost	1 per 2 pts MAX				

**VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold**



Builder/Applicant: Chandler Design Build  
 Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC  
 Community/Lot #:

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>606.2 Wood or wood-based product types are certified to the requirements of a recognized product program:</b>	<b>MAX PTS. = 7</b>				<input type="checkbox"/> AFF American Tree Farm System® <input type="checkbox"/> CSA Sustainable Forest Management System Standards (CA Z809) <input checked="" type="checkbox"/> Forest Stewardship Councils (FSC) Bark Siding FSC listed <input type="checkbox"/> Program for Endorsement of Forest Certification Systems (PEFC) <input checked="" type="checkbox"/> Sustainable Forestry Initiative® Program (SFI) <input checked="" type="checkbox"/> Other product programs mutually recognized by PEFC
(1) Min. 2 products used for minor elements	3	3			
(2) Min. 2 products used for major elements	4			4	
<b>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). (2 points awarded per material)</b>	<b>MAX PTS. = 6</b>		2		List mat'l's: Huber Advantech Subfloor
<b>607 RESOURCE-EFFICIENT MATERIALS</b>					
<b>607.1 Products containing fewer materials are used to achieve the same end-use requirements as conventional products, (3 points awarded for each material.)</b>	<b>MAX PTS. = 9</b>	6	6		<input type="checkbox"/> lighter, thinner brick with bed depth less than 3 inches and/or brick with coring of more than 25 percent <input checked="" type="checkbox"/> engineered wood or engineered steel products <input checked="" type="checkbox"/> roof or floor trusses
<b>608 INDIGENOUS MATERIALS</b>					
<b>608.1 Indigenous materials are used for major elements of the building.</b>	<b>MAX PTS. = 10</b>				List mat'l's: interior trim board and wood ceilings are pine harvested and processed from NC forests (WrennWood); Bark siding,
(1) one type of material	2				
(2) for each additional type	2 each	2	4		
<b>609 LIFE CYCLE ANALYSIS</b>					
<b>609.1 A more environmentally preferable product selected based upon a Life Cycle Assessment</b>	<b>MAX PTS. = 15</b>				List products compared:
(1) per product comparison	3 each*				
(2) whole building LCA analysis	15*				
<b>610 INNOVATIVE PRACTICES</b>					
<b>610.1 Product manufacturer's operations are ISO 14001 certified. The value of building products from ISO 14001 facilities is 1% or more of the est. total building materials cost. (1 point awarded per percent.)</b>	<b>MAX PTS. = 10</b>				List Products:
	Pts Claimed	104	50	54	<b>GREEN LEVEL:</b> BRONZE SILVER GOLD EMERALD
	Points Awarded		96	19	<b>Points needed for:</b> 45 79 113 146
	<b>TOTAL AWARDED</b>			115	<b>Points above/below:</b> 70 36 2 -31
<b>700 ENERGY EFFICIENCY</b>					
<b>701 MINIMUM ENERGY EFFICIENCY REQUIREMENTS</b>					
User must select either <i>Performance (701.1.1)</i> , <i>Prescriptive (701.1.2)</i> , or <i>Alternative Bronze (701.1.3)</i> compliance path. (Choose one path only)					
<b>701.1 The building shall comply with either Section 702 or Section 703</b>					
<b>701.1.1 Minimum Performance Path requirements.</b> A building complying with Section 702 shall exceed the ICC IECC by 15%, and shall include a minimum of 2 practices from Sec. 704, <b>OR meet 701.1.2 OR 701.1.3</b>	<b>MANDATORY</b>	<input type="checkbox"/>			
<b>701.1.2 Minimum Prescriptive Path requirements.</b> A building complying with Sec. 703 shall obtain a minimum of 30 points from Sec. 703, and shall include a minimum of 2 practices from Sec. 704.	<b>701.1.2 -OR-</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		
<b>701.1.3 Alternative Bronze Level compliance.</b> Any ENERGY STAR Qualified Home achieves the Bronze Level for Chapter 7.	<b>701.1.3 (30)</b>				
<b>701.2 Emerald Level points. The Performance Path shall be used to achieve the Emerald Level.</b>		<input type="checkbox"/>	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NA		
<b>701.3 A review by third party shall be conducted to verify design and compliance with Chapter 7 points.</b>				<input checked="" type="checkbox"/>	Review by: <u>jamie Hager southern energy management</u>
<b>701.4 Mandatory practices.</b>					
<b>701.4.1.1</b> Space heating/cooling sized per Manual J	<b>Mandatory</b>		<input checked="" type="checkbox"/>		
<b>701.4.1.2</b> Radiant/hydronic heating system designed using industry-approved guidelines	<b>Mandatory</b>		<input checked="" type="checkbox"/>		<input type="checkbox"/> NA
<b>701.4.2.1</b> Ducts sealed w/ UL181 tape/mastic/gasket	<b>Mandatory</b>		<input checked="" type="checkbox"/>		<input type="checkbox"/> NA
<b>701.4.2.2</b> Building cavities are not used as supply ducts	<b>Mandatory</b>		<input checked="" type="checkbox"/>		<input type="checkbox"/> NA

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>701.4.3.1 General.</b> Insulation and air sealing is in accordance with the following.					
(1) <b>Insulation.</b> Insulation is installed in accordance with the manufacturer's instructions or local code	Mandatory		<input checked="" type="checkbox"/>		
(2) <b>Shafts</b> opening to unconditioned space are sealed with blocking/flashing; gaps are sealed with caulk or foam	Mandatory		<input checked="" type="checkbox"/>		<input type="checkbox"/> NA
<b>701.4.3.2(1) Floors.</b> (incl insulated floors above garages and cantilevered floors) (a) Insulation is installed to maintain contact with the underside of the subfloor, enveloping ductwork & without compression or air gaps (b) Batt & loose-fill insulation is held in place by permanent attachments	Mandatory		<input checked="" type="checkbox"/>		<input type="checkbox"/> NA
<b>701.4.3.2(2) Crawlspace.</b> Where insulated, crawlspace wall insulation is permanently attached to the walls. Exposed earth in unvented crawlspaces is covered with continuous vapor retarder with overlapping joints that are taped or masticed.	Mandatory			<input checked="" type="checkbox"/>	<input type="checkbox"/> NA
<b>701.4.3.3 Walls</b>					
(1) <b>Windows and doors.</b> Caulking, gasketing, flashing tape, foam sealant, or weather-stripping forms a complete air barrier.	Mandatory		<input checked="" type="checkbox"/>		
(2) Band/rim joists insulated & air sealed.	Mandatory		<input checked="" type="checkbox"/>		
(3) (a) Sill sealer is installed between foundation and sill plate; AND (b) Seal the bottom plate of exterior walls.	Mandatory		<input checked="" type="checkbox"/>		
(4) Skylight shafts and knee walls are insulated to the same level as the exterior walls.	Mandatory		<input type="checkbox"/>		<input checked="" type="checkbox"/> NA
(5) Code required building envelope insulation and air sealing are not disrupted at exterior architectural features such as stairs & decks.	Mandatory		<input checked="" type="checkbox"/>		
<b>701.4.3.4 Ceilings and attics.</b>					
(1) <b>Attic access (except unvented attics).</b> Attic access, knee wall door, or drop-down stair is covered with insulation and gasketed	Mandatory			<input type="checkbox"/>	<input checked="" type="checkbox"/> NA
(2) Recessed light fixtures that penetrate the thermal envelope are airtight, IC-rated, and sealed with gasket, caulk, or foam	Mandatory		<input type="checkbox"/>		<input checked="" type="checkbox"/> NA
(3) Where ceiling/attic assemblies or designs have eave vents, baffles minimize air movement into or under the insulation	Mandatory		<input type="checkbox"/>		<input checked="" type="checkbox"/> NA -- spray foam attic/conditioned attic
<b>701.4.4 Fenestration</b>					
<b>701.4.4.1</b> NFRC-certified windows, exterior doors, skylights, and tubular daylighting devices (TDDs) are ENERGY STAR, or Table 701.4.4.1 (see VRG)	Mandatory		<input checked="" type="checkbox"/>		
<b>702 PERFORMANCE PATH</b>					
<b>702.1</b> Points from Section 702 (Performance Path) shall not be combined with points from Section 703 (Prescriptive Path).	Mandatory		<input type="checkbox"/>		
<b>702.2</b> A documented analysis shows performance in excess of IECC by:					
(1) 15 percent, OR	30			30	% above IECC ___42___
(2) 30 percent, OR	60				
(3) 50 percent, OR	100				
(4) 60 percent	120				
<b>703 PRESCRIPTIVE PATH</b>					
<b>703.1 Building envelope</b>					
<b>703.1.1</b> Where the total building thermal envelope UA is less than required by IECC, Section 402.1.4, the total building thermal envelope UA is in accordance with Table 703.1.1(see VRG). Where insulation is used to achieve these percentages, a third-party grading of the installation as achieving Grade 1 is required. A documented analysis is performed using RESCheck version 4.0.1 or equivalent.	Points per Table 703.1.1*		15		
<b>703.1.2</b> The insulation installation is graded by a third party and is in accordance VRG.	*Points per Table 703.1.2	15			



VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>703.1.3 Building Envelope: Exterior Mass Walls</b>					
703.1.3 More than 75 percent of the above-grade exterior opaque wall area of the building is mass walls. See VRG.	Points per Table 703.1.3				
<b>703.2 Insulation &amp; air sealing</b>					Name of 3rd party: Southern Energy Management
<b>703.2.1 Insulation and air sealing per VRG:</b>					<input checked="" type="checkbox"/> insulation OK at rough
(1) third party verification performed OR	15	15	15		
(2) no third party verification performed	3				
<b>703.3 Fenestration</b>					Points by table: (a) <input checked="" type="checkbox"/> (b) <input type="checkbox"/> 30/.30 - zone 4
703.3.1 The NFRC-certified U-factor and SHGC for windows, exterior doors, skylights, and tubular daylighting devices (TDDs) are in accordance with Table 703.3.1(a) or (b). See VRG.	Points per Table 703.3.1(a) or Table 703.3.1(b)	8	5		
<b>703.4 HVAC equipment efficiency</b>					
703.4.1 Combination space heating and water heating system (combo system) is installed. Devices must have a combined annual efficiency of 0.80.	4	4	4		
<b>703.4.2 Furnace and/or boiler efficiency is in accordance with one of the following:</b>					
(1) Gas and propane heaters:	Points per Table 703.4.2(1), (2), (3), or (4) See VRG	6	10		95% climate zone 4 gas boiler
(2) Oil furnace:					
(3) Gas boiler:					
(4) Oil boiler:					
703.4.3 Boiler has temp. reset or burner delay control	1	1	1		
703.4.4 Heat pump heating efficiency is in accordance with Table 703.4.4. Refrigerant charge is verified	Points per Table 703.4.4	5	5		9.0 hspf
<b>703.4.5 Cooling efficiency is in accordance with one of the following. Refrigerant charge is verified for conformance with manufacturer's instructions.</b>					
(1) Air conditioner and heat pump cooling:	Points per Table 703.4.5(1) or (2)	4	3		>15 SEER climate zone 4
(2) Water source and cooled air conditioners:					
<b>703.4.6 Ground source heat pump is installed by a Certified Geothermal Service Contractor in accordance with one of the following ENERGY STAR® levels:</b>					
(1) Open loop: ≥ 16.2 EER / ≥ 3.6 COP	20*				
(2) Closed loop: ≥ 14.1 EER / ≥ 3.3 COP	20*				
(3) Direct expansion: ≥ 15.0 EER / ≥ 3.5 COP	20*				
(4) Any type: ≥ 24 EER / ≥ 4.3 COP	30*				
703.4.7 ENERGY STAR®, ceiling fan(s) are installed. Fans must be in each unit. Max. Pts. =1 / building	1				
703.4.8 Whole bldg/unit fan(s) with insulated louvers and a sealed enclosure. Fans in each unit. Max. Pts. =2 / building	2				
<b>703.4.9 In multi-unit buildings, an advanced electric and fossil fuel submetering system is installed to monitor electricity and fossil fuel consumption for each unit. At a minimum, the information is available to the occupants on a monthly basis.</b>					
(1) Device provides monthly consumption info	1				
(2) Device provides near real-time energy use info	4				
703.4.10 An ES programmable thermostat in each heating/cooling zone in bldg.	1				
<b>703.5 Water heating design, equipment, and installation</b>					
<b>703.5.1 Water heater Energy Factor (EF) is equal to or greater than the following:</b>					
(1) Gas water heating	per Table 703.5.1(1)(a) or (b)	10	10		>86% gas efficiency -- .96 EF on tankless gas water heater (pre-heated by solar)
(2) Electric water heating	per Table 703.5.1(2)				
(3) Oil water heating	per Table 703.5.1(3)				
(4) Heat pump water heating	per Table 703.5.1(4)				
703.5.2 Desuperheater is installed by a qualified installer or is pre-installed in the factory	per Table 703.5.2				
703.5.3 Drain-water heat recovery system is installed in multi-family units. (Points awarded per building.)	2				
703.5.4.1 Hot water lines insulated to a min of R-4	1				
703.5.4.2 Boiler supply piping is insulated in unconditioned spaces	1				
703.5.5 Indirect fired water heater storage tanks heated from boiler systems are installed	1	1	1		boiler back up for water for radiant floor heat; first heat provided by solar

The NAHB Research Center authorizes use of this document only by participants in the Research Center's Green Building Certification and to facilitate certification by the Research Center

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>704.2 ADDITIONAL PRACTICES</b>					
<b>704.2 Lighting and appliances</b>					
704.2.1 Hard-wired lighting is in accordance with one of the following:					
(1) 50% of hard-wired lighting fixtures, or the bulbs in those fixtures, qualify as ENERGY STAR OR	4*				
(2) 50% percent of the total hard-wired lighting fixtures qualify as ENERGY STAR	8*				
704.2.2 # recessed light fixtures penetrating the thermal envelope are less than 1 per 400 ft2 of conditioned floor area and are in accordance with Section 701.4.3.4(2).	2	2	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) 25 percent of lighting	2*				
(2) 50 percent of lighting	4*				
704.2.4 Tubular daylighting device (TDD) or a skylight with sealed, insulated, low-E glass is installed in all rooms without windows. (Points awarded per building.)	2				
704.2.5 ENERGY STAR® or equivalent appliance(s) are installed:					
(1) refrigerator	5	5	5		<a href="#">Selection worksheet</a>
(2) dishwasher	2	2	2		
(3) washing machine	4	4	4		
704.2.6 Induction cooktop is installed	1				
704.2.7 Occupancy sensors are installed for a minimum of 80 percent of hardwired lighting outlets	1				
<b>704.3 Renewable energy and solar heating and cooling</b>					
704.3.1 Solar space heating and cooling					
704.3.1.1 Building orientation, glazing size, & overhangs are in accordance with sun tempered design (see VRG):	5				
704.3.1.2 Automated solar shading for windows	1				
704.3.1.3 Passive cooling design features are in accordance with three or more of the following:					<input checked="" type="checkbox"/> Exterior shading is provided on east and west windows <input checked="" type="checkbox"/> Overhangs per Section 704.3.1.1(7) (Points not awarded if points are taken for 704.3.1.1.) <input checked="" type="checkbox"/> Windows and/or venting skylights are located to facilitate cross ventilation <input type="checkbox"/> Solar reflective roof or radiant barrier per VRG <input checked="" type="checkbox"/> Internal exposed thermal mass per VRG <input type="checkbox"/> Roofing material with a min. 0.75" continuous air space from the roof deck from
<b>Points for three items:</b>	3	3			
<b>One point for one or more additional items:</b>	1				
704.3.1.4 Passive solar heating design. In addition features in 704.3.1.1, ALL are implemented: (1) Additional glazing per VRG (2) Additional thermal mass per VRG (3) Besides ducts/transfer grilles for 704.3.1.1, forced	4				
704.3.2.1 Solar water heater. SRCC OG 300 rated solar domestic water heating installed. See VRG	Per Table 704.3.2.1			20	Solar water heating system supports potable water and radiant space heating system; potable water heating side has SEF of 3.9 (Solarhot S-SV-DB100P64)
<b>704.3.3 Additional renewable energy options</b>					
704.3.3.1 Photovoltaic panels are installed	1 per 1/10KW				
704.3.3.2 Other on-site renewable energy source is installed (e.g., wind energy, active solar space heat, etc.)	0.5 per 1/10 kW				
<b>704.4 Ducts</b>					
704.4.1 Duct system design & install per Manual C	5*				LEED requirement
704.4.2 Space heating system with no air ducts	15*	15	0		using radiant but also ducts;
704.4.3 Space cooling system with no air ducts	15*				
704.4.4 Ductwork meets ALL of the following: (1) Building cavities are not used as return ductwork. (2) Ducts & equipment are within conditioned space. (3) Ductwork is not installed in exterior walls.	12*	12	12		
704.4.5 Return ducts/transfer grilles in all rooms w/ a door except baths, kitchens, closets, pantries, & laundry	5	5		5	yes dedicated return in master, transfer grilles for back bedrooms, return in office and dining.
<b>704.5 HVAC design and installation</b>					
704.5.1 ACCA Manual S selected heating/cooling equip	1				
704.5.2 HVAC contractor and service technician are certified by a nationally or regionally recognized program	1	1	1		<input type="checkbox"/> NATE <input type="checkbox"/> Radiant Panel Assn <input checked="" type="checkbox"/> Ifg program Other: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> BPI



**VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold**

Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET: Gold



This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED			
			AT ROUGH	AT FINAL		
<b>704.5.3</b> System performance verified by the HVAC contractor for ALL of the following: (1) Start-up procedure per manufacturer's instructions (2) Refrigerant charge verified per VRG (3) Burner is set to fire at nameplate input (4) Air handler setting/fan speed per mfg's instructions	3	3	3		Name of person/company verifying performance: __West Star HVAC Bobby Penland_____	
<b>704.5.4</b> HVAC uses an alternate refrigerant w/ no HCFCs	1			1	added based on final inspection	
<b>704.5.5</b> Manufacturer's air handler info states leakage is <= 2% design airflow at 1-inch w.c. See VRG.	4					
<b>704.6 Installation and performance verification.</b>						
<b>704.6.1</b> 3rd party inspection verifies ALL of the following, as applicable. (1) Ducts per ICC IRC or IMC and ducts are sealed (2) Building envelope air sealing is installed (3) Insulation is installed in accordance with 703.1.2 (4) Windows, skylights, doors flashed/ caulked/ sealed per mfg's recommendations and 703.2.1	5	5	5		<input checked="" type="checkbox"/> OK at rough	
<b>704.6.2</b> Third-party testing is conducted to verify performance.						
<b>704.6.2.1</b> Building envelope leakage rate is demonstrated by blower door test. In addition to the test, the following practices are required:			Testing by: __Jamie Hagar 3.47 ACH 50____ See also 901.1 & 902.2 & 901.2			
(1) Whole building ventilation is provided in accordance with Section 902.2			<input checked="" type="checkbox"/>			
(2) Fossil fuel furnace & water heater is sealed combustion/power vented per 901.1						
(3) Fireplaces and fuel burning appliances are in accordance with Section 901.2						
(4) The maximum leakage rate is in accordance with:						
(a) 5 ACH50	3*		6			
(b) 4 ACH50	6*	6				
(c) 3 ACH50	9*					
(d) 2 ACH50	12*					
(e) 1 ACH50	15*					
<b>704.6.2.2</b> The entire central HVAC duct system tested for leakage at 0.1 inches w.g. The max leakage as a % of design flow is per the following:			Testing by: Southern Energy Management_ Leakage rate %= _2.5_____			
(1) 6% for ductwork entirely outside thermal	15*	5	0	5		
(2) 6% for ductwork entirely inside the thermal	5*					
(3) 6% for ductwork both inside & outside envelope	15*					
<b>704.6.2.3</b> Balanced HVAC air flows are demonstrated by flow hood. Test results are in accordance with both of : (1) Each supply & return register within 25% of design (2) Total airflow is within 10 percent of design flow	8			8	Testing by: __West Star HVAC	
<b>705 INNOVATIVE PRACTICES</b>						
<b>705.1 Whole bldg or dwelling unit device installed to controls or monitors energy consumption. (MAX PTS=7)</b>						
(1) programmable communicating thermostat	2*	2				
(2) energy monitoring device	4*				thermometer located in kitchen to monitor temp in solar storage tank.	
(3) energy management control system	7*					
<b>705.2 Renewable energy service plan is provided as follows:</b>						
(1) Builder uses renewable energy service plan for interim electric service. The builder's local administrative office has renewable energy service.	2					
(2) The buyer of the building selects a renewable energy service plan provided by the utility	5					
	Pts Claimed	139	38	101		
	Points Awarded		109	69		
	<b>TOTAL AWARDED</b>		<b>178</b>			
	<b>GREEN LEVEL:</b>	<b>BRONZE</b>	<b>SILVER</b>	<b>GOLD</b>	<b>EMERALD</b>	<b>This Section</b>
	<b>Points needed for:</b>	30	60	100	120	EMERALD
	<b>Points above/below:</b>	148	118	78	58	

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #: \_\_\_\_\_

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units = \_\_\_\_\_

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>800 WATER EFFICIENCY</b>					
<b>801.1 Indoor hot water usage.</b>					
801.1.1 Indoor hot water usage is reduced by one of the following practices:					
(1) All hot water piping runs to both the kitchen & bathrooms is <= 40 feet & is sized per code, OR	2*				Separate electric water heater for master bath served from main solar tank to minimize energy use.  <input checked="" type="checkbox"/> Tankless <input checked="" type="checkbox"/> Solar <input type="checkbox"/> Recirc. System
(2) All hot water piping runs to both the kitchen & bathrooms is <= 30 feet & is sized per code, OR	3*				
(3) One of the following piping system designs is implemented: (a) structured plumbing w/ demand controlled hot loops, max of 4 cups water contained downstream of recirculating trunk line, OR	6*				
(b) engineered parallel piping (i.e., manifold system) w/ > 15' to parallel piping system & parallel piping to fixture fittings has max of 8 cups, OR	6*				
(c) central core plumbing w/ all plumbing fixture fittings located so the volume of water contained in each pipe run between the water heater & fixture fitting is a maximum of 6 cups, OR	8*	8			
(4) Pipe runs > 40' from water heater to fixture locations aided by either: (a) tankless water heater at point of use, OR a solar-assisted system, OR (b) on-demand hot water recirculation system	1*				
<b>801.2 Energy Star or equivalent water conserving appliances are installed.</b>					
(1) dishwasher	2	2	2		
(2) washing machine	8*				
(3) washing machine w/ water factor of 6.0 or less	12*	12	8		could not find model number on clothes washer, so gave pts for Estar but not water
<b>801.3 Food waste disposer at primary kitchen sink.</b>					
	1				
<b>801.4 The total showerhead flow rate in each shower compartment is per 801.4(1) or 801.4(2) at 80 psi. Showers have automatic compensating valve designed to provide</b>					
(1) 2.0 - 2.5 gpm (Points per showerhead), OR	1* each MAX = 3	1		0	I'm sure one shower had a showerhead that qualified but could not find specifically
(2) 1.6 - 2.0 gpm (Points per showerhead)					
(3) All showerheads in unit are 2.0 to < 2.5 gpm, OR	1* Add'l Point				
(4) All showerheads in unit are 1.6 to < 2.0 gpm	2* Add'l Pts				
<b>801.5 Faucets.</b>					
801.5.1 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:					
(1) a bathroom (Points awarded per bathroom)	1 MAX = 3	3	2		<a href="#">All lavatory faucets are Watersense listed</a>
(2) all lavatory faucets	2	2	2		<a href="#">All lavatory faucets are Watersense listed</a>
<b>801.5.2 Self-closing valve, motion sensor, metering, or pedal-activated faucet installed (Points per fixture.)</b>					
	1 MAX = 3				
<b>801.6 Water closets and urinals are in accordance with the following:</b>					
(1) Gold and Emerald Levels: All water closets and urinals are per either Section 801.6 or 802.2	Mandatory			<input checked="" type="checkbox"/> OK <input type="checkbox"/> NA	<a href="#">All toilets are 1.28 and Watersense listed</a>
(2) A water closet w/ an effective flush volume of 1.28 gal. or less & per EPA WaterSense (Pts per fixture.)	6* MAX=18				
(3) A urinal w/ flush volume of 0.5 gal. or less	4				
(4) All water closets and all urinals are in accordance with 801.6(2) or 801.6(3), as applicable	6*			6	<a href="#">All toilets are 1.28 and Watersense listed</a>
<b>801.7 Irrigation systems.</b>					
801.7.1 Low-volume irrigation is installed for each landscape type utilized: (Points awarded once for each type of irrigation. Pts for multiple types allowed.) (MAX PTS = 10)					
(1) high DU rotating spray heads	2*				
(2) drip irrigation	4*				
(3) bubblers	4*				
(4) drip emitters	4*				
(5) soaker hose	4*				
(6) subsurface irrigation	6*				
801.7.2 Irrigation system is per both of the following:					
(1) designed by a professional per WaterSense; AND	3				
(2) installed per WaterSense program					
<b>801.7.3 System zoned separately for turf &amp; bedding</b>					
	2				
<b>801.7.4 The irrigation system(s) is controlled by a smart controller</b>					
(1) ET based irrigation controller with a rain sensor	4*				Yes & landscape is per 503.5
(2) Soil moisture sensor based irrigation controller	4*			15	
(3) No irrigation installed, landscape plan per 503.5	15*				

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold

Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:



This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>801.8 Rainwater collection and distribution is provided.</b>					
(1) Rainwater is collected and used	6				
(2) Distribution via renewable energy or gravity	2				
<b>801.9 Whole dwelling unit water filter installed.</b>	1	1	1		yes, located in basement by solar water heater
<b>802 INNOVATIVE PRACTICES</b>					
<b>802.1 Gray water, as specified in ICC IRC, Appendix O is separated and reused, as permitted by local building code.</b>					
(1) All water closets flushed by reclaimed or recycled water (Points awarded per fixture)	4*				
(2) Irrigation from reclaimed or recycled water on-site	10*				
<b>802.2 Composting or waterless toilets and/or urinals are per the following: (MAX PTS. = 24)</b>					
(1) Gold and Emerald Levels: All water closets and urinals per either Section 802.2 or 801.6	Mandatory			<input checked="" type="checkbox"/>	
(2) Composting or waterless toilet and/or urinal is installed. (Points awarded per fixture)	8*				
(3) All toilets and urinals are per Section 802.2(2)	8*				
<b>802.3 Automatic shutoff device or leak detector.</b>					
	2				<input type="checkbox"/> Shut off <input type="checkbox"/> Leak Detector
	Pts Claimed	29	5	24	GREEN LEVEL: BRONZE SILVER GOLD EMERALD This Section
	Points Awarded		23	21	Points needed for: 14 26 41 60
	TOTAL AWARDED		44		Points above/below: 30 18 3 -16 GOLD
<b>900 INDOOR ENVIRONMENTAL QUALITY</b>					
<b>901 POLLUTANT SOURCE CONTROL</b>					
<b>901.1 Space and water heating options.</b>					
901.1.1 Natural draft heating or water heater not in conditioned space unless in separate room with outdoor air source. NOTE: This is mandatory if points in 704.6.2.1	5				no natural draft heating equip other than fireplace which has combustion air i
901.1.2 Air handling/return ducts not in the garage, unless in isolated, sealed room w/ outside air source	5	5	5		
<b>901.1.3 The following combustion space heating &amp; water heating equipment is in conditioned space:</b>					
(1) direct vent furnace or boiler	5	5	5		boiler back up for radiant floor heat
(2)(a) power vent water heater	3*			5	solar pre-heat to tankless direct vent water heater (Quietside)
(2)(b) direct vent water heater	5*	5			
901.1.4(1) heat pump air handler in unconditioned space	2*			5	ICF sealed crawl w/ 70 cfm vent to outside from conditioned space, Panasonic fan is located in crawl ceiling next to quietside waterheater.
901.1.4(2) heat pump air handler in conditioned space	5*	5			
<b>901.2 Fireplaces and fuel-burning appliances. Section 901.2.1(2)a is not mandatory.</b>					
<b>901.2.1 Fireplaces and natural draft fuel-burning appliances (except cooking appliances, clothes dryers, water heaters and furnaces) are code compliant, vented to the outdoors, and have adequate combustion and ventilation air provided to minimize spillage or back-drafting, in accordance with the following, as applicable.</b>					
(1) Natural gas & propane fireplaces with power or direct vented have permanent fixed glass fronts or gasketed doors per CSA <u>Z21.88a/2.33a</u> or <u>Z21.50/2.22</u>	Mandatory 7 pts if applicable				
<b>(2) Solid Fuel burning appliances are in accordance with the following requirements:</b>					
(a) Wood-burning fireplaces have gasketed doors, outside combustion air, and means for sealing the flue to minimize interior air loss when not in operation	4				
(b) Factory-built, wood-burning fireplaces are per UL 127 and are EPA certified	Mandatory 6 if applicable				
(c) Woodstove/fireplace inserts per UL 1482 & per EPA Certification & WAC173-433-100(3)	Mandatory 6 if applicable				
(d) Pellet (biomass) stoves/furnaces per ASTM E1509 or EPA certified	Mandatory 6 if applicable				
(e) Masonry heaters per ASTM E1602 and ICC IBC, Section 2112.1	Mandatory 6 if applicable				
901.2.2 Fireplaces, woodstoves, pellet stoves, or masonry heaters are not installed	7				
<b>901.3 Garages are in accordance with the following:</b>					
<b>(1) Attached garage</b>					
(a) Door between garage & conditioned space is tightly-sealed and gasketed	Mandatory 2 if applicable				
(b) A continuous air barrier is provided between walls & ceilings separating the garage from the conditioned living spaces	Mandatory 2				
(c) 100 cfm ducted, or 70 cfm unducted wall exhaust fan vented to outdoors for continuous operation or controls activate operation for a min. 1-hr. Ducted fan flow & duct size per Appendix A	4				
(2) A carport, detached garage, or no garage	10	10	10		detached garage

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED	
			AT ROUGH	AT FINAL
<b>901.4 Wood materials. A minimum of 85 percent 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. ((MAX PTS. = 10)</b>				
(1) Structural use plywood per PS 1 or PS 2. OSB per PS 2. All marked Exposure 1 or Exterior	Mandatory		<input checked="" type="checkbox"/>	
(2) Particleboard and MDF per CPA A208.1 or CPA A208.2 (Pts awarded per product group)	2*			
(3) Hardwood plywood per HPVA HP-1 & HUD Title 24, Part 3280 (Pts awarded per product group)	2*			
(4) Particleboard, MDF, or hardwood plywood per CPA 2 (Points awarded per product group)	3*			
(5) Composite wood or agrifiber panels w/ no urea-formaldehyde or per CARB Composite Wood Air Toxic Contaminant Measure Standard. (Points awarded per product group)	4*	4	4	
(6) Non-emitting products (Points awarded per product group)	4*			
<b>901.5 Carpets are in accordance with the following:</b>				
(1) Wall-to-wall carpeting is not installed adjacent to water closets and bathing fixtures.	Mandatory		<input checked="" type="checkbox"/>	
(2) A minimum of 85 percent of installed carpet area, padding, or adhesives per CDPH 01350, as certified by a third-party program, such as the CRI Green Label Plus Indoor Air Quality Program.				
(a) carpet	6	6	6	<a href="#">green label carpet</a>
(b) carpet cushion	2	2	2	<a href="#">green label carpet</a>
(c) carpet adhesives	2			
<b>901.6 At least 85% installed hard-surface flooring per CDPH 01350, certified by a 3rd party, (e.g. Resilient Floor Covering Institute's FloorScore Indoor Air Certification Program or the GREENGUARD Environmental Institute's Children and Schools Certification Program)</b>	6			
<b>901.7 At least 85% of wall coverings per CDPH 01350, certified by 3rd party, (e.g. SCS Indoor Advantage Gold Program or the GREENGUARD Environmental Institute's Children and Schools Certification Program)</b>	4			
<b>901.8 At least 85% of site applied interior architectural coatings per either 901.8.1 or 901.8.2</b>				
<b>901.8.1 Site-applied interior products per:</b>				
<input type="checkbox"/> Zero VOC as determined by EPA Method 24	5 *	5	5	
<input type="checkbox"/> CARB Suggested Control Measure for Architectural Coatings				
<input type="checkbox"/> GS-11				
<input checked="" type="checkbox"/> VOC limits in accordance with:				
(a) 50 grams/liter flat				
(b) 100 grams/liter non flat				
(c) 350 grams/liter clear wood varnish				
(d) 550 grams/liter clear wood lacquer				
<b>901.8.2 Coatings per CDPH 01350, certified by 3rd party(e.g. GREENGUARD Environmental Institute's Children and Schools Certification Program or the SCS Indoor Advantage Gold Program:</b>	8 *			see photos of paint cans
<b>901.9 At least 85% of site-applied adhesives and sealants per Section 901.9.1 and/or Section 901.9.2.</b>				
<b>901.9.1 Exterior low-VOC adhesives and sealants for subfloors &amp; exterior per one of the following:</b>				
(1) The CARB regulation as follows:	5			
(a) Adhesives: VOC content not to exceed the greater of 7 %t by weight or 75 grams/liter				
(b) The VOC of reactive sealants (i.e., silicones, polyurethanes, & hybrids, e.g. MS Polymer & SPUR) not to exceed 4% by weight or 50 grams/liter, whichever is greater				
(c) The VOC of all other caulks & sealants not to exceed 2% by weight or 30 grams/liter, whichever is greater				
(d) The VOC content of contact adhesives not to exceed 55 percent by weight or 480 grams/liter, whichever is greater				
(2) GS-36				

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold



Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:

This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>901.9.2 Interior low-VOC adhesives and sealants per one of the following, as applicable.</b>					
(1) CDPH 01350, certified by 3rd party program, (e.g. GREENGUARD Environmental Institute's Children and Schools Certification Program or SCS Indoor Advantage Gold Program)	5				
(2) GS-36					
<b>901.10 At least 85% of kitchen &amp; bath vanity cabinets per one of the following. (Where more than one of the following practices is used, the practice with the fewer number</b>					
(1) Kitchen and bath vanity cabinets in accordance with KCMA ESP 01, or equivalent, are installed	2*	2			
(2) Kitchen and bath vanity cabinets in accordance with CARB Composite Wood Air Toxic Contaminant Measure Standard installed	3*		2		
(3) Kitchen and bath vanity cabinets are installed that contain no added urea formaldehyde or are in accordance with GGPS.EC.010.R0, ASTM D 6670, or equivalent.	5*				KCMA certified cabinets
<b>901.11 Insulation is in accordance with the following:</b>					
(1) Formaldehyde emissions of wall, ceiling, and floor insulation materials per CDPH 01350, certified by 3rd party, (e.g. GREENGUARD Environmental Institute's Children and Schools Certification Program or the ACS Indoor Advantage Gold Program)	4	4	4		John Mansville Spider Spray insulation;
(2) Formaldehyde emissions of duct insulation per CDPH 01350, certified by 3rd party, (e.g. GREENGUARD Environmental Institute's Children and Schools Certification Program or the SCS Indoor Advantage Gold Program)	1				
<b>901.12 CO alarm hard-wired w/ a battery back-up in the immediate vicinity of each bedroom per NFPA 720 &amp; devices certified by 3rd party per CSA 6.19 or UL 2034.</b>					
	3				no CO alarms on this project
<b>901.13 Fixed grilles/mats (removable for cleaning) are installed to control pollutants at all main building entrances by one of the following methods.</b>					
(1) Exterior grilles or mats	1				
(2) Interior grilles or mats	1				
<b>901.14 All interior common areas of a multi-unit building posted as non-smoking.</b>					
	1				
<b>902 POLLUTANT CONTROL</b>					
<b>902.0 Intent. Pollutants generated in the building are controlled.</b>					
<b>902.1 Spot ventilation.</b>					
<b>902.1.1 Spot ventilation is in accordance with the following:</b>					
(1) All bathrooms are vented to the outdoors - rate = 50 cfm or 20 cfm if continuous operation	Mandatory			<input checked="" type="checkbox"/>	
(2) Clothes dryers are vented to the outdoors	Mandatory			<input checked="" type="checkbox"/>	
(3) Kitchen exhaust units ducted outdoors & rate of 100 cfm or 25 cfm if continuous operation	8	8	8		
<b>902.1.2 Bathroom or laundry exhaust fan is provided w/ an automatic timer or humidistat( MAX PTS. = 9)</b>					
(1) for first device	5	5	5		<input checked="" type="checkbox"/> Timer
(2) each additional device Additional MAX PTS. = 4	2	4	4		<input type="checkbox"/> Humidistat
<b>902.1.3 All Kitchen, bath &amp; laundry fans verified to 902.1.1</b>					
	8	8			tested on 1/15/10; all passed
<b>902.1.4 Exhaust fans are ENERGY STAR®, as applicable. (Points awarded per fan. MAX PTS. = 6)</b>					
(1) ENERGY STAR® fans	2*				
(2) ENERGY STAR® fans operating at 1 some or less	3*	6	6		
<b>902.2 Building ventilation systems.</b>					
<b>902.2.1 Whole building ventilation system is implemented per Appendix B.</b>					
(1) exhaust or supply fan(s) for continuous operation	8 *	8			Panasonic fan in sealed crawl to remove 70 cfm 24/7 plus bath fans on timers in all bath areas
(2) balanced exhaust & supply fans w/ intakes located per mfg to not introduce polluted air	10 *		8		
(3) heat-recovery ventilator	15 *				
(4) energy-recovery ventilator	17 *				
<b>902.2.2 Vent system tested verify fan flow per Appendix B</b>					
	8	8	8		
<b>902.2.3 MERV filters 8 or greater on central air systems. Designer or installer to verify that equipment can accommodate the greater pressure drop.</b>					
	3	3	3		MERV 11

VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold

Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:



This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED			
			AT ROUGH	AT FINAL		
<b>902.3 Radon control measures per ICC IRC Appendix F. Zones are defined in Figure 9(1) of VRG.</b>						
(1) Buildings located in Zone 1	Mandatory		<input type="checkbox"/> OK	<input checked="" type="checkbox"/> Not Zone 1		
(a) a passive radon system is installed	10 *				active radon vent system installed	
(b) an active radon system is installed	15 *	15		15		
(2) Buildings located in Zone 2	10 *					
(a) a passive radon system for zone 2						
<b>902.4 One of the following HVAC system protection measures is performed.</b>						
(1) HVAC supply registers, return grilles, & rough-ins covered during construction to prevent dust and other pollutants from entering the system, OR	3 *					
(2) Prior to occupancy, HVAC supply registers, return grilles, & duct terminations inspected & vacuumed. Coils are inspected/cleaned & the filter is replaced.		3	3			
<b>902.5 Central vacuum system vented to the outside.</b>	5	5			central vac installed with cool "Hide-a-hose system"	
<b>902.6 The living space is sealed to prevent unwanted contaminants.</b>						
(1) Attic access, knee wall door, caulked, gasketed, or otherwise sealed.	2				no attic access	
(2) All penetrations, (e.g., top plates, HVAC register boots, recessed can lights), are sealed:						
(a) attic/ceiling	2	2	2			
(b) wall	2	2	2			
(c) floors	2	2	2			
<b>903 MOISTURE MANAGEMENT: VAPOR, RAINWATER, PLUMBING, HVAC</b>						
<b>903.1 Tile backing under tile in wet areas per</b>	Mandatory		<input type="checkbox"/>	<input checked="" type="checkbox"/>		
<b>903.2.1 A capillary break and vapor retarder are installed at all concrete slabs in accordance with Sections 903.2.1(1) or 903.2.1(2), as modified by Section 903.2.1(3):</b>						
(1) 4-inch of ½-inch aggregate w/ poly	Mandatory	<input checked="" type="checkbox"/>				
(2) 4-inch of sand w/ geotextile matting plus poly		<input checked="" type="checkbox"/>				
(3) Modification:			<input checked="" type="checkbox"/>			
(a) On Group 1 certified soils a gravel bed or geotextile matting is not required		<input checked="" type="checkbox"/>				
(b) In Dry locations, per Figure 6(1), poly not required unless for radon resistance (902.3)		<input checked="" type="checkbox"/>				
<b>903.2.2 Capillary break on footing.</b>	3		3		capillary break at top of ICFs	
<b>903.3.1 Crawlspace vapor retarder per the following, as applicable. Joints overlap 6 inches &amp; are taped.</b>						
(1) 6 mil vapor retarder on floor & up walls	6	6			verified on site - JH	
(2) Damp-proof walls provided below finished grade	Mandatory		<input checked="" type="checkbox"/> OK <input type="checkbox"/> NA			
<b>903.3.2 Crawl sealed for infiltration &amp; w/ conditioned air at 0.02 cfm per ft2 area AND one of:</b>						
(1) a concrete slab over lapped 6 mil poly, OR	10*				sealed crawl but did not condition w conditioned air	
(2) 6 mil poly lapped and taped at the seams	8*					
<b>903.4.1 Moisture control measures are in accordance with the following:</b>						
(1) No building materials with visible mold	2					
(2) Walls are not enclosed (e.g. with drywall) if the insulation has a high moisture content	Mandatory 2	2	0		n/a for insulation installed	
(3) Moisture content of lumber checked not to exceed 19% prior to the surface and/or wall cavity enclosure.	4	4	0		documentation needed	
<b>903.4.2 Moisture content of subfloor, substrate, or slab per industry standard for finish flooring</b>	2	2	0		documentation needed	
<b>903.5.1 Plumbing lines not in exterior wall cavities</b>	2					
<b>903.5.2 Cold water pipes in unconditioned spaces insulated to R-4 &amp; condensation prevented</b>	2					
<b>903.5.3 Plumbing is not in unconditioned spaces</b>	5	5	5			
<b>903.6 All HVAC ducts, plenums, &amp; trunks in unconditioned attics, basements, and crawl spaces and all outside supply air ducts are:</b>						
(1) insulated to a minimum of R-6	Mandatory		<input checked="" type="checkbox"/>	<input type="checkbox"/> NA		
(2) insulated to a minimum of R-8	2	2	2			
<b>903.7 In climate zones 1A, 2A, 3A, 4A, and 5A (see fig.6(1)) RH controlled below 60% by:</b>						
(1) additional dehumidification system(s) OR	8				controls include humidity sensor that will run the system based on humidity levels independent of air temperature levels	
(2) central HVAC system equipped with additional controls to operate in dehumidification mode		8	8	8		
<b>904 INNOVATIVE PRACTICES</b>						
<b>904.1 Humidity monitoring system with 1 mobile unit &amp; 2 remote units. (See VRG).</b>	2					
<b>904.2 Kitchen exhaust =&gt; 400 cfm &amp; make-up air.</b>	2					
	Pts Claimed	161	23	138		
	Points Awarded		94	43		
	TOTAL AWARDED		137			
	GREEN LEVEL:	BRONZE	SILVER	GOLD	EMERALD	This Section
	Points needed for:	36	65	100	140	#REF!

The NAHB Research Center authorizes use of this document only by participants in the Research Center's Green Building Certification and to facilitate certification by the Research Center





VERIFICATION REPORT - NATIONAL GREEN BUILDING STANDARD - Review completed 5/4/10, JH; Approved Gold

Builder/Applicant: Chandler Design Build

Mailing (physical) Address w/ Zip Code of Home: 5602 Dodsons Crossroads, Hillsborough NC

Community/Lot #:

CERTIFICATION TARGET:



This is a  Single Family Home  Multifamily Building # dwelling units =

GREEN BUILDING PRACTICES	Points Available	Pts Claimed on Designer Report	POINTS AWARDED		
			AT ROUGH	AT FINAL	
<b>1003 CONSTRUCTION, OPERATION, AND MAINTENANCE MANUALS AND TRAINING FOR MULTI-UNIT BUILDINGS</b>					
<b>1003.0 Intent. Manuals provided to the responsible parties regarding the construction, operation, and maintenance of the building. (see VRG). NOT AVAILABLE FOR 1 &amp; 2</b>					
<b>1003.1 A building construction manual, including five or more of the following, is compiled and distributed in accordance with Section 1003.0.</b>					
<b>One (1) point awarded per two items. Points awarded for both mandatory and non-mandatory items.</b>					
(1) A narrative detailing the importance of constructing a green building, including a list of green building attributes included in the building	Mandatory	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
(2) A green building program certificate (or place holder), copy of the <i>National Green Building Standard</i> , & the individual measures achieved					
(3) Warranty, operation, & maintenance instructions for all equipment, fixtures, appliances, & finishes					check all that apply
(4) As-built drawings of the building	1 point per two items (incl. (1)-(3)) round down to nearest integer				<input type="checkbox"/>
(5) As built site plan showing stormwater management, utility lines, landscaping w/ common name and genus/species of plantings					<input type="checkbox"/>
(6) Diagram of safety valves & controls					<input type="checkbox"/>
(7) A list of type/wattage of bulbs in light fixtures					<input type="checkbox"/>
(8) Clearly labeled photos (prior to insulation) of framing with utilities installed					<input type="checkbox"/>
<b>1003.2 Operations manuals are distributed to the responsible parties per 1003.0. Five or more of the following options are included. 1 pt award per 2 items.</b>					
(1) Importance of operating/living in a green building. This narrative is in all responsible parties'	Mandatory	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	
(2) Practices to conserve water & energy					
(3) Information on maintaining the building's relative humidity in the range of 30-60%					check all that apply
(4) Info on purchasing renewable energy & info on incentives for renewable energy systems	1 point per two items (incl. (1)-(3)) round down to nearest integer				<input checked="" type="checkbox"/>
(5) Local & on-site recycling & hazardous waste disposal programs &, if applicable, building recycling & hazardous waste handling/disposal procedures					<input checked="" type="checkbox"/>
(6) Local public transportation options					<input type="checkbox"/>
(7) Benefits of energy efficient lighting systems					<input checked="" type="checkbox"/>
(8) Information on native landscape materials and/or those that have low water requirements					<input checked="" type="checkbox"/>
(9) Information on radon mitigation, if applicable					<input type="checkbox"/>
(10) Procedure for educating tenants on the proper use, benefits, & maintenance of green building systems including a maintenance staff notification process for improperly functioning equipment					<input type="checkbox"/>
<b>1003.3 Maintenance manuals are created/distributed per 1003.0. Between all manuals, five or more of the following are included. 1 point is awarded per 2 items.</b>					
(1) A narrative detailing the importance of maintaining a green building in all manuals	Mandatory	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	check all that apply
(2) List for service/maintenance	1 point per two items (incl. (1)) Must check at least 5 items round down to nearest integer				<input checked="" type="checkbox"/>
(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					<input checked="" type="checkbox"/>
(4) List of common hazardous materials often used around the building and instructions for proper handling and disposal of these materials					<input type="checkbox"/>
(5) Information on organic pest control, fertilizers, deicers, and cleaning products					<input type="checkbox"/>
(6) Instruction for maintaining gutters/downspouts & importance of diverting water 5' from foundation					<input checked="" type="checkbox"/>
(7) Instructions for inspecting for termites					<input checked="" type="checkbox"/>
(8) A procedure for rental tenant occupancy turnover that preserves the green features					<input type="checkbox"/>
(9) An outline of a formal green building training program for maintenance staff					<input type="checkbox"/>
<b>SECTION 1000 TOTALS</b>					
Pts Claimed		15			
Points Awarded		6	8		
<b>TOTAL AWARDED</b>		<b>14</b>			
				<b>GREEN LEVEL:</b>	<b>BRONZE SILVER GOLD EMERALD This Section</b>
				Points needed for:	8 10 11 12
				Points above/below:	6 4 3 2
<b>EMERALD</b>					
<b>ALL SECTION TOTALS</b>					
Pts Claimed		567			
Points Awarded		433	160		
<b>TOTAL AWARDED</b>		<b>593</b>			
				<b>GREEN LEVEL:</b>	<b>BRONZE SILVER GOLD EMERALD Level Achieved For</b>
				Points needed for:	222 406 558 697
				Points above/below:	371 187 35 -104
<b>GOLD</b>					