

ASHRAE 90.1-1989 Field Inspection Checklist

<i>REFER TO COMPLIANCE CERTIFICATES FOR PROJECT-SPECIFIC REQUIREMENTS</i>		
Foundation and/or Slab/Under-Floor Inspection		
Requirement	Verify	Reference
Slab-edge insulation installed	R-value of insulation	Envelope Certificate
Below-grade wall insulation installed	R-value of insulation	Envelope Certificate
Under-floor insulation installed	R-value of insulation	Envelope Certificate
Ducts insulated and sealed/pipes insulated	R-value of insulation	Mechanical Certificate
Frame Inspection		
Requirement	Verify	Reference
All joints and penetrations are caulked, gasketed, weatherstripped, or otherwise sealed	Caulking/sealing	Envelope Certificate
Windows, doors, and skylights certified as meeting leakage req.	Label	Envelope Certificate
Window and skylight areas per plans	Area of windows/skylights	Envelope Certificate
Window and skylight U-factors acceptable	U-factors of windows/skylights	Envelope Certificate
Window SHGC factors acceptable	SHGC of windows	Envelope Certificate
Window shading installed per plans/specifications	Overhang or shade screen	Envelope Certificate
Insulation Inspection		
Requirement	Verify	Reference
Wall insulation installed	Wall construction type R-value of insulation	Envelope Certificate
Ceiling/roof insulation installed	Ceiling/roof construction type R-value of insulation	Envelope Certificate
Vapor retarders installed	Kraft paper or equal	Envelope Certificate
Exception: exempted zones/states (generally Zones 2-7)		
Final Mechanical Inspection		
Requirement	Verify	Reference
Heating and Cooling System Controls		
One setback thermostat with occupant override per zone	Thermostat with battery back-up and accessible override	Mechanical Certificate
Setback requirement exceptions: Residences & hotel/motel guest rooms areas that operate continuously		
Heat-pump thermostat used with heat pumps		
Air economizer on systems greater than 90,000 Btu/h	Economizer installed or HVAC make and model matches plans	Mechanical Certificate
Exceptions: exempted climate zones residences, supermarkets, hotel guest rooms high-efficiency cooling equipment tradeoff minimum EER: _____ EER: _____		
Outdoor-Air Ventilation		
Outdoor air provided to each space	Outdoor-air intake on HVAC system or required area of operable openings	Mechanical Certificate
Shutoff dampers in restaurant make-up air systems	Damper installed	Mechanical Certificate
Duct Construction		
Duct insulation installed	R-value of insulation	Mechanical Certificate
Duct sealed	Transverse joints of metal ducts and mechanical connections on other duct joints	Mechanical Certificate
Hydronic Heating Systems		
Pipe insulation	½ in. on heating coil branches 1½ in. on circulation loops	Mechanical Certificate Mechanical Certificate
Part-load efficiency method	Temp reset/variable flow	Mechanical Certificate
NOTE: <i>Final Mechanical Inspection (contd) and Final Electrical Inspection checklist on other side.</i>		

Field Inspection Checklist (contd)

Final Mechanical Inspection (contd)		
Requirement	Verify	Reference
Other Multiple-Zone Mechanical Requirements		
See Complex Systems Certificate		
Water-Heating Systems		
Heat traps	Integral to water heater or field-fabricated	Mechanical Certificate
Pipe insulation on inlet/outlet pipes	Insulation thickness	Mechanical Certificate
Recirculating systems	Insulation thickness Automatic time-switch	Mechanical Certificate Mechanical Certificate
Final Electrical Inspection		
Requirement	Verify	Reference
Controls, Switching, and Wiring		
Independent lighting controls	Switch in each room	Lighting Certificate
Exceptions: security lighting building lobby/retail store/mall		
Hotel/motel guest rooms	Master switch at entry	Lighting Certificate
At least two lighting levels in each space	Two switches, dimmer, or occupancy sensor in each space	Lighting Certificate
Exceptions: only one luminaire in space corridor, storage area, restroom, or lobby area		
Exterior lighting controls	Photocell or astronomical time-switch on exterior lights	Lighting Certificate
Exception: large covered areas requiring lighting during daylight hours		
One-lamp and three-lamp ballasted luminaires	Tandem-wired ballasts	Lighting Certificate
Exceptions: electronic high-frequency ballasted luminaires luminaires not on same switch		
Interior Lighting		
Fixtures, lamps, and ballasts	Match plans and specs	Lighting Certificate
Exterior Lighting		
Power for lighting from electrical service	Exterior-lighting circuit	Lighting Certificate
Exterior-lighting source:	Fluorescent Metal halide High-pressure sodium	Lighting Certificate
Exceptions: specialized signal, directional, and marker lighting lighting highlighting exterior features of historic building advertising signage safety or security lighting low-voltage landscape lighting source efficacy greater than 45 lumens per watt		
NOTE: <i>This form is required to be under the front seat of the inspection vehicle.</i>		