Home Energy Rating Certificate

Final Report

Rating Date: 2024-09-20
Registry ID: 640856391
Ekotrope ID: 2RMmOmrv

ARCXIS

HERS® Index Score:

60 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

$1,600

*Relative to an average U.S. home

Home:
16691 W 93rd Ave
Arvada, CO 80007

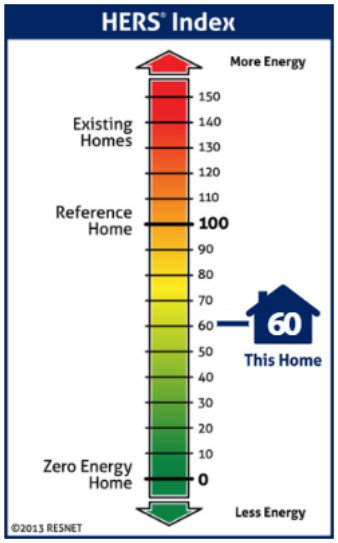
Builder:
Taylor Morrison Homes

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	60.5	$445
Cooling	0.6	$21
Hot Water	9.7	$347
Lights/Appliances	23.0	$732
Service Charges		$229
Generation (e.g. Solar)	0.0	$0
Total:	**93.8**	**$1,774**

This home meets or exceeds the criteria of the following:

ENERGY STAR v3.1
ENERGY STAR v3
IECC 2018 (.24 SF/.30 MF CFM50/SQFT) Performance
2018 International Energy Conservation Code



Home Feature Summary:

Home Type:	Single family detached
Model:	Plan Ridgeway Full Basement
Community:	Trailstone
Conditioned Floor Area:	2,823 ft^2
Number of Bedrooms:	3
Primary Heating System:	Furnace • Natural Gas • 93 AFUE
Primary Cooling System:	Air Conditioner • Electric • 13 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	1194 CFM50 (2.00 ACH50)
Ventilation:	70 CFM • 24.5 Watts (Default) • Exhaust Only
Duct Leakage to Outside:	Untested Forced Air
Above Grade Walls:	R-23
Ceiling:	Attic, R-49
Window Type:	U-Value: 0.3, SHGC: 0.4
Foundation Walls:	R-19
Framed Floor:	R-22

Rating Completed by:

Energy Rater: Mike Byrnes
RESNET ID: 6577244

Rating Company: Arcxis-GNW
3140 Neil Armstrong Blvd
6513935255

Rating Provider: Arcxis-GNW
3140 Neil Armstrong Blvd
6513935255

Mike Byrnes

Mike Byrnes, Certified Energy Rater
Digitally signed: 10/16/24 at 2:42 PM

ekotrope

Ekotrope RATER - Version:4.1.2.3501
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Energy savings calculated without modifications to the energy model. (As Modeled)

16691 W 93rd Ave, Arvada, CO

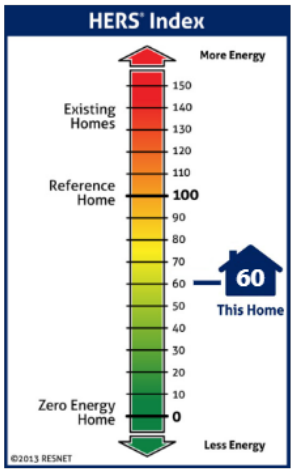
HERS® Index Score:
60

Rating Date: Sep 20, 2024
HERS Registry ID: 640856391

Annual Estimates:

Electric (kWh):	9,515.1
Natural Gas (Therms):	613.3
CO2 (Tons):	12.8
Approx. Energy Cost:	$1,774

Rating Company:
Arcxis-GNW
Rating Provider:
Arcxis-GNW
Rating Provider Address:
3140 Neil Armstrong Blvd



Home Feature Summary:

Single family detached, 3 bedrooms, 2,823 ft^2

Heating: 93 AFUE

Cooling: 13 SEER

Hot Water: 0.93 Energy Factor

Air Leakage:
1194 CFM50 (2.00 ACH50)

Ventilation:
70 CFM • 24.5 W (Default) • Exhaust Only

Duct LTO: Untested Forced Air

Above Grade Walls: R-23

Ceiling: Attic, R-49

Window: U: 0.3 • SHGC: 0.4

Foundation Walls: R-19

ekotrope

Ekotrope RATER - Version: 4.1.2.3501

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RESNET HOME ENERGY RATING
Standard Disclosure

For home(s) located at: 16691 W 93rd Ave, Arvada, CO

Check the applicable disclosure(s):

☑ 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 the 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)

☑ 3. The Rater or the 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:

Products	Installed in this home by		OR is in the business of	
HVAC systems	☐ Rater	☐ Employer	☐ Rater	☐ Employer
Thermal insulation systems	☐ Rater	☐ Employer	☐ Rater	☐ Employer
Air sealing of envelope or duct systems	☐ Rater	☐ Employer	☐ Rater	☐ Employer
Energy efficient appliances	☐ Rater	☐ Employer	☐ Rater	☐ Employer
Construction (builder, developer, construction contractor, etc)	☐ Rater	☐ Employer	☐ Rater	☐ Employer
Other (specify):	☐ Rater	☐ Employer	☐ Rater	☐ Employer

☐ 5. This home has been verified under the provisions of Chapter 6, Section 603 "Technical Requirements for Sampling" of the Mortgage Industry National Home Energy Rating Standard as set forth by the Residential Energy Services Network (RESNET). Rater Certification #: 6577244

Name: Mike Byrnes Signature: Mike Byrnes

Organization: Arcxis-GNW Digitally signed: 10/16/24 at 2:42 PM

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 NationalHome 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 102.1.4.6 of the standard and are posted at https://standards.resnet.us

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

ENERGY STAR

CERTIFIED HOME

Independently verified to meet EPA's strict guidelines for energy efficiency.

Address:

16691 W 93rd Ave
Arvada, CO 80007

Built by:

Taylor Morrison Homes

Verified by:

Arcxis-GNW

Oversight by:

RESNET

Date:

Oct 16, 2024

Program/Version number:

3.1

Optional information:

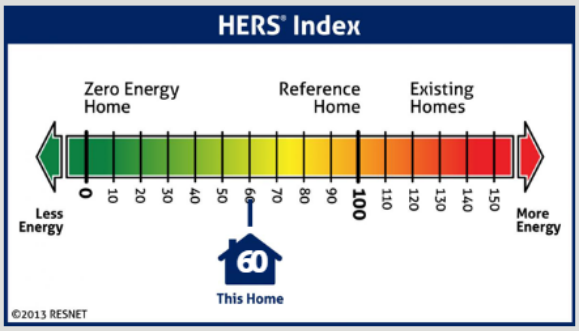
Verified using Ekotrope (Version 4.1.2.3501)

Learn more at energystar.gov/newhomes

ENERGY STAR® CERTIFIED
NEW CONSTRUCTION

Builder/Developer: Taylor Morrison Homes
Permit Date/Number:
Home/Unit Address: 16691 W 93rd Ave, Arvada, CO 80007

Rating Company: Arcxis-GNW
Rater ID Number: 6577244
Rating Date: 2024-09-20
Oversight By: RESNET
Program/Version Number: 3.1



This value is not intended to be used for code compliance.

Standard Features of ENERGY STAR Certified New Homes and Apartments

Your ENERGY STAR certified new home or apartment has been designed, constructed, and independently verified to meet rigorous requirements for energy efficiency set by the U.S. Environmental Protection Agency (EPA), including:

Thermal Enclosure System

A complete thermal enclosure system that includes comprehensive air sealing, quality-installed insulation, and high-performing windows to deliver improved comfort and lower utility bills.

Air Infiltration Test: 1194 CFM50 (2.00 ACH50)

Primary Insulation Levels:
Ceiling: R-49 Floor: R-22
Wall: R-23 Slab: R-0

Primary Window Efficiency:
U-Value: 0.3 SHGC: 0.4

Water Management System

A comprehensive water management system to protect roofs, walls, and foundations.

Flashing, a drainage plane, and site grading to move water from the roof to the ground and then away from the home or building.

Water-resistant materials on below-grade walls and underneath slabs to reduce the potential for water entering the home or building.

Management of moisture levels in building materials during construction.

Heating, Cooling, and Ventilation System

A high-efficiency heating, cooling, and ventilation system that is designed and installed for optimal performance.

Total Duct Leakage: 96 CFM @ 25Pa (Rough-In, with Air Handler)
Duct Leakage to Outdoors: Untested Forced Air

Primary Heating (System Type • Fuel Type • Efficiency):
Furnace • Natural Gas • 93 AFUE

Primary Cooling (System Type • Fuel Type • Efficiency):
Air Conditioner • Electric • 13 SEER

Whole-House Ventilation Type (System Type):
Exhaust Only

Energy Efficient Lighting and Appliances

Energy efficient products to help reduce utility bills, while providing high-quality performance.

Energy Efficient Lighting: 100%

ENERGY STAR Certified Appliances and Fans:
Refrigerators: 0 Dishwashers: 0
Ceiling Fans: 0 Exhaust Fans: 0

Primary Water Heater (System Type • Fuel Type • Efficiency):
Residential Water Heater • Electric • 0.93 Energy Factor

About this certificate

The certificate provides a summary of the major energy efficiency and other construction features that contribute to this home or apartment earning the ENERGY STAR, as determined through independent inspection and verification performed by a trained professional. The Energy Rating Index or HERS index for this home, if reported, is calculated in accordance with ANSI/RESNET/ICC Standard 301, with any exceptions approved by EPA. Because the version of Standard 301 used to calculate this index may not align with the version referenced by code, this value is not intended to be used to demonstrate compliance with code. Note that when a home or apartment contains multiple performance levels for a particular feature (e.g., window efficiency or insulation levels), the predominant value is shown. Also, homes and apartments may be certified to earn the ENERGY STAR using a sampling protocol, whereby one home or apartment is randomly selected from a set for representative inspections and testing. In such cases, the features found in each home or apartment within the set are intended to meet or exceed the values presented on this certificate. The actual values for your home or apartment may differ, but offer equivalent or better performance.

ENERGY STAR V3.1 Home Report

Property
16691 W 93rd Ave
Arvada, CO 80007
Model: Plan Ridgeway Full Basement
Community: Trailstone

16691 W 93rd Ave

Organization
Arcxis-GNW
Mike Byrnes

Builder
Taylor Morrison Homes

Inspection Status
2024-09-20
Rater ID (RTIN): 6577244
RESNET Registered
(Confirmed)

Mandatory Requirements

- ✓ Duct leakage at post construction better than or equal to applicable requirements.
- ✓ Total building thermal envelope UA meets or exceeds applicable requirements.
- ✓ Slab on Grade Insulation must be > R-5, and at IECC 2009 Depth for Climate Zones 4 and above.
- ✓ Envelope insulation achieves RESNET Grade I installation, or Grade II with insulated sheathing.
- ✓ Total window thermal properties meet or exceed the applicable requirements
- ✓ Duct insulation meets the EPA minimum requirements of R-6.
- ✓ Mechanical ventilation system is installed in the home.
- ✓ ENERGY STAR Checklists fully verified and complete.

ERI (HERS) Index Target

Reference Home ERI (HERS)	62
SAF (Size Adjustment Factor)	1.00
SAF Adjusted ERI (HERS) Target	62
As Designed Home ERI (HERS)	60
As Designed Home ERI (HERS) w/o PV	60

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

	ENERGY STAR	As Designed
Heating	30.8	36.0
Cooling	6.2	1.2
Water Heating	10.4	8.8
Lights and Appliances	24.4	23.0
Total	71.8	69.0

This home MEETS or EXCEEDS the energy efficiency requirements for designation as an EPA ENERGY STAR Qualified Home under Version 3.1

Pollution Prevented

Type of Emissions	*Reduction*
Carbon Dioxide (CO_2) - tons/yr	1.1

Energy Cost Savings

	$/yr
Heating	-49
Cooling	88
Water Heating	60
Lights & Appliances	49
Generation Savings	0
Total	148

The energy savings and pollution prevented are calculated by comparing the Rated Home to the ENERGY STAR Version 3.1 Reference Home as defined in the ENERGY STAR Qualified Homes ERI (HERS) Target Procedure for National Program Requirements, Version 3.1 promulgated by the Environmental Protection Agency (EPA). In accordance with the ANSI/RESNET/ICC 301 Standard, building inputs affecting setpoints infiltration rates, window shading and the existence of mechanical systems may have been changed prior to calculating loads

All results are based on data entered by Ekotrope users. Ekotrope disclaims all liability for the information shown on this report.

IECC 2018 Performance Compliance

Property
16691 W 93rd Ave
Arvada, CO 80007
Model: Plan Ridgeway Full Basement
Community: Trailstone

16691 W 93rd Ave

Organization
Arcxis-GNW
Mike Byrnes

Builder
Taylor Morrison Homes

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2024-09-20
Rater ID (RTIN): 6577244
RESNET Registered
(Confirmed)

Annual Energy Cost

Design	IECC 2018 Performance	As Designed
Heating	$699	$659
Cooling	$149	$59
Water Heating	$365	$366
Mechanical Ventilation	$39	$23
SubTotal - Used to determine compliance	**$1,252**	**$1,107**
Lights & Appliances w/out Ventilation	$631	$631
Onsite generation	$0	$0
Total	**$1,883**	**$1,737**

R405.3 Source Energy Exception: The proposed home uses 15.6 MBtu LESS source energy than the reference home.

Requirements

✓	R405.3	Performance-based compliance passes by 11.6%	The proposed house meets the IECC 2018 Performance reference energy bill requirement by $145.37 (15.6 MBtu).
✓	R402.4.1.2	Air Leakage Testing	Air sealing is 2.00 ACH at 50 Pa. It must not exceed 3.00 ACH at 50 Pa.
✓	R402.5	Area-weighted average fenestration SHGC	Area-weighted average fenestration SHGC is 0.396. The maximum allowed value is [No Limit].
✓	R402.5	Area-weighted average fenestration U-Factor	
✓	R404.1	Lighting Equipment	At least 90.0% of fixtures shall be high-efficacy lamps, currently 100.0% are high-efficacy.
✓	R403.6.1	Mechanical Ventilation Efficacy	
✓	R403.3.3	Duct Testing	
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	2018 IECC Mandatory Checklist must be checked as complete.
✓	IRC M1505.4.3	Mechanical Ventilation Rate	
✓	R405.2	Duct Insulation	All ducts outside the thermal envelope must be insulated to at least R6.0.

Design exceeds requirements for IECC 2018 Performance compliance by 11.6%.

As a 3rd party extension of the code jurisdiction utilizing these reports, I certify that this energy code compliance document has been created in accordance with the requirements of Chapter 4 of the adopted International Energy Conservation Code based on JEFFERSON County. If rating is Projected, I certify that the building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. If rating is Confirmed, I certify that the address referenced above has been inspected/tested and that the mandatory provisions of the IECC have been installed to meet or exceed the intent of the IECC or will be verified as such by another party.

Name: Mike Byrnes
Signature: Mike Byrnes
Organization: Arcxis-GNW
Digitally signed: 10/16/24 at 2:42 PM

16691 W 93rd Ave

Arvada, CO 80007

Builder: Taylor Morrison Homes

Model: Plan Ridgeway Full Basement **Community: Trailstone**

THIS HOME IS CERTIFIED TO MEET THE 2018 INTERNATIONAL ENERGY CONSERVATION CODE

Building Features

Ceiling	Attic, R-49
Above Grade Walls	R-23
Foundation Walls	R-19
Framed Floor	R-22
Slab	R-0.0 Perimeter, R-0.0 Under
Infiltration	1194 CFM50 (2.00 ACH50)
Window	U-Value: 0.3, SHGC: 0.4
Duct	Supply R-0.0, Return R-0.0
Duct Leakage to Outside	Untested Forced Air
Total Duct Leakage	96 CFM @ 25Pa (Rough-In, with Air Handler)
Heating	Furnace • Natural Gas • 93 AFUE
Cooling	Air Conditioner • Electric • 13 SEER
Water Heating	Residential Water Heater • Electric • 0.93 Energy Factor

As a 3rd party extension of the code jurisdiction utilizing these reports, I certify that this energy code compliance document has been created in accordance with the requirements of Chapter 4 of the adopted International Energy Conservation Code based on JEFFERSON County. If rating is Projected, I certify that the building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. If rating is Confirmed, I certify that the address referenced above has been inspected/tested and that the mandatory provisions of the IECC have been installed to meet or exceed the intent of the IECC or will be verified as such by another party.

Name:	Mike Byrnes	Signature:	Mike Byrnes
Organization:	Arcxis-GNW	Digitally signed:	10/16/24 at 2:42 PM

Ekotrope RATER - Version 4.1.2.3501

2018 IECC compliance results calculated using Ekotrope RATER's energy and code compliance algorithm.
Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users.
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IECC 2018 Label

16691 W 93rd Ave

Model: Plan Ridgeway Full Basement

Ekotrope RATER - Version: 4.1.2.3501

HERS® Index Score: 60

Building Envelope Specs

Ceiling: R-49

Above Grade Walls: R-23

Foundation Walls: R-19

Exposed Floor: R-22

Slab: R-0

Infiltration: 1194 CFM50 (2.00 ACH50)

Duct Insulation: Supply: R0, Return: R0

Duct Lkg to Outdoors: Untested Forced Air

Window & Door Specs

U-Value: 0.3, SHGC: 0.4

Door: R-5

Mechanical Equipment Specs

Heating: Furnace • Natural Gas • 93 AFUE

Cooling: Air Conditioner • Electric • 13 SEER

Hot Water: Residential Water Heater • Electric • 0.93 Energy Factor

Average Mechanical Ventilation: 70 CFM

Builder or Design Professional

Signature: _____

Air Leakage Report

Property
16691 W 93rd Ave
Arvada, CO 80007
Model: Plan Ridgeway Full Basement
Community: Trailstone

16691 W 93rd Ave

Organization
Arcxis-GNW
Mike Byrnes

Builder
Taylor Morrison Homes

Inspection Status
2024-09-20
Rater ID (RTIN): 6577244
RESNET Registered
(Confirmed)

General Information

Conditioned Floor Area [ft^2]	2,823
Infiltration Volume [ft^3]	35,842
Number of Bedrooms	3

Air Leakage

Measured Infiltration	1194 CFM50 (2.00 ACH50)
ACH50 (Calculated)	2.00
ELA [sq. in.] (Calculated)	65.51
ELA per 100 s.f. Shell Area (Calculated)	0.765
CFM50 (Calculated)	1,194
CFM50 / s.f. Shell Area (Calculated)	0.139

Duct Leakage

	System 1
Leakage to Outdoors	Untested Forced Air
Estimated Leakage to Outside	48 CFM25
Total Leakage Test Type	Rough-In, with Air Handler
Total Leakage [CFM @ 25 Pa]	96.0
Total Leakage [CFM25 / 100 s.f.]	3.4
Total Leakage [CFM25 / CFA]	0.034

Mechanical Ventilation

Rate [CFM]	70 CFM
Hours per day	24.0
Fan Power	24.5 Watts (Default)
Recovery Efficiency %	0.0
Runs at least once every 3 hrs?	true
Average Rate [CFM]	70.0 CFM
2010 ASHRAE 62.2 Req. Cont. Ventilation	58.2
2013 ASHRAE 62.2 Req. Cont. Ventilation	54.9
2016 ASHRAE 62.2 Req. Cont. Ventilation	83.6

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Building Summary

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Arvada, CO 80007
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Community: Trailstone

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Inspection Status
2024-09-20
Rater ID (RTIN): 6577244
RESNET Registered (Confirmed)

General Building Information

Number Of Bedrooms	3
Number Of Floors	2
Conditioned Floor Area [sq. ft.]	2,823
Has Electric Vehicle Ready Space	No
Unconditioned, attached garage?	Yes
Conditioned Volume [cu. ft.]	35,842
Total Units in Building	1
Residence Type	Single family detached
Number of Floors in Building	-
Floor Number	-
Model	Plan Ridgeway Full Basement
Community	Trailstone
RESNET/IECC 2006-2018 Climate Zone	5B
IECC 2021 Climate Zone	5B

Foundation Wall

Name	Library Type	Height Above Grade	Depth Below Grade	Perimeter	Location	Enclosing
Crawl Walls	R-19 Draped, Full	0.5	3.9	202.5	Exposed Exterior	Conditioned Crawlspace

Foundation Wall Library List

Name	Feet From Wall Top To Continuous Insulation Top	Feet From Wall Top To Continuous Insulation Bottom	Is Fully Insulated	Continuous R-value	Cavity R-value	Effective Insulation R-value
R-19 Draped, Full	N/A	N/A	Yes	19.00	N/A	N/A

Slab

Name	Library Type	Perimeter	Floor Grade	Carpet R	Exposed Masonry Area	Surface Area	Location	Enclosing
Slab Basement	Uninsulated	202.5	Below Grade	2	0	1,271.6 ft^2	Exposed Exterior	Conditioned Crawlspace

Slab Library List

Name	Wall Construction Type	Slab Completely Insulated?	Underslab Insulation Width [ft]	Perimeter Insulation Depth [ft]	Perimeter Insulation R Value	Perimeter Insulation Is Exterior	Thermal Break	Effective R-value
Uninsulated	Wood Frame / Other	No	0	0	0	Yes	No	0.00

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Framed Floor

Name	Library Type	Carpet R	Floor Grade	Surface Area	Location
Over Garage	2x12 24" OC R-22/G1 (Generated by Inspection Sync)	2	Above Grade	544.1 ft²	Unconditioned, attached garage
Over ambient	2x12 24" OC R-22/G1 (Generated by Inspection Sync)	2	Above Grade	91.6 ft²	Exposed Exterior

Framed Floor Library List

Name	Effective R-value
2x12 24" OC R-22/G1 (Generated by Inspection Sync)	29.491
2x12 24" OC R-22/G1 (Generated by Inspection Sync)	29.491

Rim Joist

Name	Library Type	Surface Area	Location
Attic rim	R-19.2	6.2 ft²	Attic
ambient rim	R-19.2	323.6 ft²	Exposed Exterior
garage rim	R-19.2	56.8 ft²	Unconditioned, attached garage

Rim Joist Library List

Name	Effective Insulation R-value
R-19.2	19.20

Wall

Name	Library Type	Surface Color	Solar Absorptance	Surface Area	Location
2x6 AGW	R-23 x24	Medium	0.75	2,974.9 ft²	Exposed Exterior
2x6 Attic	R-23 x24	Light	0.6	5.6 ft²	Attic
2x6 Garage	R-23 x24	Light	0.6	490.7 ft²	Unconditioned, attached garage

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Wall Library List

Name	Effective R-value
R-23 x24	20.517

Glazing

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
Front 2x6	0.30/0.36	2x6 AGW		Yes	0	0	0	South	48.0 ft²
Front 2x6 - shade	0.30/0.40	2x6 AGW		Yes	6	0	5	South	30.0 ft²
Left 2x6	0.30/0.40	2x6 AGW		Yes	0	0	0	West	59.0 ft²
Rear 2x6	0.30/0.40	2x6 AGW		Yes	0	0	0	North	210.0 ft²
Right 2x6	0.30/0.40	2x6 AGW		Yes	0	0	0	East	187.0 ft²

Glazing Library List

Name	Shgc	U-factor
0.30/0.36	0.36	0.300
0.30/0.40	0.4	0.300

Skylight

None Present

Skylight Library List

None Present

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Opaque Door

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Emittance	Solar Absorptance	Surface Color	Surface Area	Location
Front Door	Entry Door R-5	2x6 AGW		0.9	0.75	Medium	24.0 ft²	Exposed Exterior
Garage Door	1-3/4 Wd solid core	2x6 Garage		0.9	0.75	Medium	17.8 ft²	Unconditioned, attached garage

Opaque Door Library List

Name	Effective R-value
1-3/4 Wd solid core	2.10
Entry Door R-5	5.00

Roof Insulation

Name	Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Does the Roof have Eaves?	Roof Slope	Ceiling Framing Height [in.]	Eave Height [in.]	Eave Length [in.]	Surface Color	Solar Absorptance	Surface Area	Location
Attic	2x4 24" OC R-13/G1 + R-	2,384.125	No	No	N/A	N/A	N/A	N/A	Dark	0.9	1,907.3 ft²	Attic

Roof Insulation Library List

Name	Has Radiant Barrier	Effective R-value
2x4 24" OC R-13/G1 + R-36 Continuous	No	50.184

Whole House Infiltration

Infiltration	Measurement Type	Shelter Class
1194 CFM at 50 Pa	Blower-door tested	4

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Rater ID (RTIN): 6577244
RESNET Registered (Confirmed)

Mechanical Ventilation

Ventilation Type	Ventilation Rate [ft³ / Minute]	Operational hours per day	Fan Watts	Runs once every three hours	Energy Recovery Percent	Model Number	Manufacturer
Exhaust Only	70 CFM	24	24.5 Watts (Default)	Yes	0		

Lighting

% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting
0	100	0	100	0	100

Onsite Generation

None Present

Onsite Generation Library List

None Present

Solar Generation

None Present

Dehumidifier

None Present

Dehumidifier Library List

None Present

Building Summary

Property
16691 W 93rd Ave
Arvada, CO 80007
Model: Plan Ridgeway Full Basement
Community: Trailstone

16691 W 93rd Ave

Organization
Arcxis-GNW
Mike Byrnes

Builder
Taylor Morrison Homes

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Whole House Fan

None Present

Whole House Fan Library List

None Present

Conditioning Equipment

Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
Air conditioner (3)	13 SEER A/C 3 Ton		0%	100%	0%	Conditioned Space
Fuel-fired air distribution (1)	ML193UH090XE48C ECM		100%	0%	0%	Conditioned Space
Water Heating (5)	RE250LN6		0%	0%	100%	Conditioned Space

Equipment Type: 13 SEER A/C 3 Ton

Equipment Type	Air Conditioner
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	PSC (Single Speed)
Heat Pump System Type	Unspecified
Cooling Efficiency	13 SEER
Cooling Capacity [kBtu/h]	36

Equipment Type: ML193UH090XE48C ECM

Equipment Type	Furnace
Fuel Type	Natural Gas
Distribution Type	Forced Air
Motor Type	ECM (Variable Speed)
Heating Efficiency	93 AFUE
Heating Capacity [kBtu/h]	84
Use default EAE	No
EAE [kWh]	488

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Equipment Type: RE250LN6

Equipment Type	Residential Water Heater
Fuel Type	Electric
Distribution Type	Hydronic Delivery (Radiant)
Hot Water Efficiency	0.93 Energy Factor
Tank Capacity (gal.)	47
Hot Water Capacity [kBtu/h]	40
Recovery Efficiency	0.98

Distribution System

Distribution Type	Forced Air
Heating Equipment	Fuel-fired air distribution (1)
Cooling Equipment	Air conditioner (3)
Sq. Feet Served	2,823
# Return Grilles	2
Supply Duct R Value	0
Return Duct R Value	0
Supply Duct Area [ft^2]	762.21
Return Duct Area [ft^2]	282.3
Leakage to Outdoors	Untested Forced Air
Estimated LtO	48.00 CFM25
Total Leakage	96 CFM25
Total Leakage Duct Test Conditions	Rough-In, with Air Handler
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Conditioned Space
Percent Supply Area	100
Percent Return Area	100
Duct 2	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 3	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 4	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 5	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 6	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0

HVAC Grading

HVAC Grading Not Conducted

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Ceiling Fan

Has Ceiling Fan	No

Water Distribution

Water Fixture Type	Standard
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	56
At Least R3 Pipe Insulation?	Yes
Hot Water Recirculation System?	No
Drain Water Heat Recovery?	No

Clothes Dryer

Cef	3.01
Fuel Type	Electric
Field Utilization	Timer Controls
Is Outside Conditioned Space	No
Clothes Dryer Available	Yes
Defaults Type	HERS Reference

Clothes Washer

Label Energy Rating	400 kWh/Year
Annual Gas Cost	$27.00
Electric Rate	$0.12/kWh
Gas Rate	$1.09/Therm
Capacity	3
Imef	1
Defaults Type	HERS Reference
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher

Dishwasher Defaults Type	ENERGY STAR Standard
Dishwasher Size	Standard
Dishwasher Efficiency	270 kWh
Annual Gas Cost	$22.23
Electric Rate	$0.12/kWh
Gas Rate	$1.09/Therm
Is Outside Conditioned Space	No
Dishwasher Available	Yes

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Appliances and Controls

Programmable thermostat?	Yes
Range/Oven Fuel	Natural Gas
Convection Oven?	No
Induction Range?	No
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	691 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes