



REScheck Software Version 4.3.0 Compliance Certificate

Project Title: Breen Sample Residence

Energy Code: **2006 IRC**
 Location: **Denver, Colorado**
 Construction Type: **Single Family**
 Glazing Area Percentage: **14%**
 Heating Degree Days: **6020**
 Climate Zone: **5**

Construction Site:
 422 E Fake Ln
 Denver, CO

Owner/Agent:
 Sample Inc.
 1266 Fake St
 Littleton, CO 80125
 720-522-5555
 SampleInc@fake.com

Designer/Contractor:
 Carl Breen
 Breen Design
 6847 Brook Forest Rd
 Evergreen, CO 80439
 970-596-4479
 Breenhvaccdesign@gmail.com

Compliance: **Passes**

Compliance: Maximum UA: **370** Your UA: **360**

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Glazing or Door U-Factor	UA
Floor 1: All-Wood Joist/Truss:Over Outside Air	9	30.0	0.0		0
Ceiling 1: Flat Ceiling or Scissor Truss	537	38.0	0.0		16
Ceiling 2: Flat Ceiling or Scissor Truss	340	38.0	0.0		10
Ceiling 3: Flat Ceiling or Scissor Truss	165	38.0	0.0		5
Ceiling 4: Flat Ceiling or Scissor Truss	65	38.0	0.0		2
Ceiling 5: Flat Ceiling or Scissor Truss	307	38.0	0.0		9
Ceiling 6: Flat Ceiling or Scissor Truss	304	38.0	0.0		9
Ceiling 7: Flat Ceiling or Scissor Truss	206	38.0	0.0		6
Ceiling 8: Flat Ceiling or Scissor Truss	163	38.0	0.0		5
Ceiling 9: Flat Ceiling or Scissor Truss	106	38.0	0.0		3
Basement Wall 1: Solid Concrete or Masonry Wall height: 8.0' Depth below grade: 6.0' Insulation depth: 8.0'	333	0.0	11.0		20
Window 1: Other	16			0.350	6
Basement Wall 2: Solid Concrete or Masonry Wall height: 8.0' Depth below grade: 8.0' Insulation depth: 8.0'	416	0.0	11.0		22
Basement Wall 3: Solid Concrete or Masonry Wall height: 8.0' Depth below grade: 8.0' Insulation depth: 8.0'	168	0.0	11.0		9
Basement Wall 4: Solid Concrete or Masonry Wall height: 8.0' Depth below grade: 6.0' Insulation depth: 8.0'	208	0.0	11.0		12
Window 2: Other	16			0.350	6
Wall 1: Wood Frame, 16" o.c.	289	21.0	0.0		13
Window 3: Other	15			0.350	5
Window 4: Other	48			0.350	17
Wall 2: Wood Frame, 16" o.c.	364	21.0	0.0		18
Window 5: Other	15			0.350	5

Window 6: Other	15			0.350	5
Window 7: Other	15			0.350	5
Wall 3: Wood Frame, 16" o.c.	10	21.0	0.0		1
Wall 4: Wood Frame, 16" o.c.	21	21.0	0.0		1
Wall 5: Wood Frame, 16" o.c.	45	21.0	0.0		2
Window 8: Other	8			0.350	3
Window 9: Other	8			0.350	3
Wall 6: Wood Frame, 16" o.c.	19	21.0	0.0		1
Wall 7: Wood Frame, 16" o.c.	137	21.0	0.0		7
Window 10: Other	6			0.350	2
Wall 8: Wood Frame, 16" o.c.	155	21.0	0.0		9
Wall 9: Wood Frame, 16" o.c.	80	21.0	0.0		5
Wall 10: Wood Frame, 16" o.c.	80	21.0	0.0		5
Wall 11: Wood Frame, 16" o.c.	207	21.0	0.0		9
Window 11: Other	15			0.350	5
Window 12: Other	15			0.350	5
Window 13: Other	20			0.350	7
Wall 12: Wood Frame, 16" o.c.	100	21.0	0.0		5
Window 14: Other	15			0.350	5
Wall 13: Wood Frame, 16" o.c.	108	21.0	0.0		4
Window 15: Other	9			0.350	3
Door 1: Solid	24			0.170	4
Wall 14: Wood Frame, 16" o.c.	158	21.0	0.0		8
Window 16: Other	15			0.350	5
Wall 15: Wood Frame, 16" o.c.	130	21.0	0.0		7
Window 17: Other	15			0.350	5
Wall 16: Wood Frame, 16" o.c.	125	21.0	0.0		6
Window 18: Other	24			0.350	8
Wall 17: Wood Frame, 16" o.c.	82	21.0	0.0		5
Basement Wall 5: Solid Concrete or Masonry Wall height: 4.0' Depth below grade: 4.0' Insulation depth: 4.0'	83	0.0	11.0		5
Basement Wall 6: Solid Concrete or Masonry Wall height: 4.0' Depth below grade: 4.0' Insulation depth: 4.0'	104	0.0	11.0		6
Basement Wall 7: Solid Concrete or Masonry Wall height: 4.0' Depth below grade: 4.0' Insulation depth: 4.0'	83	0.0	11.0		5
Basement Wall 8: Solid Concrete or Masonry Wall height: 4.0' Depth below grade: 4.0' Insulation depth: 4.0'	104	0.0	11.0		6

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2006 IRC requirements in REScheck Version 4.3.0 and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Carl Breen-HVAC Design

Name - Title

Carl Breen

Signature

3/25/10

Date



REScheck Software Version 4.3.0

Inspection Checklist

Ceilings:

- Ceiling 1: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Great Room, 16B-38
- Ceiling 2: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Kitchen/Nook, 16B-38
- Ceiling 3: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Master Bath, 16B-38
- Ceiling 4: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Master Wic, 16B-38
- Ceiling 5: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Master Bedroom, 16B-38
- Ceiling 6: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Entry/Hall, 16B-38
- Ceiling 7: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Bedroom 2, 16B-38
- Ceiling 8: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Dining, 16B-38
- Ceiling 9: Flat Ceiling or Scissor Truss, R-38.0 cavity insulation
Comments: Bathroom 1, 16B-38

Above-Grade Walls:

- Wall 1: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Great Room, 12F-0bw
- Wall 2: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Great Room, 12F-0bw
- Wall 3: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Kitchen/Nook, 12F-0bw
- Wall 4: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Kitchen/Nook, 12F-0bw
- Wall 5: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Kitchen/Nook, 12F-0bw
- Wall 6: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Kitchen/Nook, 12F-0bw
- Wall 7: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Kitchen/Nook, 12F-0bw
- Wall 8: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Kitchen/Nook, 12F-0bw
- Wall 9: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Master Bath, 12F-0bw
- Wall 10: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Master Wic, 12F-0bw
- Wall 11: Wood Frame, 16" o.c., R-21.0 cavity insulation

Comments: Master Bedroom, 12F-0bw

- Wall 12: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Master Bedroom, 12F-0bw
- Wall 13: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Entry/Hall, 12F-0bw
- Wall 14: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Bedroom 2, 12F-0bw
- Wall 15: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Bedroom 2, 12F-0bw
- Wall 16: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Dining, 12F-0bw
- Wall 17: Wood Frame, 16" o.c., R-21.0 cavity insulation
Comments: Bathroom 1, 12F-0bw

Basement Walls:

- Basement Wall 1: Solid Concrete or Masonry, 8.0' ht / 6.0' bg / 8.0' insul, R-11.0 continuous insulation
Comments: Unfinished Basement, R11 Draped-6
- Basement Wall 2: Solid Concrete or Masonry, 8.0' ht / 8.0' bg / 8.0' insul, R-11.0 continuous insulation
Comments: Unfinished Basement, R11 Draped-8
- Basement Wall 3: Solid Concrete or Masonry, 8.0' ht / 8.0' bg / 8.0' insul, R-11.0 continuous insulation
Comments: Unfinished Basement, R11 Draped-8
- Basement Wall 4: Solid Concrete or Masonry, 8.0' ht / 6.0' bg / 8.0' insul, R-11.0 continuous insulation
Comments: Unfinished Basement, R11 Draped-6
- Basement Wall 5: Solid Concrete or Masonry, 4.0' ht / 4.0' bg / 4.0' insul, R-11.0 continuous insulation
Comments: Crawl Space, R11 draped-4
- Basement Wall 6: Solid Concrete or Masonry, 4.0' ht / 4.0' bg / 4.0' insul, R-11.0 continuous insulation
Comments: Crawl Space, R11 draped-4
- Basement Wall 7: Solid Concrete or Masonry, 4.0' ht / 4.0' bg / 4.0' insul, R-11.0 continuous insulation
Comments: Crawl Space, R11 draped-4
- Basement Wall 8: Solid Concrete or Masonry, 4.0' ht / 4.0' bg / 4.0' insul, R-11.0 continuous insulation
Comments: Crawl Space, R11 draped-4

Windows:

- Window 1: Other, U-factor: 0.350
For windows without labeled U-factors, describe features:
#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No
Comments: Unfinished Basement, vinyle Frame
- Window 2: Other, U-factor: 0.350
For windows without labeled U-factors, describe features:
#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No
Comments: Unfinished Basement, vinyle Frame
- Window 3: Other, U-factor: 0.350
For windows without labeled U-factors, describe features:
#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No
Comments: Great Room, vinyle Frame
- Window 4: Other, U-factor: 0.350
For windows without labeled U-factors, describe features:
#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No
Comments: Great Room, vinyle Frame
- Window 5: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Great Room, vinyle Frame

- Window 6: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Great Room, vinyle Frame

- Window 7: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Great Room, vinyle Frame

- Window 8: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Kitchen/Nook, vinyle Frame

- Window 9: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Kitchen/Nook, vinyle Frame

- Window 10: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Kitchen/Nook, vinyle Frame

- Window 11: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Master Bedroom, vinyle Frame

- Window 12: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Master Bedroom, vinyle Frame

- Window 13: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Master Bedroom, vinyle Frame

- Window 14: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Master Bedroom, vinyle Frame

- Window 15: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Entry/Hall, vinyle Frame

- Window 16: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Bedroom 2, vinyle Frame

- Window 17: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panes ____ Frame Type _____ Thermal Break? ____ Yes ____ No

Comments: Bedroom 2, vinyl Frame

- Window 18: Other, U-factor: 0.350

For windows without labeled U-factors, describe features:

#Panels _____ Frame Type _____ Thermal Break? _____ Yes _____ No

Comments: Dining, vinyl Frame

Note: Up to 15 sq.ft. of glazed fenestration per dwelling is exempt from U-factor and SHGC requirements.

Doors:

- Door 1: Solid, U-factor: 0.170

Comments: Entry/Hall, 11Q

Floors:

- Floor 1: All-Wood Joist/Truss:Over Outside Air, R-30.0 cavity insulation

Comments: Kitchen/Nook, 20P-30

Floor insulation is installed in permanent contact with the underside of the subfloor decking.

Air Leakage:

- Joints, penetrations, and all other such openings in the building envelope that are sources of air leakage are sealed.
- Recessed lights are either 1) Type IC rated with enclosures sealed/gasketed against leaks to the ceiling, or 2) Type IC rated and ASTM E283 labeled, or 3) installed inside an air-tight assembly with a 0.5" clearance from combustible materials and a 3" clearance from insulation.

Vapor Retarder:

- Vapor retarder is installed on the warm-in-winter side of all non-vented framed ceilings, walls, and floors; or it has been determined that moisture or its freezing will not damage the materials; or other approved means to avoid condensation are provided.

Comments: _____

Materials Identification and Installation:

- Materials and equipment are installed in accordance with the manufacturer's installation instructions.
- Insulation is installed in substantial contact with the surface being insulated and in a manner that achieves the rated R-value.
- Materials and equipment are identified so that compliance can be determined.
- Manufacturer manuals for all installed heating and cooling equipment and service water heating equipment have been provided.
- Insulation R-values and glazing U-factors are clearly marked on the building plans or specifications.

Duct Insulation:

- Ducts in unconditioned spaces or outside the building are insulated to at least R-8.
- Ducts in floor trusses above unconditioned spaces or above the outdoors are insulated to at least R-6.

Duct Construction:

- Air handlers, filter boxes, and duct connections to flanges of air distribution system equipment or sheet metal fittings are sealed and mechanically fastened.
- All joints, seams, and connections are made substantially airtight with tapes, gasketing, mastics (adhesives) or other approved closure systems. Tapes and mastics are rated UL 181A or UL 181B.
- Building framing cavities are not used as supply ducts.
- Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.
- Additional requirements for tape sealing and metal duct crimping are included by an inspection for compliance with the International Mechanical Code.

Temperature Controls:

- Thermostats exist 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 is provided.

Circulating Service Hot Water Systems:

- Circulating service hot water pipes are insulated to R-2.
- Circulating service hot water systems include an automatic or accessible manual switch to turn off the circulating pump when the system is not in use.

Certificate:

- A permanent certificate is provided on or in the electrical distribution panel listing the predominant insulation R-values; window U-factors; type and efficiency of space-conditioning and water heating equipment.

NOTES TO FIELD: (Building Department Use Only)



2006 IRC Energy Efficiency Certificate

Insulation Rating	R-Value
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Ceiling / Roof	38.00
Wall	21.00
Floor / Foundation	11.00
Ductwork (unconditioned spaces):	_____

Glass & Door Rating	U-Factor	SHGC
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Window	0.35	0.35
Door	0.17	NA

Heating & Cooling Equipment	Efficiency
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Heating System: _____	_____
Cooling System: _____	_____
Water Heater: _____	_____

Name: Carl Breen Date: 3/25/10

Comments: