



AIR LEAKAGE REPORT

Date: September 28, 2016 Rating No.: 42048

Building Name: Reunion Homes Rating Org.: EnergyLogic, Inc
Owner's Name: Reunion Homes Homeowner Phone No.: (970) 556-0839
Property: 7345 Bonterra Ln Rater's Name: Phil Drotar
Address: Colorado Springs, CO 80925 Rater's No.: 9147374
Builder's Name: Reunion Homes
Weather Site: Colorado Springs, CO Rating Type: Confirmed
File Name: 7345 Bonterra Ln Reunion Homes REM.blg Rating Date: 9/28/2016

| Whole House Infiltration | Blower door test | | | |
|--------------------------|-----------------------------|----------------|-----------|--|
| | Heating | Cooling | | |
| | Natural ACH: | 0.31 | 0.25 | |
| | ACH @ 50 Pascals: | 4.01 | 4.01 | |
| | CFM @ 25 Pascals: | 1693 | 1693 | |
| | CFM @ 50 Pascals: | 2656 | 2656 | |
| | Eff. Leakage Area: [sq.in] | 145.8 | 145.8 | |
| | Specific Leakage Area: | 0.00024 | 0.00024 | |
| | ELA/100 sf shell: [sq.in] | 1.74 | 1.74 | |
| Duct Leakage | Leakage to Outside Units | Main | | |
| | CFM @ 25 Pascals: | 70 | | |
| | CFM25 / CFMfan: | 0.0311 | | |
| | CFM25 / CFA: | 0.0163 | | |
| | CFM per Std 152: | N/A | | |
| | CFM per Std 152 / CFA: | N/A | | |
| | CFM @ 50 Pascals: | 110 | | |
| | Eff. Leakage Area: [sq.in] | 6.03 | | |
| | Thermal Efficiency: | N/A | | |
| | Total Duct Leakage Units | CFM25/CFA | | |
| Total Duct Leakage: | 0.2801 | | | |
| Ventilation | Mechanical: | Exhaust Only | ASHRAE | |
| | Sensible Recovery Eff. (%): | 0.0 | 62.2-2010 | |
| | Total Recovery Eff. (%): | 0.0 | | |
| | Rate (cfm): | 35 | 73 | |
| | Hours/Day: | 24.0 | 24 | |
| | Fan Watts: | 100.0 | | |
| | Cooling Ventilation: | No Ventilation | | |

Regarding ASHRAE 62.2 Ventilation Compliance

The ASHRAE 62.2 flow rates shown above are the CONTINUOUS mechanical fresh air ventilation which will meet the 'whole-building' requirement under that version of the standard. Both values incorporate any appropriate 'infiltration credit'. Intermittent mechanical ventilation may be used if the flow rate is adjusted accordingly. For example, the runtime can be reduced to 12 hours per day using a doubled flow rate, as long as the system provides ventilation at least once every 3 hours. For more detail, refer to the appropriate standard.



COMPONENT LOAD SUMMARY

| | | | |
|-----------------|--|---------------|------------------|
| Date: | September 28, 2016 | Rating No.: | 42048 |
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Reunion Homes

HEATING SEASON (MMBtu/yr)

| | |
|------------------------|-------------|
| Ceilings/Roofs | 5.2 |
| Rim/Band Joists | 2.0 |
| Above Grade Walls | 23.5 |
| Foundation Walls | 6.0 |
| Doors | 0.9 |
| Windows/Skylights | 7.5 |
| Floors | 2.5 |
| Crawl Space/Unht Bsmt | 0.0 |
| Slab Floors | 6.0 |
| Infiltration | 22.4 |
| Mechanical Ventilation | 4.5 |
| Ducts | 6.4 |
| Active Solar | 0.0 |
| Sunspace | 0.0 |
| Internal Gains | -16.7 |
| Total | 70.2 |

COMPONENT LOAD SUMMARY

Reunion Homes

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Reunion Homes

COOLING SEASON (MMBtu/yr)

| | |
|-------------------------|-------------|
| Ceilings/Roofs | 0.6 |
| Rim/Band Joists | -0.3 |
| Above Grade Walls | -1.3 |
| Foundation Walls | -1.0 |
| Doors | -0.1 |
| Windows/Skylights | 11.5 |
| Floors | -0.4 |
| Crawl Space/Unht Bsmt | 0.0 |
| Slab Floors | -1.6 |
| Infiltration | -2.4 |
| Mechanical Ventilation | -0.6 |
| Ducts | 1.0 |
| Active Solar | 0.0 |
| Sunspace | 0.0 |
| Internal Gains | 13.0 |
| Whole House Ventilation | 0.0 |
| Total | 18.4 |



2005 EPACT ENERGY EFFICIENT HOME TAX CREDIT (13-001)

| | | | |
|-----------------|--|---------------|------------------|
| Date: | September 28, 2016 | Rating No.: | 42048 |
| Building Name: | Reunion Homes | Rating Org.: | EnergyLogic, Inc |
| Owner's Name: | Reunion Homes Homeowner | Phone No.: | (970) 556-0839 |
| Property: | 7345 Bonterra Ln | Rater's Name: | Phil Drotar |
| Address: | Colorado Springs, CO 80925 | Rater's No.: | 9147374 |
| Builder's Name: | Reunion Homes | | |
| Weather Site: | Colorado Springs, CO | Rating Type: | Confirmed |
| File Name: | 7345 Bonterra Ln Reunion Homes REM.blg | Rating Date: | 9/28/2016 |

Normalized, Modified End-Use Loads (MMBtu/year)

| | 2006 IECC 50% Target | As Designed |
|----------|-------------------------|-------------|
| Heating: | 40.7 | 44.7 |
| Cooling: | 6.4 | 11.5 |
| Total: | 47.2 | 56.2 |

Envelope Loads (MMBtu/year)

| | 2006 IECC 90% Target | As Designed |
|----------|-------------------------|-------------|
| Heating: | 73.3 | 65.1 |
| Cooling: | 11.5 | 13.3 |
| Total: | 84.9 | 78.4 |

This home DOES NOT meet the requirements for the residential energy efficiency tax credits under Section 1332, Credit for Construction of New Energy Efficient Homes, of the Energy Policy Act of 2005 extended to December 31, 2014.

Building Features

| | |
|---------------------------|---|
| Ceiling Flat: R-40.0 | Slab: R-0.0 Edge, R-0.0 Under |
| Sealed Attic: NA | Duct: Uninsulated |
| Vaulted Ceiling: NA | Window: U-Value: 0.310, SHGC: 0.400 |
| Above Grade Walls: R-20.0 | Heating: Fuel-fired air distribution, Natural gas, 93.0 AFUE. |
| Foundation Walls: R-11.0 | Cooling: Air conditioner, Electric, 13.0 SEER. |
| Exposed Floor: R-38.0 | |

Under penalties of perjury, I declare that I have examined this certification, including accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this certification are true, correct, and complete.

| | |
|---------------------------------------|------------------|
| Name: Phil Drotar | Signature: _____ |
| Company: EnergyLogic, Inc | Date: 9/28/2016 |
| Address: PO Box N, Berthoud, CO 80513 | |



2009 IECC ANNUAL ENERGY COST COMPLIANCE

| | | | |
|-----------------|--|---------------|------------------|
| Date: | September 28, 2016 | Rating No.: | 42048 |
| Building Name: | Reunion Homes | Rating Org.: | EnergyLogic, Inc |
| Owner's Name: | Reunion Homes Homeowner | Phone No.: | (970) 556-0839 |
| Property: | 7345 Bonterra Ln | Rater's Name: | Phil Drotar |
| Address: | Colorado Springs, CO 80925 | Rater's No.: | 9147374 |
| Builder's Name: | Reunion Homes | | |
| Weather Site: | Colorado Springs, CO | Rating Type: | Confirmed |
| File Name: | 7345 Bonterra Ln Reunion Homes REM.blg | Rating Date: | 9/28/2016 |

| Annual Energy Cost (\$) | | |
|---|-------------|---------------|
| | 2009 IECC | As Designed |
| Heating: | 1178 | 821 |
| Cooling: | 211 | 211 |
| Water Heating: | 157 | 157 |
| SubTotal - Used to Determine Compliance: | 1545 | 1189 |
| Lights & Appliances: | 1036 | 1106 |
| Photovoltaics: | -0 | -0 |
| Service Charge: | 0 | 0 |
| Total: | 2581 | 2295 * |

Mandatory Requirements:

Duct Insulation R-Value Check (per Section 405.2)

| | | |
|--|-----|------|
| Minimum Duct Insulation (Design must be equal or higher) | 6.0 | 19.0 |
|--|-----|------|

Window U-Factor Check (Section 402.5)

| | | |
|--|-------|-------|
| Window U-Factor (Design must be equal or lower): | 0.480 | 0.308 |
|--|-------|-------|

Home Infiltration (Section 402.4.2):

PASSES

Duct Leakage (Section 403.2.2):

PASSES

This home MEETS the annual energy cost requirements of Section 405 of the 2009 International Energy Conservation Code based on a climate zone of 5B. In fact, this home surpasses the requirements by 23.0%.

Name: Phil Drotar

Signature:

Organization: EnergyLogic, Inc

Date: September 28, 2016

* Design energy cost is based on the following systems:
Heating: Fuel-fired air distribution, 104.0 kBtuh, 93.0 AFUE.
Cooling: Air conditioner, 48.0 kBtuh, 13.0 SEER.
Water Heating: Conventional, Gas, 0.67 EF.
Window-to-Floor Area Ratio: 0.11
Blower door test: Htg: 2656 Clg: 2656 CFM50

In accordance with IECC, building inputs, such as setpoints, infiltration rates, and window shading may have been changed prior to calculating annual energy cost. Furthermore, the standard reference design HVAC system efficiencies are set equal to those in the design home as specified in the 2009 IECC. These standards are subject to change, and software updates should be obtained periodically to ensure the compliance calculations reflect current federal minimum standards.

HOME CERTIFIED TO MEET THE PROVISIONS OF THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE

This home built at

7345 Bonterra Ln, Colorado Springs, CO

by Reunion Homes

exceeds the minimum requirements for the 2009 International Energy Conservation Code

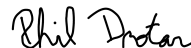
9/28/2016

Building Features

| | |
|-------------------------------|--|
| Ceiling Flat: R-40.0 | Duct Leakage to Outside: 70.00 CFM @ 25 Pascals |
| Sealed Attic: NA | Total Duct Leakage: 1200.00 CFM @ 25 Pascals |
| Vaulted Ceiling: NA | Infiltration: Htg: 2656 Clg: 2656 CFM50 |
| Above Grade Walls: R-20.0 | Window: U-Value: 0.310, SHGC: 0.400 |
| Foundation Walls: R-11.0 | Heating Fuel-fired air distribution, Natural gas, 93.0 AFUE. |
| Exposed Floor: R-38.0 | Cooling Air conditioner, Electric, 13.0 SEER. |
| Slab: R-0.0 Edge, R-0.0 Under | Water Heating Conventional, Natural gas, 0.67 EF, 50.0 Gal. |
| Duct: Uninsulated | |

The organization below certifies that the proposed building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2009 IECC requirements in compliance with Chapter 4 based on Climate Zone 5B and with all mandatory requirements.

Name: Phil Drotar
Organization: EnergyLogic, Inc

Signature: 
Date: September 28, 2016

*The 2009 International Energy Conservation Code is a registered trademark of the International Code Council, Inc. ("ICC").
No version of this software has been reviewed or approved by ICC or its affiliates.
REM/Rate - Residential Energy Analysis and Rating Software v14.6.4*

2009 IECC Certificate

7345 Bonterra Ln, Colorado Springs, CO 80925

Building Envelope Insulation

Ceiling: R-40.0
Above Grade Walls: R-20.0
Foundation Walls: R-11.0
Exposed Floor: R-38.0
Slab: R-0.0 Edge, R-0.0 Under
Infiltration: Htg: 2656 Clg: 2656 CFM50
Duct: Uninsulated
Duct Leakage to Outside: 70.00 CFM @ 25 Pascals

| Window Data | U-Factor | SHGC |
|-------------|----------|-------|
| Window: | 0.310 | 0.400 |

Mechanical Equipment

HEAT: Fuel-fired air distribution, Natural gas, 93.0 AFUE.
COOL: Air conditioner, Electric, 13.0 SEER.
DHW: Conventional, Natural gas, 0.67 EF, 50.0 Gal.

Builder or Design Professional

Signature _____



Home Energy Rating Certificate

Reunion Homes

7345 Bonterra Ln

Colorado Springs, CO 80925



**5 Stars Plus
Confirmed**

Uniform Energy Rating System

| 1 Star | 1 Star Plus | 2 Stars | 2 Stars Plus | 3 Stars | 3 Stars Plus | 4 Stars | 4 Stars Plus | 5 Stars | 5 Stars Plus |
|---------|-------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|
| 500-401 | 400-301 | 300-251 | 250-201 | 200-151 | 150-101 | 100-91 | 90-86 | 85-71 | 70 or Less |

HERS Index: 59

General Information

Conditioned Area: 4284 sq. ft. HouseType: Single-family detached
Conditioned Volume: 39789 cubic ft. Foundation: More than one type
Bedrooms: 3

Mechanical Systems Features

Heating: Fuel-fired air distribution, Natural gas, 93.0 AFUE.
Cooling: Air conditioner, Electric, 13.0 SEER.
Water Heating: Conventional, Natural gas, 0.67 EF, 50.0 Gal.
Duct Leakage to Outside: 70.00 CFM25.
Ventilation System: Exhaust Only: 35 cfm, 100.0 watts.
Programmable Thermostat: Heating: Yes Cooling: Yes

Building Shell Features

Ceiling Flat: R-40.0 Slab: R-0.0 Edge, R-0.0 Under
Sealed Attic: NA Exposed Floor: R-38.0
Vaulted Ceiling: NA Window Type: U-Value: 0.310, SHGC: 0.400
Above Grade Walls: R-20.0 Infiltration Rate: Htg: 2656 Clg: 2656 CFM50
Foundation Walls: R-11.0 Method: Blower door test

Lights and Appliance Features

Percent Interior Lighting: 95.00 Range/Oven Fuel: Natural gas
Percent Exterior Lighting: 50.00 Clothes Dryer Fuel: Electric
Refrigerator (kWh/yr): 709.00 Clothes Dryer EF: 3.01
Dishwasher Energy Factor: 0.68 Ceiling Fan (cfm/Watt): 0.00

The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

REM/Rate - Residential Energy Analysis and Rating Software v14.6.4

This information does not constitute any warranty of energy cost or savings.
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Registry ID: 205059457

Rating Number: 42048

Certified Energy Rater: Phil Drotar

Rating Date: 9/28/2016

Rating Ordered For: Reunion Homes Homeowner

Estimated Annual Energy Cost

| Use | Confirmed | | |
|-------------------|--------------|---------------|-------------|
| | MMBtu | Cost | Percent |
| Heating | 77.7 | \$760 | 35% |
| Cooling | 3.9 | \$135 | 6% |
| Hot Water | 17.4 | \$158 | 7% |
| Lights/Appliances | 34.1 | \$1106 | 51% |
| Photovoltaics | -0.0 | \$-0 | -0% |
| Service Charges | | \$0 | 0% |
| Total | 133.1 | \$2158 | 100% |

**This home meets or exceeds the minimum
criteria for all of the following:**

2009 International Energy Conservation Code

Home Energy Rating Provider

EnergyLogic, Inc.

P.O. Box N

Berthoud, CO 80513

Phone # 1-800-315-0459

www.nrglogic.com

Phil Drotar

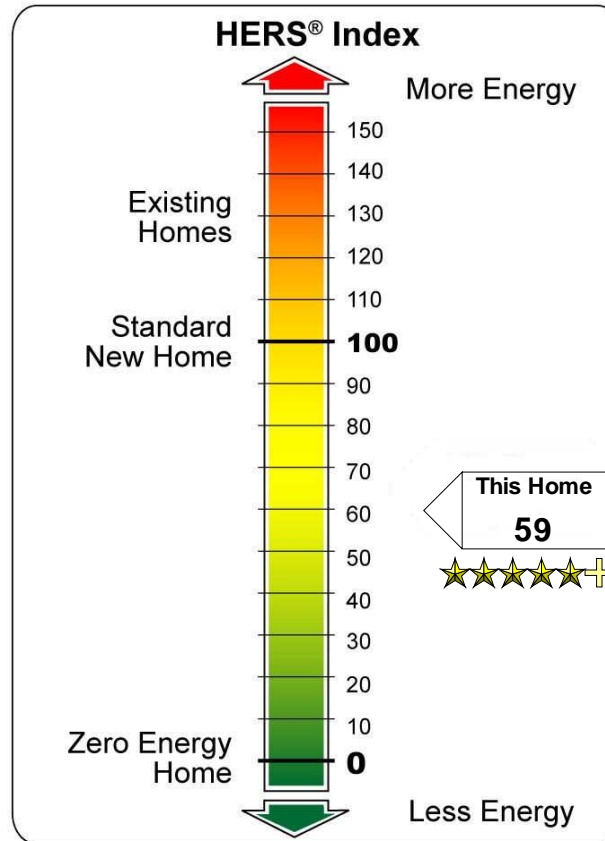
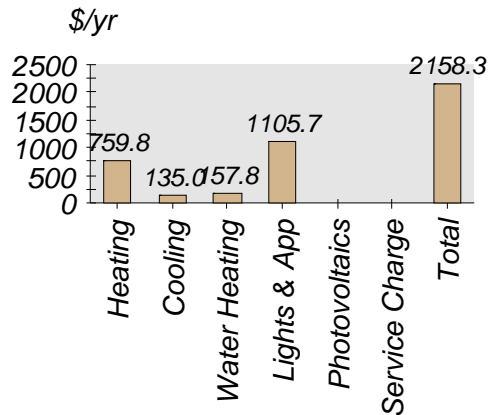
Certified Energy Rater



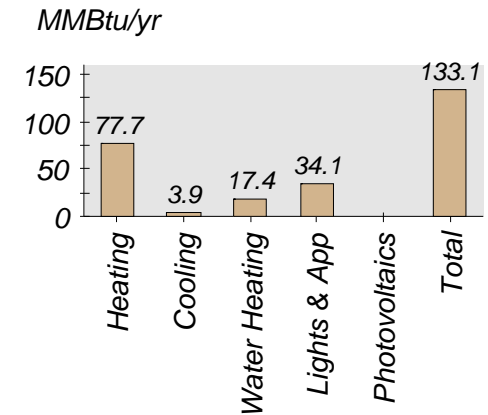
HOME PERFORMANCE ENERGY RATING CERTIFICATE



Estimated Annual Energy Cost



Estimated Annual Energy Consumption



Name: Reunion Homes
 Address: 7345 Bonterra Ln
 Colorado Springs, CO 80925
 House Type: Single-family detached
 Cond. Area: 4284 sq. ft.
 Rating No.: 42048
 Issue Date: September 28, 2016
 Certification: Verified

Annual Estimates*:
 Electric(kWh): 10882
 Natural gas(Therms): 960
 CO2 emissions(Tons): 15
 Annual Savings**: \$2012

* Based on standard operating condition.
 ** Based on a HERS 130 Index Home

Home Energy Rating Provider
EnergyLogic, Inc.
 P.O. Box N

Certified Rater: Phil Drotar
 Rater ID: 9147374
 Registry ID: 205059457
 Rating Date: 9/28/2016

Signature: *Phil Drotar*



REM/Rate - Residential Energy Analysis and Rating Software v14.6.4

This information does not constitute any warranty of energy cost or savings. © 1985-2016 Noresco, Boulder, Colorado.
 The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

RESNET HOME ENERGY RATING

Standard Disclosure

For home located at: 7345 Bonterra Ln

City: Colorado Springs

State: CO

1. ☒ The Rater or the Rater's employer is receiving a fee for providing the rating on this home.
2. ☒ In addition to the rating, the Rater or Rater's employer has also provided the following consulting services for this home:

- ☐ A. Mechanical system design
- ☒ B. Moisture control or indoor air quality consulting
- ☒ C. Performance testing and/or commissioning other than required for the rating itself
- ☒ D. Training for sales or construction personnel
- ☐ E. Other (specify below)

3. ☒ The Rater or Rater's employer is:

- ☐ A. The seller of this home or their agent
- ☐ B. The mortgagor for some portion of the financed payments on this home
- ☒ C. An employee, contractor or consultant of the electric and/or natural gas utility serving this home

4. ☐ The Rater or Rater's employer is a supplier or installer of products, which may include:

| | Installed in this home by: | | OR | Is in the business of: | |
|--|--------------------------------|-----------------------------------|----|--------------------------------|-----------------------------------|
| HVAC systems | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer | | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer |
| Thermal insulation systems | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer | | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer |
| Air sealing of envelope or duct systems | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer | | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer |
| Windows or window shading systems | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer | | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer |
| Energy efficient appliances | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer | | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer |
| Construction (builder, developer, construction contractor, etc.) | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer | | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer |
| Other (specify below): | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer | | <input type="checkbox"/> Rater | <input type="checkbox"/> Employer |

I attest that the above information is true and correct to the best of my knowledge. As a Rater or Rating Provider I abide by the rating quality control provisions of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET). The national rating quality control provisions of the rating standard are contained in Chapter One 4.C.8. of the standard and are posted at http://resnet.us/standards/RESNET_Mortgage_Industry_National_Home_Energy_Rating_Standard_Disclosure. The Home Energy Rating Standard Disclosure for this home is available from the rating provider.

Phil Drotar

Rater's Printed Name



Rater's Signature

9147374

Certification #

September 28, 2016

Date