



Multi-Family Project Enrollment Form and Self-Certification Checklist

A Program of the Master Builders Association of Pierce County
1120 Pacific Ave., Suite 301, PO Box 1913, Tacoma, WA 98401
253-272-2112 ♦ Fax 253-383-1047 ♦ www.mbapierce.com ♦ info@mbapierce.com

Company: _____

Contact Name & Phone Number: _____

Project Address, Lot Number, Tax Number, or Location:

Brief Project Description: _____

BUILDER: In submitting the BUILT GREEN® self-certification checklist, I agree to complete all Action Items checked. I agree to submit an amended checklist if any changes occur during the construction or development process regarding BUILT GREEN® program Action Items. I understand the MBA does not warrant, to the homeowner or anyone else, that these Action Items have been completed; only that, based on the checklist provided by me, the project qualifies for a certificate.

I understand I will receive a BUILT GREEN® certificate showing a star rating for my submitted project based on the information I provide in the self-certification checklist.

_____ Signature and Date

Total Points for Project _____ Program Level Obtained: 1-Star ★ 2-Star ★★ 3-Star ★★★
By my signature above, I certify that I have performed all Action Items checked below.

Please enclose payment: MBA Member: \$25 per unit. Non-Member: \$300 per unit
(up to \$1000 per project)

For MBA Office Use:

Checklist submitted. Proof of required items completed. Payment received.

Multi-Family Self-Certification Checklist

STEP 1: Complete Checklist

Check Action Items completed in the project to qualify for a Built Green® star rating.

HOW TO USE THE CHECKLIST

<input type="checkbox"/>	2-	25	(3)	Preserve topsoil in place
Check (x) when completed	Section where action item description appears (numerical)	Order action item appears in Section	Point value of action item (when range of points; refer to Handbook Part 1, 'R' items are required)	Action item

Basic Requirements

- Complete Program Orientation (one time only)
Complete all required (R) items for each project
- Section 1: Build to "Green" Codes & Regulations
- 2-15 Preserve and protect wetlands, shorelines, bluffs, and other critical areas during construction
- 2-20 Install temporary erosion control devices beyond code and optimally maintain them
- 2-35 Prohibit burying construction waste
- 2-36 Recycle antifreeze, oil, and oil filters at appropriate outlets, where available
- 2-37 Dispose of non-recyclable hazardous waste at legally permitted facilities
- 3-58 Furnish four ENERGY STAR® compact fluorescent light (CFL) bulbs to owners

Basic Requirements, cont.

- 4-78 Install kitchen range hood, bath, laundry or ceiling exhaust fan vented to the outside to remove excess moisture and odors
- 5-82 Provide and post job site waste reduction & recycling plan and resource sheet to on-site personnel and subcontractors
- 6-1 Provide owner with O&M Manual
- 6-2 Provide occupants with information kit

STEP 2: Determine Rating

Requirements for 1-Star Level

- Comply with Basic Requirements
- Earn 60 points from Sections 2 through 5, with at least 5 points from each Section

Requirements to Qualify at 2-Star Level

- Comply with Basic Requirements
- Earn 160 points from Sections 2 through 5, with at least 10 points from each Section
- Attend a BUILT GREEN® approved workshop within past 12 months prior to certification

Requirements to Qualify at 3-Star Level

- Comply with Basic Requirements
- Earn 260 points from Sections 2 through 5, with at least 15 points from each Section
- Attend a BUILT GREEN® approved workshop within past 12 months prior to certification

Recommendation: Review the checklist for Action Items you already do, then note others that seem easy to incorporate and those that interest you, but require further investigation (see Handbook). Make a preliminary tally to judge what rating you might achieve.

SECTION ONE: BUILD TO GREEN CODES/REGULATIONS

- 1-1 (R) Meet Washington State Water Use Efficiency Standards
- 1-2 (R) Meet Applicable Stormwater/Site Development Standards
- 1-3 (R) Meet Washington State Energy Code
- 1-4 (R) Meet Washington State Ventilation/IAQ Code

SECTION 2: SITE AND WATER

SITE SELECTION

- 2-1 (10 - 30) Redevelop and restore existing sites.
- 2-2 (10) Build in a Low Impact Development or a Built Green Community
- 2-3 (10) Locate to Reduce Dependence on Automobiles

DESIGN ALTERNATIVES

- 2-4 (6) Design for maximum density allowable by zoning and within Growth Management Area
- 2-5 (2) If adding a garage, minimize garage size
- 2-6 (3) If adding a garage, position garage so it is not in front of house
- 2-7 (3) Size parking capacity to meet minimum local zoning requirements.
- 2-8 (5) Design below-ground space for non-occupancy uses.
- 2-9 (4) Provide shading for 30% of hardscape to reduce heat islands
- 2-10 (3) Cluster buildings and design site roadways and parking to preserve open space
- 2-11 (2) Provide secure bicycle parking for tenants.
- 2-12 (3) Provide on-site transportation shelters OR create easy access to existing public transportation options/facilities.
- 2-13 (3) On larger projects with internal streets, install traffic calming devices, such as curb bulbs.
- 2-14 (1 to 8) Review site and landscape design plans using "Places for Nature & People" guidelines

SITE PROTECTION

Protect Site's Natural Features

- 2-15 (R) Preserve and protect wetlands, shorelines, bluffs, and other critical areas during construction
- 2-16 (3) Limit heavy equipment use zone to limit soil compaction

- 2-17 (3) Preserve existing native vegetation as landscaping
- 2-18 (3) Take extra precautions beyond code to protect trees during construction
- 2-19 (5 to 10) Set aside or restore 20% or more of site to be left undisturbed

Protect Natural Processes On-Site

- 2-20 (R) Install temporary erosion control devices beyond code and optimally maintain them
- 2-21 (3) Use compost mulch to stabilize disturbed slopes
- 2-22 (3) Protect stockpiled topsoil with mulch or plastic
- 2-23 (3) Balance cut and fill, while maintaining original topography
- 2-24 (3) Limit grading to 20 ft outside building footprint
- 2-25 (3) Preserve topsoil in place
- 2-26 (3) Grind landclearing wood and stumps for reuse
- 2-27 (4 - 8) Amend disturbed soil with compost to a depth of 4 to 10 inches to restore soil environmental functions
- 2-28 (3) Replant or donate removed vegetation for immediate reuse
- 2-29 (3) Use a water management system that allows groundwater to recharge
- 2-30 (5-15) Design to reduce effective impervious surface equivalent to 0% for 5 acres and above; <10% for less than 5 acres
- 2-31 (5 to 15) Use pervious materials for 35% to 100% of surfaces outside of building footprint.
- 2-32 (5) Use an alternative foundation system to minimize disturbance to soil and/or to water flow
- 2-33 (5 to 10) Install vegetated roof system for 25, 50 or 90% of roof to reduce impervious surface
- 2-34 (2) Provide an infiltration trench for rooftop runoff

Eliminate Water Pollutants

- 2-35 (R) Prohibit burying construction waste
- 2-36 (R) Recycle antifreeze, oil, and oil filters at appropriate outlets, where available
- 2-37 (R) Dispose of non-recyclable hazardous waste at legally permitted facilities
- 2-38 (1) Establish and post clean up procedures for spills to prevent illegal discharges
- 2-39 (2) Reduce hazardous waste through good jobsite housekeeping

- 2-40 (2) Establish and post clean up protocol for tire wash and construct wash facility on-site if necessary
- 2-41 (2) Use slow-release organic fertilizers to establish vegetation
- 2-42 (2) Use less toxic form releasers
- 2-43 (3) Use non-toxic or low-toxic outdoor lumber for landscaping (e.g. plastic, least-toxic treated wood)
- 2-44 (5) No clearing or grading during winter months
- 2-45 (2) No zinc galvanized ridge caps, copper flashing, copper wires, or copper/zinc impregnated shingles for moss prevention
- 2-46 (2) Clearly label all storm sewer inlets to inform residents about proper surface water protection.

WATER PROTECTION

Outdoor Conservation

- 2-47 (1) Mulch landscape beds with 2 inches organic mulch
- 2-48 (1) Use grass type requiring less irrigation and minimal maintenance
- 2-49 (5) Limit use of turf grass to 25% or less of landscaped area
- 2-50 (5) Landscape with plants appropriate for site topography and soil types, emphasizing use of plants with low watering requirements; AND particularly strive to use NATIVE plants.
- 2-51 (5) Install rainwater collection system (cistern) for reuse
- 2-52 (10) No turf grass
- 2-53 (3) Install intelligent irrigation system
- 2-54 (2) Sub-surface or drip systems used for irrigation
- 2-55 (10) Install landscaping that requires no potable water for irrigation whatsoever after initial establishment period (approximately 2 years)

Indoor Conservation

- 2-56 (1) Install bathroom faucets with GPM less than code
- 2-57 (1) Install kitchen faucets with GPM less than code
- 2-58 (2--8) Install Ultra Low Flow or Dual Flush Toilets
- 2-59 (2) Install instant (tankless) hot water systems (where appropriate)
- 2-60 (2) Install showerheads with GPM less than code

Eliminate Water Pollutants

- 2-61 (4) Provide food waste chutes and compost or worm bins instead of a food garbage disposal

INNOVATION

- 2-62 (5-10) Design on-site wastewater treatment
- 2-63 (10) Install irrigation system using recycled water
- 2-64 (10) Include innovative design, equipment and operation solutions to protect the site's natural features, conserve water and reduce impact on water resources

_____ Subtotal Section 2

SECTION 3: ENERGY EFFICIENCY

OVERALL & DESIGN

- 3-1 (10) Use an outside consultant to verify energy performance of design or Certify units through ENERGY STAR® Homes Northwest or participate in utility program.
- 3-2 (10-18) Install a photovoltaic system so that more than 2% of house is powered by PV
- 3-3 (2) Install properly sized overhangs on south facing glazing
- 3-4 (2) Orient windows to make the best use of passive solar
- 3-5 (2) Use glazing with solar heat gain coefficient less than 0.35
- 3-6 (4) Use building and landscaping plans that reduce heating/cooling loads naturally
- 3-7 (3) Use a comprehensive approach to high-quality lighting design
- 3-8 (5+) Demonstrate an overall reduction in space conditioning energy using approved energy modeling software (Systems Analysis approach) One point for each % point improvement. 5%

ENVELOPE

- 3-9 (5+) OR Improve envelope performance beyond code (component performance approach, using WSU Worksheet).
- 3-10 (5+) OR Improve envelope performance beyond code (Prescriptive approach, using WSU Worksheet).

Air Sealing

- 3-11 (3) Wrap building with an exterior air infiltration barrier to manufacturer's specifications
- 3-12 (3) Use Airtight Drywall Approach for framed structures

- 3-13 (3) Use airtight building method, such as Structural Insulated Panels or Insulated Concrete Forms, for building envelope
- 3-14 (3) Use Blower door test to identify and correct air infiltration problems - achieve 0.3 ACH - 0.25 ACH (7.0 ACH @50pa)

Reduce Thermal Bridging

- 3-15 (1) Use blown-in insulation

HEATING/ COOLING

- 3-16 (5) Heating Systems—Compare two or more systems from the list by completing a Life Cycle Cost Analysis. Choose the system that best reduces utility costs to tenants and achieves the lowest total cost for a 20-year life.

Distribution

- 3-17 (5) Install heat systems with separate zones for sleeping and living areas
- 3-18 (1) Centrally locate heating / cooling system to reduce the size of the distribution system
- 3-19 (2) Install one or more properly supported Energy Star ceiling fans in all units
- 3-20 (2) Install ENERGY STAR® heating equipment
- 3-21 (2) Install ENERGY STAR® cooling equipment
- 3-22 (2) Insulate any ducts located in unconditioned space to R-11
- 3-23 (2) Use direct vent gas or propane hearth product (AFUE rating)
- 3-24 (2) No fireplaces or only high efficiency units (Rumsford or Russian fireplace, masonry heater)
- 3-25 (3) No air conditioner
- 3-26 (3) Seal ducts using low toxic mastic or aerosolized sealing system
- 3-27 (3) Performance test duct for air leakage meets third-party review and certification
- 3-28 (5) Locate heating / cooling equipment and/or the distribution system inside the heated space

Controls

- 3-29 (1) Install 60-minute timers or programmable timers set to operate for bathroom and laundry room fans
- 3-30 (2) Install Energy Star® qualified programmable thermostats with nighttime setback and switch for furnace fan

Heat Recovery

- 3-31 (2) Install a heat recovery ventilator

WATER HEATING

Distribution

- 3-32 (1) Locate water heater within 20 pipe feet of highest use
- 3-33 (1) Insulate hot and cold water pipes within 3 feet of the hot water heater
- 3-34 (2) Install on-demand or small, local hot water delivery system, or “home run” hot plumbing at farthest location from water heater
- 3-35 (3) Install electric water heater efficiency to EF of .93 or higher (or use 3-37 below)
- 3-36 (3) Install gas or propane water heater efficiency to EF of .60 if over 60 gallons, or .61 if 60 g or under (or use 3-38 below)
- 3-37 (4) Install the water heater inside the heated space (electric, direct vent, or sealed venting only)
- 3-38 (4) Install exhaust air heat pump water heater or de-superheater: EF 1.9 (alternate to 3-34 above)
- 3-39 (4) Install condensing gas or propane water heater to EF of .83 (alternate to 3-35 above)
- 3-40 (8) Install a solar water heating system
- 3-41 (3) Install a timer to regulate standby hot water loss in hot water heater.
- 3-42 (5-8) Install ultra-high-efficiency central water heating
- 3-43 (5) Install tankless water heaters (gas/propane)
- 3-44 (5) Install recirculation pump
- 3-45 (2) Pre-pipe for solar hot water

Drainwater Heat Recovery

- 3-46 (3) Install drainwater heat recovery system (DHR)

APPLIANCES

- 3-47 (1) Provide clothesline for residents, either in suite, on balcony or common area
- 3-48 (1) Install gas clothes dryer in units or common area
- 3-49 (1) Install ENERGY STAR® washing machines in units or common area
- 3-50 (1) Install an ENERGY STAR® dishwasher in units

- 3-51 (1) Install an ENERGY STAR® refrigerator in units
- 3-52 (5) Install an ENERGY STAR® appliance suite (clothes washer, dishwasher, and refrigerator) in units
- 3-53 (8) Install energy-efficient elevators.

LIGHTING

Natural Light

- 3-54 (1) Use light-colored interior finishes
- 3-55 (2) Use clerestory or roof monitor for natural lighting
- 3-56 (2) Use light tubes for natural lighting and to reduce electric lighting

Solar Powered Lighting

- 3-57 (1) Use solar-powered walkway or outdoor area lighting

Efficient Lighting

- 3-58 (R) Install four ENERGY STAR® compact fluorescent light bulbs in all units.
- 3-59 (1) Substitute Halogen lighting, Energy Star CFL for incandescent down-lights OR eliminate can lights
- 3-60 (1) Install motion detectors on exterior lights
- 3-61 (2) Install lighting dimmer, timers, and/or motion detectors on interior lights
- 3-62 (2) Use ENERGY STAR® compact fluorescent bulbs, ballast, or fixtures in 50% of sockets including three high-use locations (kitchen, porch/outdoors, and one other location)
- 3-63 (5) Install ENERGY STAR® fixtures (including one original and one back-up lamp) in three high-use locations (kitchen, porch/outdoors, and one other location)
- 3-64 (1) Install LED lighting

INNOVATION

- 3-65 (4 - 50) Include innovative design, equipment and operation solutions to enhance the energy efficiency of the home
- 3-66 (5) Purchase Green Power.

_____ Subtotal Section 3

SECTION FOUR: HEALTH AND INDOOR AIR QUALITY

DESIGN & OVERALL

- 4-1 (10) In multi-unit buildings compartmentalize each unit for ventilation
- 4-2 (3) For Rehabs, investigate for mold and mildew prior to and during remodel. Remediate/repair as appropriate.
- 4-3 (2) For Rehabs, inspect for asbestos and lead prior to remodel. Abate as required.
- 4-4 (2) Implement a "No Smoking" policy for common areas. Consider designating smoking and non-smoking units, floors, or buildings.
- 4-5 (10) Implement the Energy Star Indoor Air Package (must be Energy Star home to add-on)
- 4-6 (1) Use less-toxic cleaners

JOBSITE OPERATIONS

- 4-7 (1) Require workers to use VOC-safe masks when applying VOC containing wet products, and N-95 dust masks when generating dust
- 4-8 (3 - 5) Take measures during construction operations to avoid moisture problems later
- 4-9 (2) Take measures to avoid problems due to construction dust (see handbook for required measures)
- 4-10 (2) Protect exterior building components from water or moisture damage
- 4-11 (3) Ventilate with fans after each new finish is applied
- 4-12 (3) No use of unvented heaters during construction
- 4-13 (3) Clean duct and furnace thoroughly at before owners move in
- 4-14 (4) Train subs in implementing a healthy building job-site plan for the project

LAYOUT AND MATERIAL SELECTION

- 4-15 (1) If using carpet, specify low VOC carpets with the Carpet and Rug Institute (CRI) Indoor Air Quality (IAQ) Green Label Plus or GreenGuard
- 4-16 (1) Install low pile or less allergen-attracting carpet and pad
- 4-17 (1) Provide cleanable doormat and shoe racks at entry(ies) to home

- 4-18 (3) Design a shoe removal vestibule at major entrances to units
 - 4-19 (1) Build a lockable storage unit for hazardous cleaning and maintenance products, detached from occupied space
 - 4-20 (1) If installing water filter at sink, select one with biodegradable carbon filter
 - 4-21 (1) Install showerhead filters
 - 4-22 (3) Limit carpet to one-third of home's square footage
 - 4-23 (3) Optimize air quality in family bedrooms
 - 4-24 (3) If using carpet, install by tacking (no glue) or other dry methods
 - 4-25 (3) If garage is attached, air-seal it from house
 - 4-26 (3 - 4) Use formaldehyde-free fiberglass insulation (Greenguard certified) or no fiberglass insulation
 - 4-27 (3) Use low-VOC, low-toxic, water-based, solvent-free sealers, grouts, mortars, caulks, and adhesives inside the house
 - 4-28 (3) Use plywood and composites of exterior grade or formaldehyde-free (for interior use)
 - 4-29 (3) Use cabinets made with formaldehyde-free board or exterior grade plywood and low toxic finish
 - 4-30 (3) Use only shelving, window trim, door trim, base moulding etc. with no formaldehyde
 - 4-31 (1) Do not install insulation, carpet or pad with brominated flame retardant.
 - 4-32 (3) Use glass, ceramic, or porcelain tile for flooring
 - 4-33 (3) Use polyethylene piping for plumbing (no PVC)
 - 4-34 (3) Install natural fiber carpet (e.g. jute, sisal, wool)
 - 4-35 (5) Use low-VOC /low-toxic interior paints and finishes for large surface areas
 - 4-36 (1) Paint without cadmium or lead.
 - 4-37 (15) No carpet in home
 - 4-38 (1) Use pre-finished floors
 - 4-39 (2) Avoid carpet in moisture prone areas
 - 4-40 (4) Do not use fiberglass insulation
- MOISTURE CONTROL**
- 4-41 (1) Install floor drain or catch basin with drain under washing machine
 - 4-42 (1) Install moisture alarms under sinks and dishwasher
 - 4-43 (1) Direct stormwater at least 5 ft away from building using grading and approved drain system as appropriate
 - 4-44 (1) Seal at doors, windows, plumbing, and electrical penetrations against moisture and air leaks
 - 4-45 (2) Slab on grade, upgrade under slab moisture barrier beyond code to 10mil minimum; minimum of 10mil poly in crawl spaces with sealed seams and sealed perimeter
 - 4-46 (1) Ensure proper drainage of crawl space
 - 4-47 (1) Prepare a roof water management plan showing best practices for the site soils and storm water infrastructure
 - 4-48 (3) Roof overhangs are at least 24"
 - 4-49 (2) Protect windows and doors on tall walls with additional overhang protection
 - 4-50 (6) Install a drain plane for walls between siding, trim & building paper or house wrap
 - 4-51 (2) Fully insulate garage to minimize condensation-based mold growth
 - 4-52 (4) Envelope inspection at HVAC rough in by qualified professional
 - 4-53 (1) Install a sill pan w/ end dams
 - 4-54 (7) Install a sloped sill pan with end dams and back dam for all windows & exterior doors exposed to the weather
 - 4-55 (3) Install back dams or sloped sill at all window subsills
 - 4-56 (1) Install metal flashing at all windows
 - 4-57 (1) Install metal flashing at all door heads
 - 4-58 (3) Hose test installed window to verify resistance to wind driven rain
 - 4-59 (2) Install working "radon" type vent system to eliminate potential moisture, methane, and radon problems in crawl space or under slabs on grade
 - 4-60 (1) Install a rigid perforated footing drain at foundation perimeter, not connected to roof drain system.
 - 4-61 (3) Show & build moisture management details for below grade walls beyond code, such as dimple drainage mat at exterior face, and capillary breaks.
 - 4-62 (2) Perform calcium chloride moisture test on all slabs on grade prior to installing any finish flooring in conformance with product warranties.
 - 4-63 (3) Perform moisture test on wood, and concrete floors prior to installing any finish.
 - 4-64 (3) Have crawl space, attic and garage building performance tested for disconnection to the living space of house.

AIR DISTRIBUTION AND FILTRATION

- 4-65 (1) Install return-air ducts in bedroom(s)
- 4-66 (2) Install an operable skylight (manual or automated) high up in the structure to aid natural ventilation. Use U-factor of 0.45 or below and solar gain co-efficient of 0.35 or below
- 4-67 (8) Verify performance of ventilation systems; measuring supply and exhaust airflow, checking control activation and damper operation, flow test all spot ventilation fans, label systems
- 4-68 (1--5) Install medium-efficiency pleated filter (MERV 10) or high efficiency MERV 12 or better, HEPA OR install furnace or duct-mounted air cleaner
- 4-69 (4) Install whole unit or building air purification system
- 4-70 (3) Install central vacuum, exhausted to outside
- 4-71 (3) Provide for cross ventilation using operable windows
- 4-72 (3) Install CO detector(s) in units and community rooms
- 4-73 (1) Provide ideal relative humidity and air circulation to prevent IAQ problems
- 4-74 (1) Ensure ceiling plenums contain no hazardous/unhealthy materials
- 4-75 (1) No stud or joist cavities used as plenums
- 4-76 (2) Do not install electronic, metal mesh, horse hair, or non-pleated fiberglass filters; no sound insulation or fibrous or fiberglass in air stream
- 4-77 (1) Make sure air intakes are placed to avoid intake from air pollutant sources, make sure parking is at least 40 feet from air intake.

HVAC EQUIPMENT

- 4-78 (R) Install kitchen range hood, bath, laundry or ceiling exhaust fan vented to the outside to remove excess moisture and odors
- 4-79 (3) Install multi-port attic fan to exhaust kitchen, laundry and bathroom.
- 4-80 (1) Install crank or electronic timers, or humidistat controls for bath exhaust fans
- 4-81 (2) Install spot ventilation fans to same standard as whole house fan (Fan noise at 1.5 sones or less, etc.), smooth ducting, min 4 in.
- 4-82 (2) Install exhaust fans in rooms where office equipment is used
- 4-83 (2) Install sealed combustion heating and hot water equipment

- 4-84 (2) Ensure heating and/or cooling equipment is correctly sized to meet design heating and cooling loads of home (do not oversize)
- 4-85 (5) Provide balanced indoor pressure using controlled ventilation
- 4-86 (5) Where appropriate, install furnace fan motor with an electrically commutated motor (ECM)
- 4-87 (10) Install a ductless heating system (e.g. radiant floor or baseboard)
- 4-88 (1) Design to ensure accessibility of all system components
- 4-89 (1) Design to prevent standing water in HVAC system
- 4-90 (1) Use heating system controls that are free of mercury
- 4-91 (1) Limit kitchen exhaust fan to 300 cfm maximum
- 4-92 (1) Reduced or zero use of ozone-depleting compounds in refrigeration and fire suppression systems

INNOVATION

- 4-93 (4 to 10) Include innovative design, equipment and operation solutions to protect human health and enhance indoor air quality during construction and/or occupation

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SECTION FIVE: MATERIALS EFFICIENCY

DESIGN & OVERALL

- 5-1 (5 to 25) Create functional, multi-purpose spaces while limiting overall square footage
- 5-2 (5--9) Design and build for deconstruction concept
- 5-3 (3) Eliminate materials & systems that require finishes on a minimum of 100 square feet
- 5-4 (1) Use standard dimensions in design of structure
- 5-5 (1) Install materials with longer life cycles
- 5-6 (2) Install locally produced materials from within the Pacific NorthWest – approximately 500 miles radius
- 5-7 (5) Use salvaged lumber, minimum of 1000 board feet
- 5-8 (3) No endangered wood species.

FRAMING

- 5-9 (1) Use stacked floor plans
- 5-10 (3) Use engineered structural products and use no 2xs larger than 2x8, and no 4xs larger than 4x8
- 5-11 (4) Use structural insulated panels
- 5-12 (3) Use cementitious foam-formed walls with flyash concrete (ICFs)
- 5-13 (3) Use finger-jointed framing material (e.g. risers and studs) longitudinal compression loads only
- 5-14 (3--5) Use sheathing that is third party certified sustainably harvested wood with a chain of custody, 50% minimum
- 5-15 (3--5) Use beams that are third party certified sustainably harvested wood with a chain of custody, 50% minimum
- 5-16 (3) Use factory framed wall panels (panelized wall construction)
- 5-17 (1) For interior walls, use steel studs with minimum 50% recycled content
- 5-18 (5) Use advanced system framing with double top plate
- 5-19 (2) Use (R-21) 2x6 intermediate framing

FOUNDATION

- 5-20 (1) Use at least 90% regionally or locally produced block for foundation
- 5-21 (6) Use flyash in concrete for foundation Use flyash or blast furnace slag for 25% by weight of cementitious materials for all concrete (20% for flat work)
- 5-22 (2) Use recycled concrete, asphalt, or glass cullet for base or fill for foundation
- 5-23 (2) Use alternative foundation system that minimizes volume of foundation material

SUB-FLOOR

- 5-24 (1) Use recycled-content underlayment for sub-floor

DOORS

- 5-25 (2) If using wood interior doors, select products from domestically grown wood

FINISH FLOOR

- 5-26 (1) If installing vinyl flooring, use product with recycled content
- 5-27 (1) No vinyl floors

- 5-28 (1) If installing carpet, use recycled-content carpet pad
- 5-29 (3) If installing carpet, use recycled-content or renewed carpet
- 5-30 (1) Use replaceable carpet tile on 15% of total flooring surface area
- 5-31 (1 to 5) If using wood flooring, use locally salvaged wood flooring on 25%, 50% or 90%+ of total flooring
- 5-32 (5) Use recycled-content glass, ceramic or porcelain tile
- 5-33 (5) Use cork or bamboo flooring
- 5-34 (5) Use natural linoleum
- 5-35 (5) Use polished concrete or other no finish floor
- 5-36 (1) Use spot repairable floor finish

INTERIOR WALLS

- 5-37 (4) Specify and use drywall with recycled-content gypsum Use drywall with a minimum of 90% recycled-content gypsum or flue gas substitute for recycled gypsum
- 5-38 (2-3) Specify and use recycled or "reworked" paint and finishes
- 5-39 (1) Use recycled newspaper or cork expansion joint filler
- 5-40 (2) Use natural wall finishes, like lime paint and clay
- 5-41 (2) Reduce interior walls, through open plan for kitchen, dining & living areas.
- 5-42 (2) Install toilet/shower partitions with recycled content

CEILING

- 5-43 (2) If installing acoustical ceiling, select a recycled-content product

OTHER INTERIOR – RECYCLING

- 5-44 (2) Provide appropriate sorting bins for recyclable materials
- 5-45 (4) Provide built-in kitchen or utility room recycling center

EXTERIOR WALLS

- 5-46 (1) Use recycled-content sheathing
- 5-47 (3) Use exterior cladding with reclaimed or recycled material on at least 20% of solid wall surface
- 5-48 (4) No vinyl siding or exterior trim

- 5-49 (3--5) Use wood siding that is third party certified sustainably harvested wood with a chain of custody on at least 20% of solid wall surface
- 5-50 (5) Use straw bale walls, minimum R-28
- 5-51 (1) Use siding with reclaimed or recycled material
- 5-52 (2) Use 50-year siding product
- 5-53 (2) Use salvaged masonry brick or block for exterior
- 5-54 (2) Use locally produced stone or brick for exterior

WINDOWS

- 5-55 (3) Use wood/composite windows
- 5-56 (3--5) Use wood windows that are third party certified sustainably harvested wood with a chain of custody
- 5-57 (1) Use finger-jointed wood windows

CABINETRY AND TRIM

- 5-58 (1) Use regional products, 50% minimum
- 5-59 (2--3) Use domestic hardwood trim that is third party certified sustainably harvested wood with a chain of custody, 50% minimum
- 5-60 (2--3) Use third party certified sustainably harvested wood with a chain of custody, 50% minimum
- 5-61 (3) Use finger-jointed or MDF trim with no added urea formaldehyde, 90% minimum
- 5-62 (1) Use wood veneers that are third party certified sustainably harvested woods with a chain of custody, 50% minimum
- 5-63 (2) Use regional products, 90% minimum
- 5-64 (1-2) Use domestic hardwood that is third party certified sustainably harvested wood with a chain of custody, 50% minimum
- 5-65 (1-2) Use third party certified sustainably harvested wood with a chain of custody, 50% minimum
- 5-66 (2-3) Use cabinet casework and shelving constructed of agricultural fiber ("strawboard" or "wheatboard") with no added urea formaldehyde
- 5-67 (3) Use resource-efficient countertop material in lobby/reception areas
- 5-68 (1) Use countertops that are salvaged, recycled, or third party certified sustainably harvested wood with a chain of custody

ROOF

- 5-69 (2) Use recycled-content roofing material
- 5-70 (2) Use 40-year roofing material

- 5-71 (3) Use 50-year roof material
- 5-72 (3) High albedo roof
- 5-73 (2) Use Solar shingles
- 5-74 (5-10) Install green roof

INSULATION

- 5-75 (1) Use recycled-content insulation
- 5-76 (4) Use environmentally friendly foam building products (formaldehyde-free, CFC-free, HCFC-free)
- 5-77 (1) Use backerrod around windows for infiltrations sealing

OTHER EXTERIOR

- 5-78 (2) Use reclaimed or salvaged material for landscaping walls
- 5-79 (3) Use recycled-content plastic or wood polymer lumber for decks and porches Use 100% recycled content HDPE, salvaged lumber, or lumber that is third party certified sustainably harvested wood with a chain of custody for decking and porches.
- 5-80 (5) Use non-toxic or low-toxic pressure-treated wood
- 5-81 (1) install only light colored pavement or pervious pavement to mitigate heat island

JOBSITE OPERATIONS

- 5-82 (R) Provide and post job site waste reduction & recycling plan and resource sheet to on-site personnel and subcontractors
- 5-83 (3) Contractually require subcontractors to participate in waste reduction & recycling efforts
- 5-84 (5) For Rehabs, evaluate opportunities for deconstruction. - systematic disassemble of a structure to remove and salvage usable materials prior to demolition.

REDUCE

- 5-85 (1) Use suppliers who offer reusable or recyclable packaging
- 5-86 (1) Provide weather protection for stored materials
- 5-87 (2) Create detailed take-off and provide as cut list to framer
- 5-88 (2) Use central cutting area or cut packs

- 5-89 (1) Substitute products that require solvent-based cleaning methods with solvent-free or water-based methods.

REUSE

- 5-90 (1) Use reclaimed building materials when appropriate (one point for each material type)
- 5-91 (1) Use reclaimed dimensional lumber; must be regraded for structural use
- 5-92 (1) Use reusable supplies for operations, such as construction fences, tarps, refillable propane tanks
- 5-93 (1) Move leftover materials to next job or provide to owner
- 5-94 (1) Reuse spent solvent for cleaning
- 5-95 (1) Sell or give away wood scraps, lumber and land clearing debris
- 5-96 (1) Sell or donate reusable items
- 5-97 (2) Use reusable forms, including wood if it is well maintained
- 5-98 (2) Purchase used building materials for your job

RECYCLE

- 5-99 (4-12) Recycle or divert from landfill, 50, 75 or 90% of all materials by weight or volume.
- 5-100 (2) Recycle paint
- 5-101 (3) Recycle asphalt roofing

HAZARDOUS WASTE

- 5-102 (R) See Action Items 2-29, Recycle Antifreeze, Oil, and Oil Filters at Appropriate Outlets and 2-30, Dispose of Non-recyclable Hazardous Waste at Legally Permitted Facilities.

INNOVATION

- 5-103 (4 to 10) Include innovative design, equipment and operation solutions to conserve natural resources and minimize waste produced on the project

_____ Subtotal Section 5

- 6-3 (5) Prepare a plan for annual scheduled maintenance of all aspects of the building and site, including but not limited to, building envelope, roof, vents, filters, plumbing, combustion equipment and landscaping.
- 6-4 (3) Prepare a sustainable landscape O&M plan.
- 6-5 (2) Incorporate a garbage disposal plan in the building/site design.
- 6-6 (5) Provide training for O&M staff.
- 6-7 (3) Conduct owner orientation/operation walk-through.

_____ Subtotal Section

SECTION SIX: OPERATIONS AND MAINTENANCE

- 6-1 (R) Provide owner with Homeowner's Information Kit
- 6-2 (R) Develop a tenant manual to provide guidance on living in a residence that incorporates green or sustainable features.