



# ENERGY STAR® Qualified Modular Homes Inspection Checklist – National BOP



Home Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_ Home ID: \_\_\_\_\_

**Instructions:** Write your initials in each applicable box. If an item does not apply to the home, write “n/a”. Raters should attempt to inspect as many critical items as accessible but may delegate a builder’s representative to verify any remaining Thermal Bypass items (numbered items on the first page of this checklist) that are not accessible or that already have been verified in the plant. If the builder verifies any item, they must sign the second page of this checklist. Every line must contain at least one set of initials or “n/a”.

Thermal Bypass Item	Inspection Guidelines	PLANT QC	CERTIFIER / RATER	
		Pass	Pass	Fail
Overall Air Barrier and Thermal Barrier Alignment	<b>General requirements:</b> <ul style="list-style-type: none"> <li>Insulation shall be installed in full contact with sealed interior and exterior air barrier except for alternate to interior air barrier under walls adjoining exterior walls or unconditioned spaces (see below).</li> </ul>			
	<b>All climate zones:</b>			
	1.1 Overall alignment throughout home	_____	_____	_____
	1.2 Garage band joist air barrier (at bays adjoining conditioned space)	_____	_____	_____
	1.3 Attic eave baffles where vents/leakage exist	_____	_____	_____
	<b>Only at Climate Zones 4 and higher:</b>			
	1.4 Slab-edge insulation (Up to 25% of the slab edge may be uninsulated in Climate Zones 4 and 5.)	_____	_____	_____
<b>Best practices encouraged, not required:</b>				
1.5 Air barrier at all band joists (Climate Zones 4 and higher)	_____	_____		
1.6 Minimize thermal bridging (e.g., OVE framing, SIPs, ICFs)	_____	_____		
Walls Adjoining Exterior Walls or Unconditioned Spaces	<b>General requirements:</b> <ul style="list-style-type: none"> <li>Fully insulated wall aligned with air barrier at both interior and exterior, <b>OR</b></li> <li>Alternate for <b>Climate Zones 1 thru 3</b>, sealed exterior air barrier aligned with RESNET Grade 1 insulation fully supported</li> <li>Continuous top and bottom plates or sealed blocking</li> </ul>			
	2.1 Wall behind shower/tub	_____	_____	_____
	2.2 Wall behind fireplace	_____	_____	_____
	2.3 Insulated attic slopes/walls	_____	_____	_____
	2.4 Attic knee walls	_____	_____	_____
	2.5 Skylight shaft walls	_____	_____	_____
	2.6 Wall adjoining porch roof	_____	_____	_____
	2.7 Staircase walls	_____	_____	_____
	2.8 Double walls	_____	_____	_____
Floors between Conditioned and Exterior Spaces	<b>General requirements:</b> <ul style="list-style-type: none"> <li>Air barrier is installed at any exposed insulation edges</li> <li>Insulation is installed to maintain permanent contact with sub-floor above</li> </ul>			
	3.1 Insulated floor above garage	_____	_____	_____
	3.2 Cantilevered floor	_____	_____	_____
Shafts	<b>General requirements:</b> <ul style="list-style-type: none"> <li>Openings to unconditioned space are fully sealed with solid blocking or flashing and any remaining gaps are sealed with caulk or foam (provide fire-rated collars and caulking where required)</li> </ul>			
	4.1 Duct shaft	_____	_____	_____
	4.2 Piping shaft/penetrations	_____	_____	_____
	4.3 Flue shaft	_____	_____	_____
Attic / Ceiling Interface	<b>General requirements:</b> <ul style="list-style-type: none"> <li>All attic penetrations and dropped ceilings include a full interior air barrier aligned with insulation with any gaps fully sealed with caulk, foam or tape</li> <li>Movable insulation fits snugly in opening and air barrier is fully gasketed</li> </ul>			
	5.1 Attic access panel (fully gasketed and insulated)	_____	_____	_____
	5.2 Attic drop-down stair (fully gasketed and insulated)	_____	_____	_____
	5.3 Dropped ceiling/soffit (full air barrier aligned with insulation)	_____	_____	_____
	5.4 Recessed lighting fixtures (ICAT labeled and sealed to drywall)	_____	_____	_____
	5.5 Whole-house fan (insulated cover gasketed to the opening)	_____	_____	_____
Common Walls Between Dwellings	<b>General requirements:</b> <ul style="list-style-type: none"> <li>Gap between drywall shaft wall (common wall) and structural framing between units is sealed at all exterior boundary conditions</li> </ul>			
	6.1 Common wall between dwelling units	_____	_____	_____

# Inspection Checklist – National BOP (Prescriptive Path)

Home ID: \_\_\_\_\_

BOP Item	Inspection Guidelines	PLANT QC	CERTIFIER / RATER	
		Pass	Pass	Fail
<b>Cooling Equipment (when provided)</b>	<b>General requirements:</b> <b>Hot Climates</b> (2004 IRC Climate Zones 1,2,3) Right-Sized <sup>1</sup> : ▪ ENERGY STAR qualified AC (14.5 SEER / 12 EER) <b>OR</b> ENERGY STAR qualified heat pump (14.5 SEER / 12 EER / 8.2 HSPF) <b>Mixed and cold climates</b> (2004 IRC Climate Zones 4,5,6,7,8) Right-sized <sup>1</sup> : ▪ 13 SEER AC <b>OR</b> ENERGY STAR qualified heat pump <sup>2</sup> (14.5 SEER / 12 EER / 8.5 HSPF)	_____	_____	_____
<b>Heating Equipment</b>	<b>General requirements:</b> <b>Hot Climates</b> (2004 IRC Climate Zones 1,2,3): ▪ 80 AFUE gas furnace <b>OR</b> 80 AFUE boiler <b>OR</b> 80 AFUE oil furnace <b>OR</b> ENERGY STAR qualified heat pump (14.5 SEER / 12 EER / 8.2 HSPF) <b>Mixed and Cold Climates</b> (2004 IRC Climate Zones 4,5,6,7,8): ▪ ENERGY STAR qualified gas furnace (90 AFUE) <b>OR</b> ENERGY STAR qualified boiler (85 AFUE) <b>OR</b> ENERGY STAR qualified oil furnace (85 AFUE) <b>OR</b> ENERGY STAR qualified heat pump <sup>2</sup> (14.5 SEER / 12 EER / 8.5 HSPF)	_____	_____	_____
<b>Thermostat</b>	<b>General requirements:</b> ▪ ENERGY STAR qualified thermostat (except zones with radiant heat) <sup>1</sup>	_____	_____	_____
<b>Ductwork</b>	<b>General requirements:</b> ▪ Leakage ≤ 4 cfm to outdoors per 100 sq. ft. of conditioned floor area	_____	_____	_____
	▪ Ducts in unconditioned spaces wrapped with R-6 minimum insulation	_____	_____	_____
	▪ All exterior ducts mechanically secured and supported off the ground	_____	_____	_____
<b>Envelope</b>	<b>General requirements:</b> ▪ Infiltration (ACH50): 7 in CZs 1–2   6 in CZs 3–4   5 in CZs 5–7   4 in CZ 8 ▪ Insulation levels that meet or exceed the 2004 IRC <sup>1</sup>	_____	_____	_____
		_____	_____	_____
<b>Windows</b>	<b>General requirements:</b> ▪ ENERGY STAR qualified windows or better (additional requirements in CZ 2 and CZ 4) <sup>1</sup>	_____	_____	_____
<b>Water Heater<sup>3</sup></b>	<b>General requirements:</b> ▪ Gas (EF): 40 Gal = 0.61   60 Gal = 0.57   80 Gal = 0.53 ▪ Electric (EF): 40 Gal = 0.93   50 Gal = 0.92   80 Gal = 0.89 ▪ Oil or Gas water heating system ≥ 0.78 EF is integrated with space heating boiler <sup>4</sup>	_____	_____	_____
		_____	_____	_____
		_____	_____	_____
<b>Lighting and Appliances</b>	<b>General requirements:</b> ▪ Five (5) or more ENERGY STAR qualified appliances, light fixtures, ceiling fans equipped with lighting fixtures, water heaters and/or ventilation fans are installed, as listed below. <sup>1</sup> 1. _____ 4. _____ 2. _____ 5. _____ 3. _____	_____	_____	_____
<b>Marriage Line Seal</b>	<b>General requirements:</b> ▪ All vertical and horizontal marriage line areas filled with continuous non-porous insulating gaskets creating a permanent air barrier at joints in the ceiling, walls and floor. Gaskets may be one or two-part systems, including proprietary gaskets, foams, insulation wrapped in poly, or insulation covered by butyl or other long-life tape on one side. No visible signs of gaps or tears are permitted.	_____	_____	_____
<b>Floors over Unconditioned Spaces</b>	<b>General requirements:</b> ▪ Air barrier between floor and unconditioned crawlspace is continuous and sealed.	_____	_____	_____

<sup>1</sup> For more information, see “ENERGY STAR Qualified Homes Codes and Standards Information.”

<sup>2</sup> Only applicable to homes in Climate Zones 4 and 5. Homes with heat pumps in Climate Zones 6, 7 and 8 cannot be qualified using the Prescriptive Path (BOP), but can earn the label using the ENERGY STAR Performance Path requirements.

<sup>3</sup> Efficiency ratings not applicable if ENERGY STAR qualified water heater is installed to comply with Lighting and Appliances requirement.

<sup>4</sup> Can use instantaneous water heating system or an indirect storage system with a boiler that has a system efficiency of ≥ 85 AFUE. Homes with tankless coil water heating systems cannot be qualified using the Prescriptive Path (BOP), but can be qualified using the ENERGY STAR Performance Path.

<b>Plant QC</b>	<b>Rater</b>	<b>Builder</b>
Company: _____	Company: _____	Company: _____
Signature: _____	Signature: _____	Signature: _____
Date: _____ Initials: _____	Date: _____ Initials: _____	Date: _____ Initials: _____