



ENERGY STAR Multifamily New Construction Photo Documentation Guidance Document (Rev. 03)

For ASHRAE and Prescriptive Path projects (and for ERI Path projects where required by your HCO), use this document as a guideline to comply with the photo documentation requirements of the *ENERGY STAR MFNC* program. Provide your MRO (or HCO) with a copy of all applicable photos or documents listed below. Name files accordingly or save in appropriately named sub-folders. Clarify photo content in a separate document as needed. Ensure that nameplates and details demonstrating compliance are clearly identifiable in the photo.

Share a representative photo of each unique assembly with your MRO (or HCO) but take representative photos from all buildings. Be able to share additional photo documentation for each building upon request.

1 – APPLIANCES

1. Include a clear photo of the nameplate of each unique appliance listed below showing appliance model number.

ERI Path: Additionally, provide the Energy Guide label or other documentation that confirms energy use or efficiency consistent with the energy model. To document compliance with ENERGY STAR Certified appliances in common spaces (Rater Field Checklist 13.2), additionally provide documentation that confirms model number is listed online at www.energystar.gov/products, or was listed at time of purchase.

ASHRAE Path: If modeling savings or not using Simulation Guideline defaults, additionally provide the Energy Guide label, proof of ENERGY STAR certification (if applicable), or other documentation that confirms energy use or efficiency consistent with the energy model.

Prescriptive Path: To document compliance with ENERGY STAR Certified appliances (Rater Field Checklist 13.1), additionally provide documentation that confirms model number is listed online at www.energystar.gov/products, or was listed at time of purchase.

- a) Refrigerator
- b) Dishwasher
- c) Clothes Washer
- d) Clothes Dryer

2 - DHW

1. Include a clear photo of the nameplate of each unique water heater showing model number, efficiency, and capacity. Where efficiency is not reported on the nameplate, provide AHRI Certificate. (Rater Field 11.1 (Prescriptive), Rater Field 11.2 (ERI))
2. For each unique in-unit storage water heater model, provide AHRI certificate that confirms the presence of a heat trap or photo of heat trap. (Rater Field 11.3)
3. For each unique faucet and showerhead model installed in dwelling units, provide a clear photo indicating the flow rate. Where flow rate is not visible or able to be photographed clearly, provide documentation that confirms flow rate being modeled matches installed fixtures.
 - a. For Prescriptive Path (Rater Field 13.1), additionally provide documentation that confirms faucet and showerhead model numbers are listed online at <https://www.epa.gov/watersense/product-search>, or were listed at time of purchase.
4. From one dwelling unit, include a clear photo, documenting the faucet temperature reading. (Rater Field 11.4)

3 – ENVELOPE INSULATION

1. For each unique envelope assembly (below and above grade walls, ceilings/roof, slab-on-grade, floors above unconditioned space), provide a photo clearly identifying each type of insulation installed, R-value or thickness using ruler (can do each individual piece of insulation or entire assembly). (Rater Field 1.2)
2. For each unique envelope assembly, if not demonstrated in photo above, provide a photo showing Grade 1 installation for each type of insulation installed. (Rater Field 1.3)
3. In addition, provide the following component-specific photos:



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Slab-on-Grade or slab at grade without ground contact

4. For Climate Zone 4-8, provide photo of slab edge insulated in accordance with Rater Field 3.4 or in compliance with one of the alternatives or exceptions.

Above-Grade Walls

5. Provide a photo taken before insulation installation to verify framing construction using a ruler or measuring tape.
6. Depending on compliance option chosen for Rater Field 3.7, provide one of the following:
 - a. A photo showing continuous rigid insulation, insulated siding, or combination that complies with Rater Field 3.7.1
 - b. A photo showing SIPS, ICFs, or double wall framing (Rater Field 3.7.2)
 - c. Photos showing compliance with the “advanced framing” details noted in Rater Field 3.7.3, including insulated corners, headers above windows & doors, and interior/exterior wall intersections
7. For above-grade concrete podiums and projected balconies, provide a photo of slab edge insulation (Rater Field 3.5) unless using alternative UA compliance option.

Insulated Ceilings with Attic Space Above

8. Provide a photo showing insulation R-value or thickness using a ruler at the inside face of the exterior wall. (Rater Field 3.1)
9. Provide photo showing insulation R-value or thickness using a ruler at the attic access panel, drop-down stairs and/or the durable cover. (Rater Field 3.2)
10. Provide a photo showing insulation R-value or thickness using a ruler beneath attic platform. (Rater Field 3.3)

Floors Above Garages

11. For concrete podiums in CZ 4-8 above ambient conditions, garages or unconditioned spaces, where applicable, provide photo of insulated column (Rater Field 3.6) unless using alternative UA compliance option.

4 - WINDOWS

1. Provide a photo or other documentation for each unique window type with third party verification (NFRC label if applicable) of U-value, SHGC, and ENERGY STAR certification (if applicable). (Rater Design 2.1, 2.2; Rater Field 1.1).

5 - DOORS

1. Interior: For the minimum number of dwelling units required to be inspected via sampling, provide a photo in each of those units showing doorsweep and weatherstripping or equivalent gasket of dwelling unit entrance door (Rater Field 4.9).
2. Exterior: Include a photo of each unique exterior door type with third party verification, NFRC and/or ENERGY STAR certification (if applicable). (Rater Design 2.1, 2.2; Rater Field 1.1)
3. Exterior: Include a photo showing doorsweep and weatherstripping or equivalent gasket of all doors adjacent to unconditioned space (Rater Field 4.5).

6 - AIR SEALING

1. Where bathroom & kitchen exhaust fan creates a penetration to unconditioned space (Rater Field 4.1), provide photo of air-sealing in one representative dwelling unit.
2. Where recessed light fixtures are adjacent to unconditioned space (Rater Field 4.2), provide photo of ICAT label and gasket in one representative dwelling unit.

7 - COMPARTMENTALIZATION (BLOWER DOOR) TEST

1. For the minimum number of dwelling units required to be tested via sampling, provide photos of testing results for each tested unit (Rater Field 4.10).
2. If required to comply with Rater Field 4.10.1, additionally provide photos of test results for pressure differential measured during compartmentalization testing.



8 – HEATED GARAGES/PLENUMS/SIDEWALKS & PIPE FREEZE PROTECTION

1. Where garages or plenums are heated, provide photos clearly identifying each type of insulation installed and R-value or thickness using ruler (can do each individual piece of insulation or entire assembly). Rater Field (1.5.1, 1.5.2, 1.5.3, 1.6.1, 1.6.2)
 - a. If not demonstrated in photos above, additionally provide photo showing Grade 1 installation for each type of insulation installed.
2. Provide a photo showing temperature-based controls for pipe freeze protection, garage heating, plenum heating, and/or snow and ice-melting systems that includes temperature set point. (Rater Field 5.10, 5.11)
3. Where heat trace is installed for pipe freeze protection, provide a photo of insulation on piping and photo of control sensor on pipe wall. (Rater Field 5.10.1)

9.1 - HVAC – HEATING & COOLING EQUIPMENT

1. If the 'weigh-in' refrigerant assessment method is used, provide one or more photographs showing the scale displaying the total weight of refrigerant added or removed from the system indicated per Section 8.5.2.1.1. The photographs shall be timestamped and geotagged to indicate the location of the Forced-Air HVAC System under test. (Rater Field 5a.3)
2. For each unique heating and cooling system, provide a photo of the nameplates to verify manufacturer, model number, efficiency, and capacity. If installed systems do not match HVAC Design report, provide the written approval from the designer. (Rater Field 5a.4, 5b.1, , 5.5 (Prescriptive), 5.6 (ERI), ASHRAE model)
3. For one dwelling unit, provide photo(s) of the furnace, boiler, and/or water heater to verify whether mechanically drafted or direct-vented. (Rater Field 10.1). If naturally drafted, provide a photo showing the equipment is in a space outside the pressure boundary of the dwelling unit and that the envelope separating it is insulated and air-sealed (Rater Field Footnote 81)
4. For one dwelling unit, provide photo of dwelling unit thermostat and its location. (Rater Field 5.9)
 - a. For Prescriptive Path, if not demonstrated in photo above, provide photo demonstrating that the thermostat is programmable (Rater Field 5.9.1)
5. Where shaft vents are present, provide photo(s) of motorized damper for stair and elevator shaft vents in the closed position. (Rater Field 5.10)

9.2 HVAC – HYDRONIC DISTRIBUTION

1. For one dwelling unit, provide photo(s) of:
 - a. hydronic distribution control valve or terminal distribution pump (Rater Field 5.13)
 - b. terminal unit balancing valve or control valve. (Rater Field 5.14)
 - c. pipe insulation (Rater Field 5.15)
2. Provide photo of each unique circulating pump motor nameplate that includes the manufacturer, model number, efficiency, horsepower and NEMA Premium label (where applicable).
 - a. If 5 horsepower or larger, additionally provide photo of the VFD (Rater Field 5.16)

9.3 HVAC – DUCTS

1. For one dwelling unit, provide photo of the installed ductwork that shows there are no kinks, sharp bends, etc. (Rater Field 6.1)
2. For one dwelling unit, provide photo showing insulation type and R-value or thickness measured with a ruler of supply and return ducts in unconditioned space (Rater Field 6.3, 6.3.1(Prescriptive))
3. For the minimum number of dwelling units required to be tested via sampling, provide a photo of the recorded test results from the bedroom pressure differential tests. (Rater Field 6.2)
4. For the minimum number of dwelling units (and common spaces using ANSI / RESNET / ACCA 310) required to be tested via sampling, provide a photo of recorded test results from duct leakage tests. (Rater Field 6.4, 6.5)

9.4 HVAC – FILTRATION

1. For one dwelling unit, where applicable, provide one photo showing the location of the filter access. (Rater Field 9.1)
 - a. If not demonstrated in photo above, additionally provide one photo showing the filter access panel gasket or alternative (Rater Field 9.1.1)
2. For one dwelling unit, where applicable, provide one photo showing that return air and outdoor air pass through the filter (Rater Field 9.1)



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10 - VENTILATION

1. For each unique mechanical ventilation fan, include a photo of fan nameplates including manufacturer and model number. (Rater Field 7.1, 8)
2. For one dwelling unit, include a photo demonstrating kitchen exhausts to exterior or to a riser (Rater Field 8.1)
3. Provide photo of ventilation override control installed and labeled if its function is not obvious. For townhouses, photo shows ventilation override control is readily-accessible. (Rater Field 7.4)
4. If outdoor air intakes are connected to the return side of the dwelling unit HVAC system, provide photo from one dwelling unit of controls, damper, and ECM/ICM motor if applicable. (Rater Field 7.5, 7.7)
5. Where in-unit bathroom exhaust fans or in-line fans are used as part of the dwelling unit mechanical ventilation system, provide documentation that confirms model number is listed online at www.energystar.gov/products, or was listed at time of purchase (Rater Field 7.8)
6. Where central exhaust fans (≤ 1 HP) provide dwelling-unit mechanical ventilation, provide photos or documentation indicating presence of direct-drive, ECM, and variable speed controllers. (Rater Field 7.9, ASHRAE model). If greater than 1 HP, provide photos or documentation indicating they are NEMA Premium Motors.
7. For the minimum number of dwelling units required to be tested via sampling, provide a photo of the recorded test results for mechanical ventilation and local mechanical exhaust systems. (Rater Field 7.2, 8.1, 8.2)
8. Provide photo of air inlet locations showing they are not located near a contaminant source and are provided with rodent / insect screen ≤ 0.5 inch mesh. (Rater Field 7.10.1, 7.10.2, 7.10.3)
9. For Garages, if applicable, photograph location of CO and NO₂ sensors and controls. (Rater Field 8.4)

11 – CENTRAL EXHAUST DUCT LEAKAGE TEST

1. Where present in the building and subject to testing, provide photos of measurement device during testing or provide report documenting central exhaust system leakage results. (Rater Field 6.7)

12 - FIREPLACES

1. Where present in the dwelling unit or common space, provide a photo of at least one installed fireplace and evidence of direct-venting (Rater Field 10.2).

13 - COMMON SPACE, GARAGE, IN-UNIT, & EXTERIOR LIGHTING

1. Include one photo of each unique fixture type that demonstrates whether it is CFL/FL, LED, or Other, and where fixture is included in lighting power density calculations for ASHRAE model or compliance with Rater Field Footnote 85, one photo of its label indicating fixture wattage. (Rater Field 12.3, 12.4 (ERI), 12.5 (Prescriptive), 12.6 (Prescriptive), ASHRAE model)
2. Include one representative photo of a corridor, stairwell, and lobby showing fixture count. (Rater Field Footnote 85, ASHRAE model)
3. Include photos from one dwelling unit showing fixture count in each of the following spaces, where fixtures are provided: bathroom, kitchen, hall, living room, dining room, bedroom. (Rater Field 12.6 (Prescriptive, ASHRAE model))
4. Include one representative photo of a garage ceiling or portion of a garage ceiling showing fixture count (Rater Field Footnote 85) and one photo of its automatic lighting control (Rater Field 12.1)
5. Where applicable, include one representative photo of the automatic lighting control device from each unique common space it serves. (Rater Field 12.1)
 - a. If there are automatic lighting controls in the stairwell or corridor, include a representative photo of each space showing sensors are active (lights turned off or if bi-level, half the lamps off or all fixtures dimmed). (Rater Field 12.1)
6. For exterior lighting with timer-based controls, provide a photo of the controls. (Rater Field 12.2)
7. For exterior lighting with daylight-sensors, provide a photo showing the light fixture is off during the day and another photo showing the fixture is on when the daylight sensor is covered. (Rater Field 12.2)

14 - WHOLE BUILDING ENERGY CONSUMPTION DATA ACQUISITION

1. For buildings 50,000 ft² and larger, provide a photo of installed energy monitoring system OR provide documentation demonstrating other data acquisition strategy. (Rater Field 14.1)