

REScheck Inspection Checklist 2003 IECC

REScheck Software Version 3.6 Release 1a

DATE: 11/10/04

PROJECT TITLE: Jones Residence - Plan 3677

Step Eight: Verify that the R-values and U-factors and efficiencies listed on the inspection form match the values listed in the preceding section. Include any comments to the inspectors in this section. Check the comments on each of the sections to ensure that they apply to the project.

Bldg.
Dept.
Use

[] **Ceilings:**
1. Ceiling 1: All-Wood Joist/Rafter/Truss, R-38.0 cavity insulation
Comments: _____

[] **Above-Grade Walls:**
1. Exterior Wall 1: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____
[] 2. Exterior Wall 2 South: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____
[] 3. Exterior Wall 3 East: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____
[] 4. Exterior Wall 4 West: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____
[] 5. Knee Wall West: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____
[] 6. Knee Wall East: Wood Frame, 16" o.c., R-19.0 cavity insulation
Comments: _____

[] **Basement Walls:**
1. Basement Wall 2: Solid Concrete or Masonry, 9.0' ht/4.5' bg/9.0' insul,
R-19.0 cavity insulation
Comments: _____
[] 2. Basement Wall 1: Solid Concrete or Masonry, 9.0' ht/4.5' bg/9.0' insul,
R-19.0 cavity insulation
Comments: _____
[] 3. Basement Wall 3: Solid Concrete or Masonry, 9.0' ht/7.0' bg/9.0' insul,
R-19.0 cavity insulation
Comments: _____

[] **Windows:**
1. Window main: Vinyl Frame, Double Pane, U-factor: 0.400
For windows without labeled U-factors, describe features:
Panes____ Frame Type_____ Thermal Break? [] Yes [] No
Comments: _____
[] 2. Window 2: Vinyl Frame:Double Pane with Low-E, U-factor: 0.400
For windows without labeled U-factors, describe features:
Panes____ Frame Type_____ Thermal Break? [] Yes [] No
Comments: _____
[] 3. Window 3: Vinyl Frame:Double Pane with Low-E, U-factor: 0.400
For windows without labeled U-factors, describe features:
Panes____ Frame Type_____ Thermal Break? [] Yes [] No
Comments: _____

[] **Doors:**
1. Door 1: Opaque, U-factor: 0.500
Comments: _____
[] 2. Door 2: Solid, U-factor: 0.500
Comments: _____

[] **Floors:**
1. Floor 1: All-Wood Joist/Truss, Over Unconditioned Space, R-19.0 cavity insulation
Comments: _____
[] 2. Floor 2: Slab-On-Grade:Unheated, 2.0' insulation depth,
R-5.0 continuous insulation
Comments: _____
Slab insulation to extend down from the top of the slab to at least 2.0 ft. OR down to at least the bottom of the slab then horizontally for a total distance of 2.0 ft.
Exterior insulation must have a rigid, opaque, weather-resistant protective covering that covers the exposed (above-grade) insulation and extends at least 6 in. below grade.

[] **Heating and Cooling Equipment:**
1. Furnace 1: Forced Hot Air, 78 AFUE or higher
Make and Model Number _____
[] 2. Air Conditioner 1: Electric Central Air, 10 SEER or higher
Make and Model Number _____



- Air Leakage:**
- [] Joints, penetrations, and all other such openings in the building envelope that are sources of air leakage must be sealed.
 - [] Recessed lights must be 1) Type IC rated, or 2) installed inside an appropriate air-tight assembly with a 0.5" clearance from combustible materials. If non-IC rated, the fixture must be installed with a 3" clearance from insulation.
- Skylights:**
- [] Minimum insulation requirement for skylight shafts equal to or greater than 12 inches is R-19.
- Vapor Retarder:**
- [] Required on the warm-in-winter side of all non-vented framed ceilings, walls, and floors.
- Materials Identification:**
- [] Materials and equipment must be installed in accordance with the manufacturer's installation instructions.
 - [] Materials and equipment must be identified so that compliance can be determined.
 - [] Manufacturer manuals for all installed heating and cooling equipment and service water heating equipment must be provided.
 - [] Insulation R-values and glazing U-factors must be clearly marked on the building plans or specifications.
- Duct Insulation:**
- [] Supply ducts in unconditioned attics or outside the building must be insulated to R-8.
 - [] Return ducts in unconditioned attics or outside the building must be insulated to R-4.
 - [] Supply ducts in unconditioned spaces must be insulated to R-8.
 - [] Return ducts in unconditioned spaces (except basements) must be insulated to R-2.
 - [] Where exterior walls are used as plenums, the wall must be insulated to R-8.
 - [] Insulation is not required on return ducts in basements.
- Duct Construction:**
- [] Duct connections to flanges of air distribution system equipment must be sealed and mechanically fastened.
 - [] All joints, seams, and connections must be securely fastened with welds, gaskets, mastics (adhesives), mastic-plus-embedded-fabric, or tapes. Tapes and mastics must be rated UL 181A or UL 181B.
 - [] *Exception:* Continuously welded and locking-type longitudinal joints and seams on ducts operating at less than 2 in. w.g. (500 Pa).
 - [] The HVAC system must provide a means for balancing air and water systems.
- Temperature Controls:**
- [] Thermostats are required for each separate HVAC system. A manual or automatic means to partially restrict or shut off the heating and/or cooling input to each zone or floor shall be provided.
- Service Water Heating:**
- [] Water heaters with vertical pipe risers must have a heat trap on both the inlet and outlet unless the water heater has an integral heat trap or is part of a circulating system.
 - [] Insulate circulating hot water pipes to the levels in Table 1.
- Circulating Hot Water Systems:**
- [] Insulate circulating hot water pipes to the levels in Table 1.
- Swimming Pools:**
- [] All heated swimming pools must have an on/off heater switch and require a cover unless over 20% of the heating energy is from non-depletable sources. Pool pumps require a time clock.
- Heating and Cooling Piping Insulation:**
- [] HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F must be insulated to the levels in Table 2.

Table 1: **Minimum Insulation Thickness for Circulating Hot Water Pipes.**

Heated Water Temperature (F)	Insulation Thickness in Inches by Pipe Sizes			
	Non-Circulating Runouts		Circulating Mains and Runouts	
	Up to 1"	Up to 1.25"	1.5" to 2.0"	Over 2"
170-180	0.5	1.0	1.5	2.0
140-160	0.5	0.5	1.0	1.5
100-130	0.5	0.5	0.5	1.0

Table 2: **Minimum Insulation Thickness for HVAC Pipes.**

Piping System Types	Fluid Temp. Range (F)	Insulation Thickness in Inches by Pipe Sizes			
		2" Runouts	1" and Less	1.25" to 2"	2.5" to 4"
Heating Systems					
Low Pressure/Temperature	201-250	1.0	1.5	1.5	2.0
Low Temperature	120-200	0.5	1.0	1.0	1.5
Steam Condensate (for feed water)	Any	1.0	1.0	1.5	2.0
Cooling Systems					
Chilled Water, Refrigerant, and Brine	40-55	0.5	0.5	0.75	1.0
	Below 40	1.0	1.0	1.5	1.5

