

# SCOTTSDALE GREEN BUILDING CHECKLIST - TIER 2

3. Energy Rating and Renewables	Tier 2	Verification	Select
3.1 Improved energy performance: 2 pts. credit for each 5 point reduction below the HERS index of 52, or each 5% improvement over the 2015 IECC (max. 10 pts.)	<input type="checkbox"/>	Plan Review	Cert. of Compl.
3.2 Utility supplied electric power shall be available upon the completion of the floor slab and used during construction. Additional Points for use of solar power or other renewable energy source through the course of construction sufficient for power tools.	<input type="checkbox"/>	City Insp.	1 3
3.3 Design and install an on-site photovoltaic (PV) solar system. 1 pt. for each 5% of the modeled annual electrical usage (kWh) produced by the PV system (max. 10 pts.)	<input type="checkbox"/>	Plan Review	Cert. of Compl.
3.4 On-site renewable energy system is sized to produce as much energy as the building consumes on an annual basis (zero-net energy).	<input type="checkbox"/>	Plan Review	10
3.5 Provided an on-site energy storage system that bridges the gap between renewable energy supply and demand.	<input type="checkbox"/>	Plan Review	5
Sub-total of points selected:			
4. Thermal Envelope	Tier 2	Verification	Select
4.1 Wall insulation. Spray foam - 2 pts. Blown-in with adhesive binder - 1 pt.	<input type="checkbox"/>	Plan Review	City Insp.
4.2 Building shall be insulated with HCFC-free rigid or spray foam insulation	<input type="checkbox"/>	Plan Review	Cert. of Compl.
4.3 Insulation shall have a minimum of 25% recycled content (e.g., cellulose, cotton) or is made with 95% bio-based or natural materials (e.g. - straw, cotton).	<input type="checkbox"/>	Plan Review	Cert. of Compl.
4.4 Building shall be insulated with formaldehyde-free insulation (manufactured without added formaldehyde).	<input type="checkbox"/>		Cert. of Compl.
4.5 Where not restricted by planning and zoning regulations, steep-slope roofs (greater than a 2 in 12 pitch) that are directly above cooled conditioned spaces, shall have a minimum initial Solar Reflectance Index (SRI) of 29.	<input type="checkbox"/>	Plan Review	Cert. of Compl.
Sub-total of points selected:			
5. Heating, Ventilation and Air Conditioning (HVAC)	Tier 2	Verification	Select
5.1 Provide an energy or heat recovery (ERV or HRV) ventilator that operates automatically or continuously in accordance with the whole-house ventilation requirements of Section M12.	<input type="checkbox"/>	Plan Review	Cert. of Compl.
5.2 Provide a whole-house ventilative cooling system to cool indoors with outside night air during temperate seasons (spring, early summer, autumn).	<input type="checkbox"/>	Plan Review	Cert. of Compl.
5.3 Provide air filter with the following minimum MERV rating or electronic air filter system for each HVAC return. Verify that the HVAC equipment and ductwork is able to accommodate the greater pressure drop on the return air side of the system. MERV 13 - 1 pt. Electronic air filter - 2 pts.	<input type="checkbox"/>		Cert. of Compl.
5.4 Provide an independent whole-house filtration system with a minimum MERV 12 rating or HEPA filter.	<input type="checkbox"/>		Cert. of Compl.
5.5 Wall openings shall be configured to allow for stack and/or cross ventilation for seasonal cooling. Cross ventilation paths shall not exceed 50 ft.	<input type="checkbox"/>	Plan Review	2
5.6 Central vacuum system shall be provided with outside exhaust.	<input type="checkbox"/>	City Insp.	1
5.7 Radon Protection. a) Test for radon on building site. Radon testing information is available on the US EPA Web site - <a href="http://www.epa.gov/radon/radontest.html">www.epa.gov/radon/radontest.html</a> b) Design and build with radon-resistant construction techniques as prescribed by US EPA or the 2015 IRC (International Residential Code), Appendix F.	<input type="checkbox"/>	Plan Review	Cert. of Compl.
Sub-total of points selected:			
6. Lighting and Power	Tier 2	Verification	Select
6.1 At least 50% of habitable rooms shall be daylit from at least two sides (windows, clerestories and skylights).	<input type="checkbox"/>	Plan Review	2
6.2 Recessed lights shall not penetrate the thermal (insulation) barrier.	<input type="checkbox"/>	City Insp.	1
6.3 One or more of the following energy management tools shall be used to improve building energy performance: a) Load controller/shedding system designed to minimize the electrical load during peak demand periods by preventing the simultaneous operation of multiple appliances, lighting and/or equipment. b) Energy monitoring system (with sub-metering capability) designed to measure and calculate real-time energy usage and costs.	<input type="checkbox"/>	Plan Review	Cert. of Compl.
6.4 Building project shall be designed with an on-site alternative-fuel refueling or electric plug-in recharging station for vehicles. Liquid or gaseous fueling facilities shall be separately ventilated or located outdoors. Electric charging stations shall consist of a dedicated 120 volt/20amp or 240 volt/40 amp electrical outlets.	<input type="checkbox"/>	Plan Review	Cert. of Compl.
Sub-total of points selected:			

TIER 2 - ADVANCED RATED OPTIONS	LEVEL	Verification	Pts			
1. Site (90% threshold unless otherwise noted)	Tier 1	Tier 2	Plan Review	City Insp.	3rd Party	Select
1.1 Topsoil and/or natural desert granite shall be isolated from the disturbed area and preserved in a separate location for re-use to minimize the importing of soil.		<input type="checkbox"/>			Cert. of Compl.	1
1.2 At least 90% of existing on-site native plants including trees shall remain in place or be salvaged.		<input type="checkbox"/>	Plan Review			1
1.3 At least 90% of improved landscaping shall be native and/or Xeriscape (no turfgrass).		<input type="checkbox"/>			Cert. of Compl.	1
1.4 A rainwater collection and storage system shall be sized and installed to supplement the irrigation system based on seasonal irrigation needs, roof collection area, and annual rainfall.		<input type="checkbox"/>			Cert. of Compl.	3
1.5 Non-toxic termite control shall be used in lieu of toxic treatments (e.g., borate treatment, physical barriers, pest-resistant building materials).		<input type="checkbox"/>			Cert. of Compl.	1
1.6 Building design shall incorporate a semi-enclosed courtyard (2 or more sides) with shading provided by trees and/or structures.		<input type="checkbox"/>	Plan Review			3
1.7 Shaded outdoor living spaces shall be provided with an area equal to at least 20% of the first and second floor livable floor area.		<input type="checkbox"/>	Plan Review			3
1.8 At least 90% of outdoor structures and/or hardscape (e.g., retaining walls, fences, landscape planter boxes, ramadas, gazebos, decking, pavers) shall be made from salvaged, reclaimed or recycled content (minimum 25% combined post-consumer & pre-consumer recovered) materials.		<input type="checkbox"/>	Plan Review			1
Sub-total of points selected:						
2. Structural Elements (90% threshold unless otherwise noted)	Tier 2	Verification	Select			
2.1 Dwelling has at least one shared common wall within a two-family (duplex) or multiple single-family (townhouse) building as regulated under the International Residential Code (IRC). Additional Points for two shared common walls.		<input type="checkbox"/>	Plan Review			1 1
2.2 Non-asphalt based dampproofing shall be used for basement and/or retaining wall applications (e.g. - zero VOC/water based liquid acrylic, 1 ply membrane, bentonite clay, and cement-based waterproof coating).		<input type="checkbox"/>			Cert. of Compl.	1
2.3 Building structural components shall be constructed of non-solid sawn lumber (metal, engineered lumber, recycled content materials, not including concrete slabs or pre-fabricated wood trusses). Point for at least 75% of roof structure Point for at least 75% of floor structure Point for at least 75% of beams, headers and columns Point for at least 75% of interior framing		<input type="checkbox"/>	Plan Review			1 1 1 1
2.4 Lumber shall be certified by the Forest Stewardship Council (FSC) or Sustainable Forest Initiative (SFI) as a sustainable source. Point for at least 75% of floor structure Point for at least 75% of beams, headers and columns Point for at least 75% of interior framing		<input type="checkbox"/>			Cert. of Compl.	1 1 1
2.5 No decorative non-structural wood beams, non-load bearing columns or double exterior walls (where 2nd is non-load bearing) shall be used in the building project.		<input type="checkbox"/>	Plan Review		Cert. of Compl.	1
2.6 Interior borate treated lumber used for at least 50% of wood structure, not including trusses.		<input type="checkbox"/>	Plan Review		Cert. of Compl.	1
2.7 All sub-floor, roof and wall sheathing shall contain no added urea-formaldehyde resins.		<input type="checkbox"/>			Cert. of Compl.	1
2.8 An integral wall system shall be used that combines structural and thermal properties, and/or finish. Options include integral insulated masonry, structural insulated panels (SIP), insulated concrete forms (ICF), autoclaved aerated concrete (AAC), insulated sandwich panel (ISP), and solid foam panels. Natural materials such as cob, strawbale, adobe, pumice, thatch, rammed earth, and stone may also qualify. Additional Point for regionally extracted or recovered, processed & manufactured within 500 miles Additional Point for regionally extracted or recovered, processed & manufactured within 250 miles		<input type="checkbox"/>	Plan Review		Cert. of Compl.	3
2.9 Structural elements (beams, lintels, headers, columns, not including concrete slabs or pre-fabricated wood trusses ) shall be sourced from regional manufacturers within 250 miles. 1 pt. per category (max. 2 pts.)		<input type="checkbox"/>			Cert. of Compl.	
2.10 Building design shall be based on modular dimensions and utilize one of the following systems: a) Advanced framing techniques (e.g., 2-stud corners, single top plates, stud spacing greater than 16" o.c., alignment of multistory load bearing modules) b) Panelized wall and roof systems		<input type="checkbox"/>	Plan Review		Cert. of Compl.	2 2
Sub-total of points selected:						

24x36 Sheet  
1/8" Text  
Tier 2  
Sheet 1

# SCOTTSDALE GREEN BUILDING CHECKLIST - TIER 2

12. Flooring	Tier 2	Verification		Select
In order to receive points in this category, the total area of the selected finish floor material must be at least 25% of total conditioned floor area unless otherwise noted.				
12.1 <u>Carpeting and padding</u> shall be certified under the Carpet and Rug Institute's Green Label Plus program, UL Environment or Greenguard Environmental Institute's certification program.	<input type="checkbox"/>		Cert. of Compl.	2
12.2 <u>Resilient flooring</u> shall be certified under the Resilient Floor Covering Institute's FloorScore program, UL Environment or Greenguard Environmental Institute's certification program (e.g. - vinyl, vinyl composite, linoleum, rubber, cork).	<input type="checkbox"/>		Cert. of Compl.	2
12.3 <u>Flooring shall be salvaged</u> (e.g., reclaimed wood) or contain a minimum 20% recycled content (e.g., carpet, pad, tile, sound deadening substrate).	<input type="checkbox"/>		Cert. of Compl.	2
12.4 <u>Flooring shall be made from a rapidly renewable material</u> (bamboo, linoleum, cork, wool or other materials that are regenerated within a 10-year cycle).	<input type="checkbox"/>		Cert. of Compl.	2
12.5 <u>Flooring shall be from a FSC</u> (Forest Stewardship Council) or <u>SFI</u> (Sustainable Forest Initiative) certified sustainable source.	<input type="checkbox"/>		Cert. of Compl.	2
12.6 <u>Stone or tile flooring</u> shall be quarried, processed and/or made within 500 miles of site.	<input type="checkbox"/>		Cert. of Compl.	2
12.7 <u>Sealed concrete</u> shall be used as finish floor surface.	<input type="checkbox"/>	Plan Review	City Insp.	2
12.8 <u>Carpeting</u> shall not be used on more than 25% of conditioned floor area.	<input type="checkbox"/>		Cert. of Compl.	1
Sub-total of points selected:				
13. Solid Waste	Tier 2	Verification		Select
13.1 Provide and implement a <u>construction waste management plan</u> that includes separate recycling bins for recycling or salvaging <u>two or more</u> of the following construction waste materials: cardboard, wood, drywall, foam, metal, concrete, masonry, tile, and/or asphalt. 1 pt. for each additional item over the first two that is recycled or salvaged by builder or waste hauler (max. 4 pts.)	<input type="checkbox"/>	Plan Review	Cert. of Compl.	3
13.2 <u>Excess construction</u> or deconstruction materials shall be <u>donated to a non-profit building organization</u> .	<input type="checkbox"/>		Cert. of Compl.	2
13.3 A designated area shall be provided for <u>city recycling and trash pick-up containers</u> .	<input type="checkbox"/>	Plan Review	Cert. of Compl.	1
13.4 A designated area shall be provided for <u>composting organic waste for gardening soil nutrients</u> .	<input type="checkbox"/>	Plan Review	Cert. of Compl.	2
Sub-total of points selected:				
14. House Size	Tier 2	Verification		Select
Calculate the number of <u>bonus or deductive points</u> based on house size.				
14.1 <u>Dwelling under 3000 sq. ft.</u> of total conditioned space. 1 Point for every 100 sq. ft. under 3000 sq. ft.	<input type="checkbox"/>	Plan Review		
14.2 <u>Dwelling over 3500 sq. ft.</u> of total conditioned space. Minus 1 Points for every 250 sq. ft. over 3500 sq. ft.	<input type="checkbox"/>	Plan Review		
Sub-total of points selected:				
15. Innovative Design	Tier 2	Verification		Select
This section recognizes innovative and emerging technologies, practices, and products that fulfill the intentions of the program, but are not addressed in the checklist. Projects can earn up to 8 additional points by submitting a written justification to plan review staff for review and determination of awarded points.				
15.1	<input type="checkbox"/>	Plan Review	Cert. of Compl.	
15.2	<input type="checkbox"/>	Plan Review	Cert. of Compl.	
15.3	<input type="checkbox"/>	Plan Review	Cert. of Compl.	
15.4	<input type="checkbox"/>	Plan Review	Cert. of Compl.	
15.5	<input type="checkbox"/>	Plan Review	Cert. of Compl.	
15.6	<input type="checkbox"/>	Plan Review	Cert. of Compl.	
Sub-total of points selected:				
<b>TOTAL POINTS (As Submitted)</b>				
<b>TOTAL POINTS (As Approved)</b>				

7. Plumbing System	Tier 2	Verification		Select
7.1 Provide a graywater drain line from at least <u>one plumbing fixtures</u> (shower, tub, lavatory faucet, washing machine, utility sink) to discharge in <u>landscape area</u> . The graywater drain line shall be provided with an accessible diverter valve for the option of diverting graywater to building sewer line when not in use. a) Provide graywater drain connection to <u>two or more plumbing fixtures</u> . b) Graywater discharges into a collection reservoir for <u>landscape irrigation system</u> in accordance with 2015 IRC Section P3009. c) Graywater discharges into a collection reservoir and treated for <u>flushing toilets</u> in accordance with 2015 IRC Section P3009.	<input type="checkbox"/>	Plan Review	City Insp.	Cert. of Compl.
3				
3				
4				
6				
Sub-total of points selected:				
8. Roofing (90% threshold unless otherwise noted)	Tier 2	Verification		Select
8.1 A minimum of 50% of roof area shall have <u>recycled or recycled content roof material</u> (e.g. metal, rubber, or salvaged roof tiles). Additional point for 75% or more of roof area.	<input type="checkbox"/>	Plan Review		Cert. of Compl.
1				
8.2 Roof shall be a <u>high durability/low maintenance material</u> such as slate, clay, metal, or fiber-cement (not including concrete tiles unless vented). Additional point if roofing material is recyclable or reusable.	<input type="checkbox"/>	Plan Review	City Insp.	
2				
8.3 Roof covering material <u>weighs less than 350 lbs/100 sq. ft.</u>	<input type="checkbox"/>	Plan Review		
1				
8.4 Building project shall be designed with a <u>vegetated roof system</u> . 1 pt. for each 25% of roof area (max. 3 pts.)	<input type="checkbox"/>	Plan Review		Cert. of Compl.
1				
8.5 Roofing shall have a <u>bitumen underlayment</u> (min. 90 lb. underlayment) or equivalent pliable membrane under concrete, clay, or slate roofing materials.	<input type="checkbox"/>	Plan Review		Cert. of Compl.
2				
8.6 <u>Ventilated attics</u> shall be provided with a <u>continuous ridge vent and vented eaves</u> with unrestricted air flow.	<input type="checkbox"/>	Plan Review	City Insp.	
2				
Sub-total of points selected:				
9. Exterior Finishes (90% threshold unless otherwise noted)	Tier 2	Verification		Select
9.1 <u>Exterior veneers</u> shall be derived from regional sources within 500 miles of jobsite. This includes stone or cultured stone veneers that are regionally quarried or processed.	<input type="checkbox"/>	Plan Review		Cert. of Compl.
1				
9.2 <u>Siding</u> shall be composed of reconstituted or recycled-content material (minimum 50% pre-or post-consumer).	<input type="checkbox"/>	Plan Review		Cert. of Compl.
1				
9.3 <u>Stucco or siding material</u> shall be integrally colored.	<input type="checkbox"/>	Plan Review		Cert. of Compl.
1				
9.4 <u>Stucco</u> is applied directly to masonry without lath.	<input type="checkbox"/>	Plan Review	City Insp.	
1				
9.5 <u>Exterior structural materials</u> (e.g. CMU, stabilized adobe, rammed earth, steel) shall be left exposed and in their natural state without a veneer or finish other than a sealer.	<input type="checkbox"/>	Plan Review	City Insp.	
1				
9.6 <u>Fascia, soffit and trim elements</u> shall be (a) certified lumber (FSC/SFI), (b) made of recycled-content materials (including metal) or (c) engineered wood products such as finger jointed trim, fiberboard, laminated strand lumber or OSB.	<input type="checkbox"/>	Plan Review		Cert. of Compl.
1				
Sub-total of points selected:				
10. Interior Finishes (90% threshold unless otherwise noted)	Tier 2	Verification		Select
10.1 <u>Wallboard and/or plasters</u> used in the home shall be made with min. 25% recycled content (e.g. - gypsum board made with industrial by-product gypsum or flue-gas waste product, wheat board made with agricultural by-products)	<input type="checkbox"/>			Cert. of Compl.
2				
10.2 <u>Interior paints</u> shall contain no acetone, formaldehyde or ethylene glycol (EG).	<input type="checkbox"/>			Cert. of Compl.
1				
10.3 <u>Natural plaster, paints and/or finishes</u> shall contain a minimum of 20% recycled content.	<input type="checkbox"/>			Cert. of Compl.
1				
Sub-total of points selected:				
11. Interior Doors, Cabinetry, and Trim (90% threshold unless otherwise noted)	Tier 2	Verification		Select
11.1 <u>Solid wood doors</u> shall be domestic hardwoods or certified by the Forest Stewardship Council (FSC) or the Sustainable Forest Initiative (SFI).	<input type="checkbox"/>			Cert. of Compl.
2				
11.2 <u>Composite doors</u> shall contain no added urea-formaldehyde resin.	<input type="checkbox"/>			Cert. of Compl.
1				
11.3 <u>Cabinets, counter substrates and built-in furniture</u> shall contain no added urea-formaldehyde resins.	<input type="checkbox"/>			Cert. of Compl.
1				
11.4 <u>Exposed substrate materials</u> containing formaldehyde, such as the inside of cabinets and the underside and edge of counters, shall be sealed with a water-based formaldehyde blocking finish.	<input type="checkbox"/>			Cert. of Compl.
1				
11.5 <u>Cabinets, counter substrates and built-in furniture</u> shall be made of domestic hardwood from a FSC (Forest Stewardship Council) or SFI (Sustainable Forest Initiative) certified sustainable source and/or consist of a rapidly renewable material (a material that re-generates itself within a ten year period)	<input type="checkbox"/>			Cert. of Compl.
2				
11.6 <u>Interior trim</u> shall be made of one or more of the following: (a) finger-jointed/engineered wood; (b) domestic hardwood; (c) FSC- or SFI-certified; (d) rapidly renewable material (bio-based materials that regenerate within 10 years); or (e) min. 20% recycled content with no added urea-formaldehyde resins.	<input type="checkbox"/>			Cert. of Compl.
1				
11.7 <u>Countertops</u> shall be made of one or more of the following: (a) min. 20% recycled content material (b) concrete containing no added urea-formaldehyde (c) regionally quarried/processed stone or manufactured tile from within 500 miles of project site.	<input type="checkbox"/>			Cert. of Compl.
2				
11.8 <u>No tropical woods</u> shall be used in the entire building project.	<input type="checkbox"/>			Cert. of Compl.
2				
Sub-total of points selected:				

24x36 Sheet  
1/8" Text  
**Tier 2**  
Sheet 2

← PROJECT TITLEBLOCK AREA →