

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORE		PROOF
SITE PLAN				
required: site erosion control plan	8			site plan
required: workshop on erosion and sediment control	2			certificate
excavated topsoil protected from erosion	5			
grind stumps and limbs for mulch	2			
mill cleared logs	2			
use of redundant mulch, compost, or straw bales for erosion control	3			
house certified under NAHB's <i>Building With Trees</i> program	25			confirmation letter
builder may certify that the house meets NAHB's <i>Building With Trees</i> program or score points from individual vegetation protection measures				
individual trees fenced at drip line (1 point per tree, max 5 trees)	1 per tree			
protected vegetation save area (min 25% of development or lot)	2			
tree planting	4			
tree preservation plan	5			tree plan
utilities in tree root zones tunneled or hand dug (1 point per tree, max 5 trees)	1 per tree			
SITE PLAN TOTAL				

BUILDING ENVELOPE AND SYSTEMS ENERGY EFFIC				
ENERGY STAR Builder may choose to certify house as ENERGY STAR OR earn a minimum of 75 points from Energy Measures				
	90			certificate or computer print-out
ENERGY MEASURES Must earn a minimum of 75 points. No more than 85 points under Energy Measures can be applied toward total score. Houses must meet or exceed the North Carolina Energy Code.				
AIR LEAKAGE TEST				
measures	35			test results
AIR SEALING MEASURES <i>maximum of 30 points</i>				
airtight IC recessed lights or no recessed lights in insulated ceilings	4			
attic access opening (pulldown stairs / scuttle hole)	2			
attic kneewall doors (weatherstripped with latch)	2			
attic kneewall has sealed exterior sheathing	5			
band joist between conditioned floors sealed	3			
bath tub and shower drain	2			
bottom plate of exterior walls	2			
cantilevered floors sealed above supporting walls	2			
ceiling drywall sealed to top plate	2			
ceiling penetrations sealed between conditioned and unconditioned space	2			
chases sealed and insulated	5			
door rough openings	1			
drywall penetrations in exterior walls	2			
drywall sealed to bottom plate of exterior walls	2			
exterior wall sheathing sealed at plates, seams, and openings	5			
fireplace air sealing package (all units)	2			
floor penetrations between unconditioned and conditioned space	2			
window rough openings	2			
AIR SEALING MEASURES SUBTOTAL <i>(max of 30 applied to Air Sealing S</i>				

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	POSSIBLE POINTS	SCORE	PROOF
INSULATION <i>*Homes with multiple foundation types must use foundation type of greatest area for points</i>			
attic kneewall doors (R10)	1		
attic kneewall doors (R19)	2		
attic kneewall stud cavities (min R19)	3		
attic kneewall with insulated sheathing (R2.5)	3		
attic kneewall with insulated sheathing (R5)	5		
attic kneewall with non-insulated sheathing	1		
attic pull-down or scuttle hole (R19)	2		
band joist insulated (R19)	2		
cantilevered floor (R30)	2		
ceiling radiant heat barrier	1		
*concrete or masonry basement walls (continuous floor to ceiling R10)	3		
energy heel trusses or raised top plate	2		
exterior wall stud cavities (R15)	1		
*framed floor over unconditioned space (R19 in continuous contact with subfl	1		
flat ceilings (R30)	1		
flat ceilings (R38)	2		
insulate fireplace chase	1		
insulated corners	2		
insulated headers	2		
insulated T-walls (exterior/interior wall intersection)	2		
insulated wall sheathing (R 2.5 or greater)	2		
insulated wall sheathing (R 5 or greater)	3		
loose-fill attic insulation card and rulers	1		
*sealed, insulated crawl space walls (R8)	1		
*slab insulation (min R4)	2		
spray applied wall insulation	4		
vaulted and tray ceilings (R25)	1		
vaulted and tray ceilings (R30)	2		
INSULATION SUBTOTAL			
WINDOWS			
certified passive solar design (25% load reduction)	10		formula
east facing glazing less than 3% of floor area	2		
inert gas-filled double glazed units (e.g. argon gas filled)	3		window label
low emissivity glazing	5		window label
NFRC rated windows (max U.56)	3		NFRC label
solar heat gain coefficient (max 0.4)	3		window label
solar shade screens	3		
2-foot overhangs over 80% of windows (max 2' above windows)	1		
west facing glazing less than 2% of floor area	2		
WINDOWS SUBTOTAL			

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POSSIBLE POINTS	SCORE D	PROOF
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HEATING AND COOLING EQUIPMENT		
cooling equipment has non-CFC and non-HCFC refrigerant	3	product literature
cooling equipment sized within 6000 btu/h of Manual J (all units)	5	load calc + eqmt siz
geothermal heat pump (75% total capacity)	7	
heating equipment output sized within 25,000 btu/h of Manual J (all units)	5	load calc + eqmt siz
HSPF 7.8 heat pump (75% total capacity)	2	product literature
HSPF 8.0 heat pump (75% total capacity)	3	product literature
measured airflow within 15% of manufacturer's specifications	3	test results
90% AFUE furnaces (75% total capacity)	3	energy guide label
outdoor thermostat for heat pump	1	
programmable thermostat (all systems)	1	
radiant floor heating-electric or hydronic using domestic hot water tank	1	
radiant floor heating-gas	2	
radiant floor heating-hydronic using solar heated water	3	
SEER 12 cooling equipment (75% total capacity)	2	energy guide label
SEER 14 cooling equipment (75% total capacity)	3	energy guide label
sensible heat fraction less than or equal to 0.7 (all air conditioners)	2	
zone control - one system services multiple zones	5	

HEATING AND COOLING SUBTOTAL		
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DUCTWORK / AIR HANDLER		
required: all duct seams and air handler sealed with mastic	10	
air handler located within conditioned space (all units)	5	
airflow for each duct run measured and balanced	3	test results
certify duct leakage less than 5%	20	test results
duct design complies with Manual D	5	sizing calculation
duct trunk lines outside conditioned space insulated to R8	2	
ducts located within conditioned space (min 90%)	5	
interior doors with 1 inch clearance to finish floor	2	
multiple return ducts (min 1 in each bedroom)	2	
no ducts in exterior walls or vaulted ceilings	3	
no ductwork	50	
rigid supply trunk	2	
transfer grilles	2	

DUCTWORK / AIR HANDLER SUBTOTAL		
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BUILDING ENVELOPE AND SYSTEMS ENERGY EFFICIENCY		
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ENERGY EFFICIENT LIGHTING AND APPLIANCES		
automatic outdoor lighting controls (e.g. motion sensor)	2	
energy efficient clothes dryer	1	product label
energy efficient dishwasher	1	product label
energy efficient refrigerator	2	product label
high efficiency exterior lighting	2	product literature
indoor fluorescent fixtures (min 200 watts)	2	
no garbage disposal	1	
recessed light fixtures are compact fluorescents	2	

LIGHTING / APPLIANCES ENERGY EFFICIENCIES TOTAL		
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POSSIBLE SCORE
E POINTS D

PROOF

RESOURCE EFFICIENT DESIGN			
all wall studs @ 24-in. centers	3		
floor joists @ 19.2-in. centers (all floors)	2		
floor joists @ 24-in. centers (all floors)	3		
floor plan adheres to 2-ft dimensions	2		
house smaller than 2100 square feet	2		
interior living space adheres to 2-ft dimensions	1		
non-load bearing wall studs @ 24-in. centers	2		
non-structural headers in non-load bearing walls	2		
single top plate with stacked framing	3		
T-walls with drywall clips or alternative framing	3		
2-stud corners with drywall clips or alternative framing	3		
window rough openings eliminate jack stud	2		
RESOURCE EFFICIENT DESIGN TOTAL			

RESOURCE EFFICIENT BUILDING MATERIALS			
RECYCLED AND NATURAL CONTENT MATERIALS			
air conditioner condensing unit pad (min 50% recycled)	1		
carpet (min 50% recycled)	2		product literature
carpet pad (min 50% recycled)	1		
concrete with fly ash (min 25% fly ash)	3		content print-out
cork or bamboo flooring	2		
insulation (min 25% recycled)	2		product literature
outdoor decking and porches (min 40% recycled)	2		
reclaimed wood flooring	1		letter
recycled concrete used as aggregate	1		letter
recycled content tiles (min 30% recycled)	1		product literature
RECYCLED AND NATURAL CONTENT MATERIALS SUBTC			
ADVANCED PRODUCTS			
all beams are steel, engineered wood, or trusses	1		
all headers are steel or engineered wood	1		
engineered exterior trim including soffit, fascia, and trim	1		
engineered floor framing (all floors)	2		
engineered interior trim	1		
engineered roof framing	2		
engineered wall framing (25% of studs)	1		
engineered wall framing (80% of studs)	2		
insulated concrete forms	5		
OSB roof decking	1		
precast autoclaved aerated concrete	5		
steel interior wall framing	1		
structural insulated panels (exterior walls)	5		
structural insulated panels (roof)	3		
ADVANCED PRODUCTS SUBTOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORE	PROOF
DURABILITY			
required: roof gutters that direct water away from foundation	2		
back-primed siding and trim	1		
continuous foundation termite flashing	1		
covered entry ways (all doors)	1		
exterior cladding (min 3 sides with 40-year warranty or masonry)	1		
insulated glazing (min. 10-year warranty)	1		warranty
light roof color (asphalt or fiberglass shingles)	1		
light roof color (tile or metal)	2		
roof drip edge	1		
roofing (min 25-year warranty)	1		warranty
roofing (min 30-year warranty)	2		warranty
roofing (min 40-year warranty)	3		warranty
siding with vented rain screen	2		
walls covered with builder paper or housewrap (drainage plane)	1		
window and door head flashing	1		
window and door pan AND side flashing	1		
DURABILITY SUBTOTAL			
RESOURCE EFFICIENT BUILDING MATERIALS TOTAL			

WASTE MANAGEMENT			
Prerequisite: No construction materials shall be burned or buried on job site or anywhere but in a state-approved facility.			
WASTE MANAGEMENT PRACTICES			
central cut area	3		
donation of excess materials or re-use (min \$500/job)	1		letter
job site framing plan and cut list	1		frame plan + cut list
job site framing plan with stud locations, joist locations, and roof structure annotations	10		frame plan + cut list
WASTE MANAGEMENT PRACTICES SUBTOTAL			
RECYCLE CONSTRUCTION WASTE			
required: cardboard	1		
required: metal	1		
required: wood	3		
drywall (recycle or grind and spread on site)	3		
plastics	1		
posted job site waste management plan - recycle 75% of 3 materials	5		management plan
shingles	1		
RECYCLE CONSTRUCTION WASTE SUBTOTAL			
WASTE MANAGEMENT TOTAL			

Winmore Green Builder Worksheet

POSSIBLE POINTS SCORE
D

PROOF

INDOOR AIR QUALITY			
Prerequisite: No unvented combustion fireplaces or space heaters are permitted.			
COMBUSTION SAFETY			
attached garage - exhaust fan controlled by motion sensor or timer	2		
attached garage - seal bottom plate and penetrations to conditioned space	4		
backdraft depressurization test	4		test results
carbon monoxide detector (one per floor required)	4		
detached garage	5		
direct vent, sealed combustion fireplace (all units)	3		
furnace combustion closet isolated from conditioned area (all units)	4		
water heater combustion closet isolated or power vented	4		
COMBUSTION SAFETY SUBTOTAL			
MOISTURE CONTROL			
required: gravel bed beneath slab-on-grade floors	3		
required: sealed crawl-space	5		
capillary break between foundation and framing	1		
drainage board for below grade walls	4		
foundation drain at outside perimeter edge of footing	2		
foundation drain on top of footing	1		
vapor barrier beneath slab (above gravel) and in crawl space	2		
MOISTURE CONTROL SUBTOTAL			
VENTILATION			
required: all exhaust fans should be vented to exterior	3		
automatic tub/shower room fan controls (e.g. timer)	1		
ceiling fans (minimum of 3 fans)	1		
controlled house ventilation (0.35 ACH)	4		
dehumidification system	3		
Energy Star bath fans (all units)	3		product literature
no power roof vents	1		
outside air intake with damper	3		
outside air intake without damper	2		
radon test of home prior to occupancy	2		
radon/soil gas vent system	3		
vented garage storage room	1		
whole house fan	2		
VENTILATION SUBTOTAL			

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	POSSIBLE POINTS	SCORE	D	PROOF
MATERIALS				
all surfaces of particle board in house sealed with water-based sealant	1			
alternative termite treatment	2			
central vacuum system	1			
ducts protected until construction is completed	2			
filter / air cleaner with minimum 30% dust spot efficiency (e.g. pleated filter)	2			
low VOC carpet certified by the Carpet AND Rug Institute	1			product literature
low VOC paints (less than 250 g/L)	2			product literature
low VOC sealents and adhesives (less than 250 g/L)	1			product literature
low VOC stains and finishes on wood floors	2			product literature
no carpet in house	4			
no urea formaldehyde materials inside conditioned space	2			product literature
outdoor structures made from non-CCA pressure treated lumber	1			product literature
urea formaldehyde materials inside conditioned space sealed	1			product literature
MATERIALS SUBTOTAL				
INDOOR AIR QUALITY TOTAL				

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	POSSIBLE POINTS	SCORE	PROOF
WATER - INDOOR			
Prerequisite: All fixtures must meet National Energy Policy Act standards for low flow.			
heat pump water heater	2		
heat recovery water heating	1		
heat traps on water heater	1		
high efficiency bathroom faucets (max 2.25 gal/min)	1		product literature
high efficiency clothes washer	2		product label
high efficiency kitchen faucets (max 2.25 gal/min)	1		product literature
high efficiency showerheads (max 2.25 gal/min)	1		product literature
high efficiency toilets (max 1.45 gal/min)	1		product literature
high efficiency water heater (min Energy Factor: gas 0.62 electric 0.92)	2		energy guide label
hot water demand re-circulation	1		
pressure reducing valve	1		
shower drain heat recovery device	1		
solar domestic water heating	4		
tankless water heater (2 points per tank)	2 per		
water filter (NSF certified)	1		product literature
water heater pipe insulation on first two feet of pipe	1		
water heater tank insulation	1		
WATER - INDOOR TOTAL			
WATER - OUTDOORS			
drip irrigation system	2		
greywater irrigation	3		
permeable driveway / parking area	2		
rainwater harvest system	3		
rainwater infiltration device	3		
timer on hose bibs or irrigation system	1		
xeriscape guidebook given to homeowner	1		resource
xeriscape installed	15		
xeriscape plan provided to homeowner	4		xeriscape plan
WATER - OUTDOORS TOTAL			

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POSSIBLE POINTS	SCORE
E POINTS	D

PROOF

HOMEBUYER EDUCATION/OPPORTUNITIES			
required: environmental features checklist for walk through	1		
required: household hazardous waste resources	1		
required: local recycling contact	1		
required: review energy operations with homeowner	4		
required: review irrigation system operations with homeowner	2		
built-in recycling center	2		
guaranteed energy bills	15		energy bill guarantee
HOMEBUYER EDUCATION TOTAL			

BONUS POINTS			
innovation points	Varies		
exceeds Energy Star (one bonus point per one Energy Star point)	1 per		
American Lung Association Health House	5		
accessible house	5		
solar electric system (2 pts per 150 watt capacity for max of 25 pts)	25		
BONUS POINTS TOTAL			

Winmore Green Builder Worksheet

	POSSIBLE POINTS	SCORE	PROOF
MIN			
WINMORE GREEN BUILDER PROGRAM TOTALS			
SITE PLANNING	10		
ENERGY EFFICIENT BUILDING ENVELOPE AND SYSTEMS	75		
ENERGY EFFICIENT LIGHTING / APPLIANCES	0		
RESOURCE EFFICIENT DESIGN	0		
RESOURCE EFFICIENT BUILDING MATERIALS	2		
WASTE MANAGEMENT	0		
INDOOR AIR QUALITY	11		
WATER - INDOOR	0		
WATER - OUTDOORS	0		
HOME BUYER EDUCATION	9		
BONUS POINTS	0		
GRAND TOTAL	200		

Note: These standards were developed by the Southface Energy Institute and the Atlanta Home Builders Association for their EarthCraft House program. However, neither organization is involved in any way in the Winmore Green Builder Program. The Winmore Green Builder Program gratefully acknowledges the work of the Southface Energy Institute and the Atlanta Home Builders Association.