Enhancing Inspections with Digital Data Collection

DOE National Energy Codes Conference 2018

July 17, 2018

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Implementation Manager

U.S. EPA, ENERGY STAR Residential Branch

ENERGY STAR™ Certified Homes

- 10-15% more efficient than typical new homes
- Designed and built to high standards
- Inspected, tested and verified by HERS Raters, a.k.a. ERI Raters

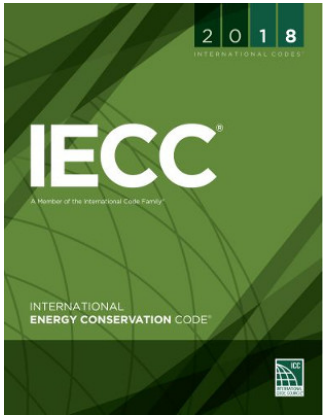
ENERGY STAR and Code

RESNET HERS INDEX

(aka "**ERI**")

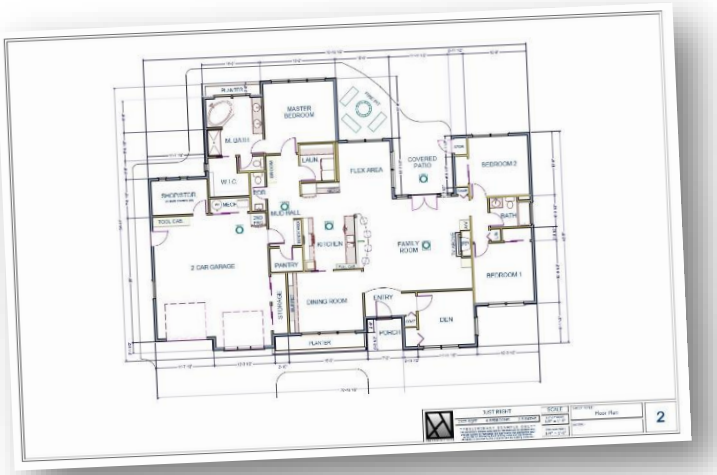
\+ Mandatory ENERGY STAR Requirements = ENERGY STAR

\+ Mandatory IECC Requirements =

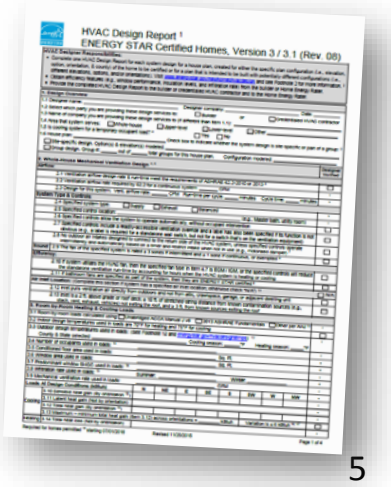


Current Rater Workflow

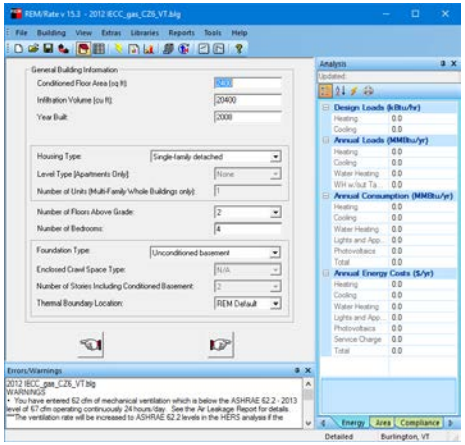
Collect house plans and design documents and perform preliminary energy modeling.



House Plans



Design Documentation



Energy Modeling

Current Rater Workflow

Perform two site inspections at pre-drywall and final construction phases

Field Checklists

Field Notes

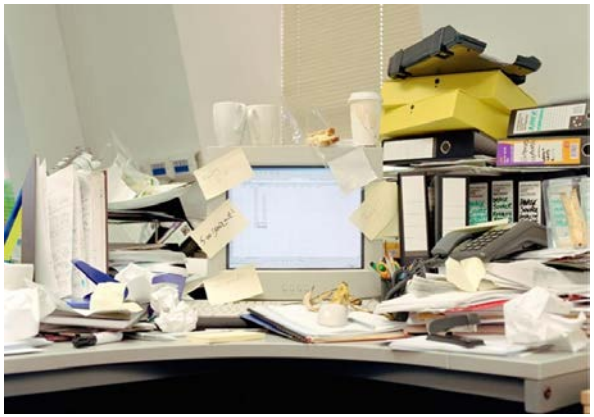
Photos

Test Results

Current Rater Workflow

Finalize energy model, send to internal QA and make final submission

Checklists + Notes



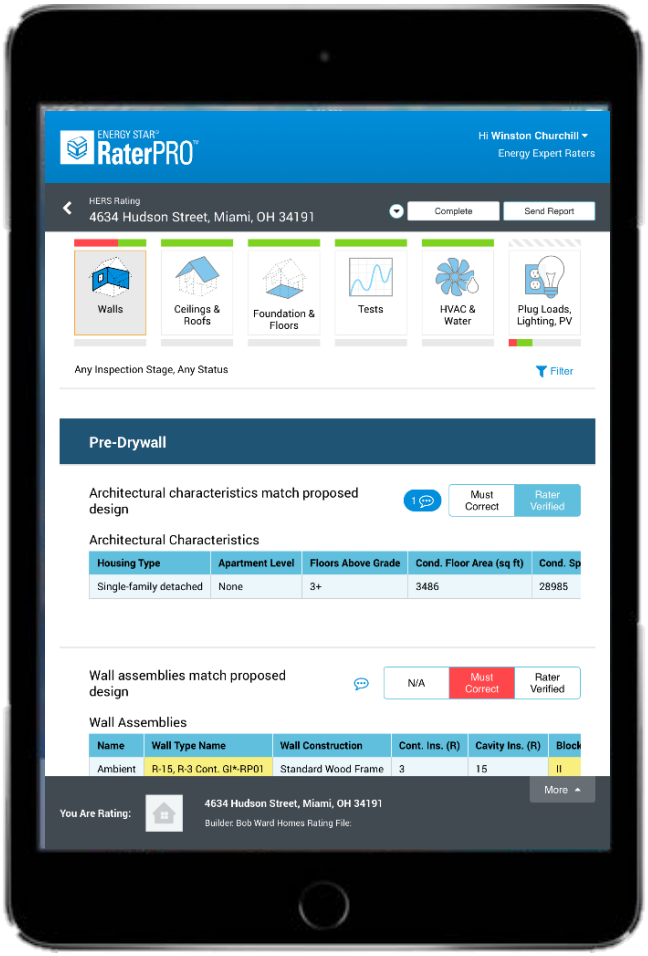
Final Energy Model

Quality Assurance Review

&

Final Submission

Introducing ENERGY STAR™ RaterPRO



ENERGY STAR®
RaterPRO™

Key Features of RaterPRO

1. Ability to verify both ENERGY STAR and HERS (ERI) jobs.

Key Features of RaterPRO

2. Cloud-based, but with the ability to work offline.

Web-Based Admin Site

Field App

Key Features of RaterPRO

3. Able to import proposed ratings from ERI software.
4. Able to export confirmed ratings back to ERI software.

Key Features of RaterPRO

5. Capable of capturing robust data.

Status	N/A | Must Correct | **Rater Verified**
Notes	*Great job on the wall insulation!*
Photos	

Key Features of RaterPRO

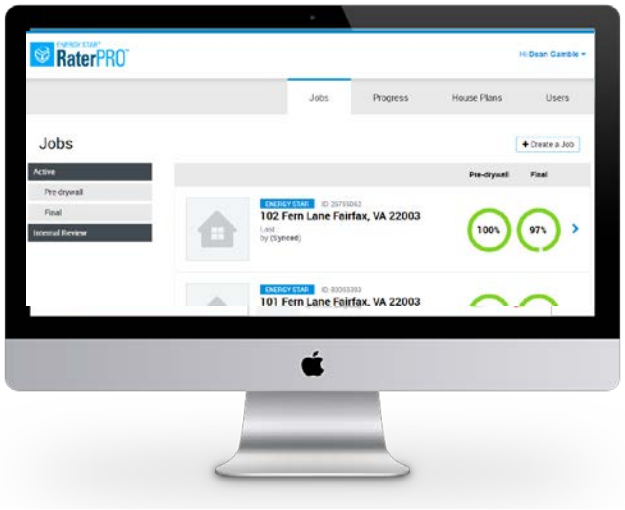
6. Voluntary and freely available.

What is a “High Quality Rating”?

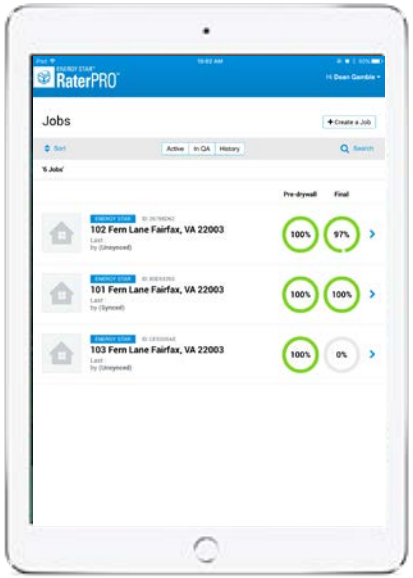
A High-Quality Rating has five features:

1. Rater is (verifiably) present on site
2. Thorough inspection
3. Accurately applies program requirements
4. Well-documented
5. Results in a final energy model that is faithful to the site observations

How RaterPRO Works

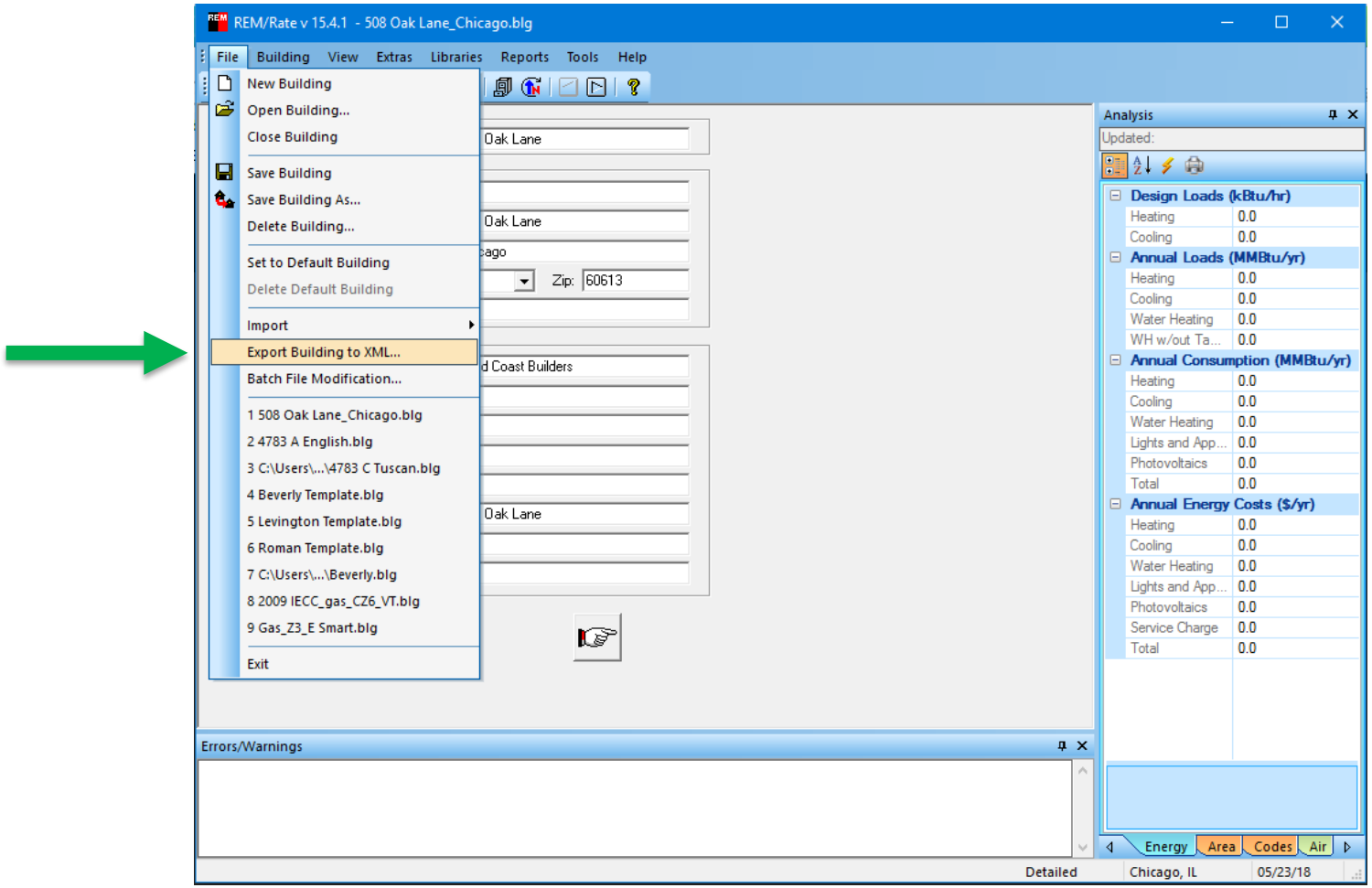


Web-Based Admin Site

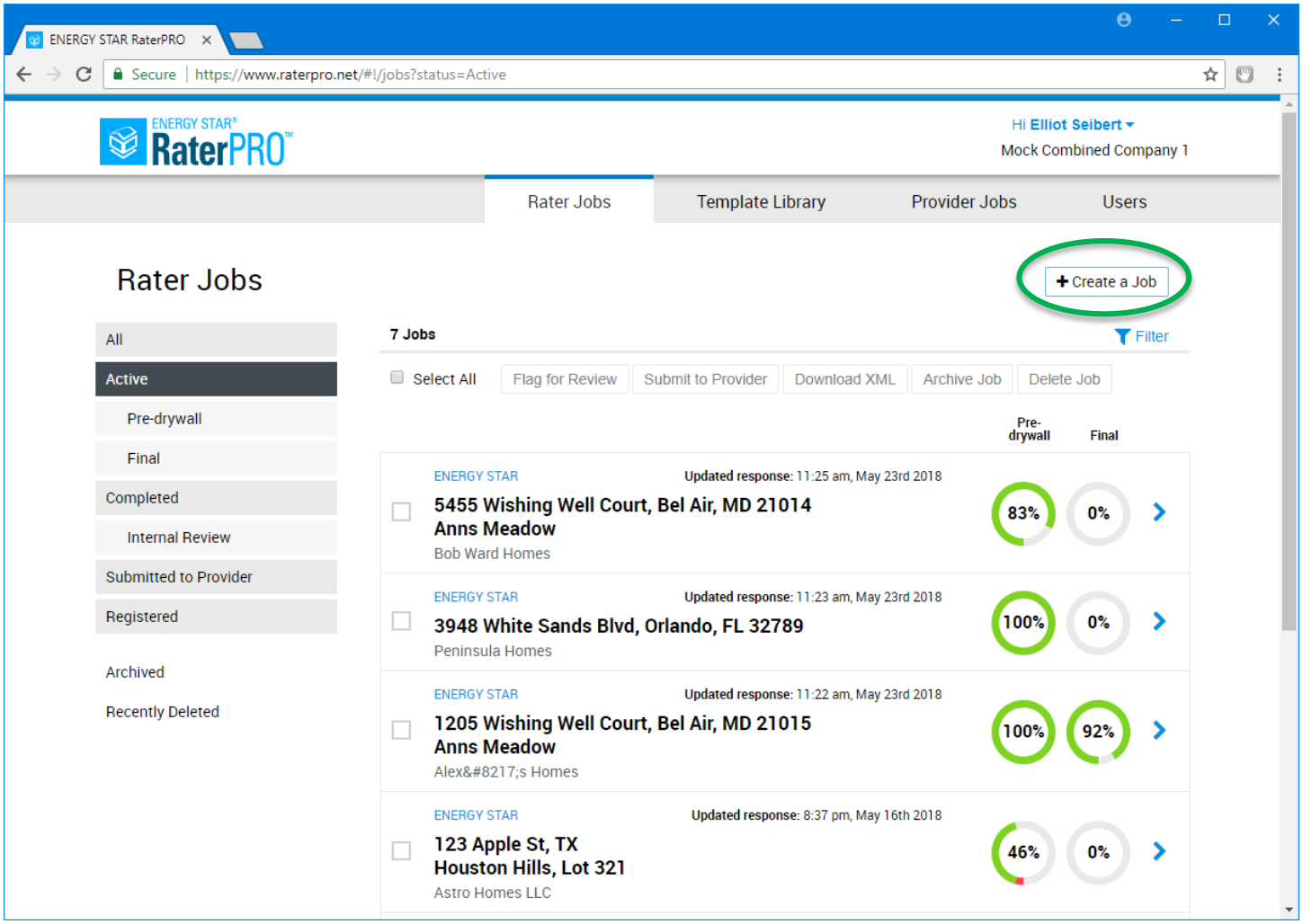


Mobile App

Export Job from REM/Rate



Create a Job

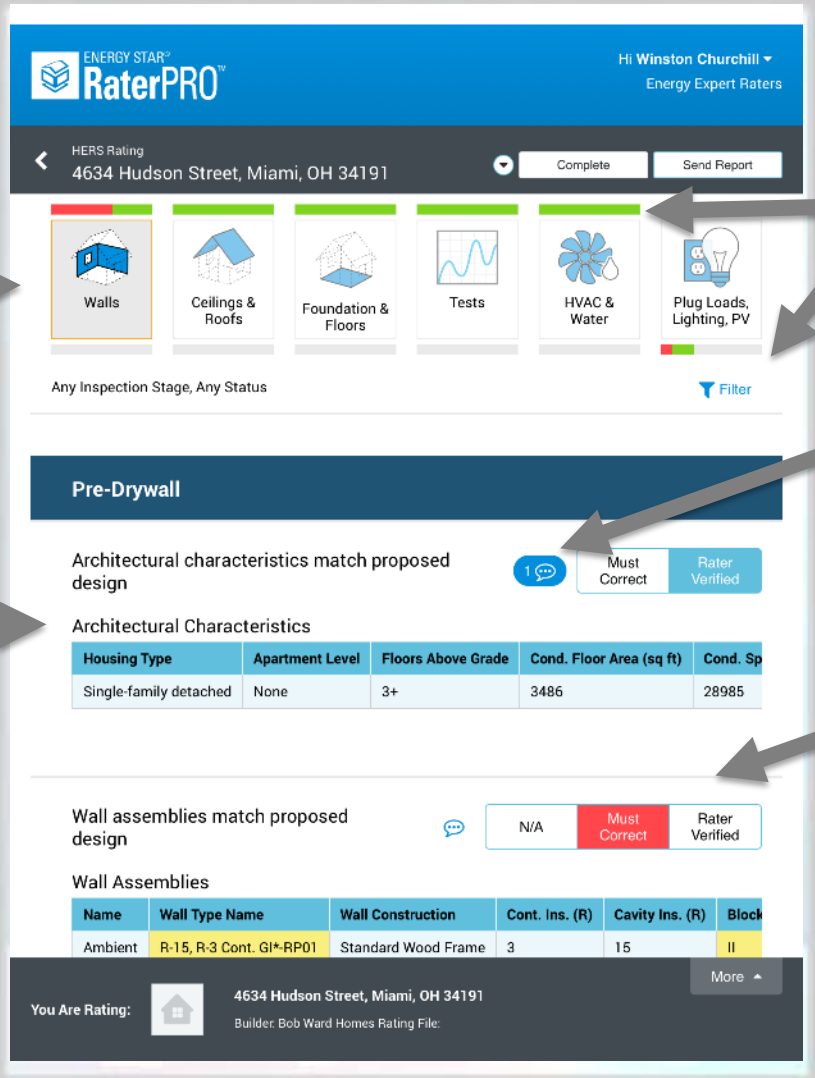

ENERGY STAR RaterPRO
Secure https://www.raterpro.net/#!/jobs?status=Active
ENERGY STAR® RaterPRO™
Hi Elliot Seibert
Mock Combined Company 1
Rater Jobs
Template Library
Provider Jobs
Users
Rater Jobs
+ Create a Job
All
Active
Pre-drywall
Final
Completed
Internal Review
Submitted to Provider
Registered
Archived
Recently Deleted
7 Jobs
Filter
Select All
Flag for Review
Submit to Provider
Download XML
Archive Job
Delete Job
Pre-drywall
Final
ENERGY STAR
Updated response: 11:25 am, May 23rd 2018
5455 Wishing Well Court, Bel Air, MD 21014
Anns Meadow
Bob Ward Homes
83%
0%
ENERGY STAR
Updated response: 11:23 am, May 23rd 2018
3948 White Sands Blvd, Orlando, FL 32789
Peninsula Homes
100%
0%
ENERGY STAR
Updated response: 11:22 am, May 23rd 2018
1205 Wishing Well Court, Bel Air, MD 21015
Anns Meadow
Alex’s Homes
100%
92%
ENERGY STAR
Updated response: 8:37 pm, May 16th 2018
123 Apple St, TX
Houston Hills, Lot 321
Astro Homes LLC
46%
0%

Mobile App

Job Details

By area in the house

Minimum rated features and ENERGY STAR Checklist Items

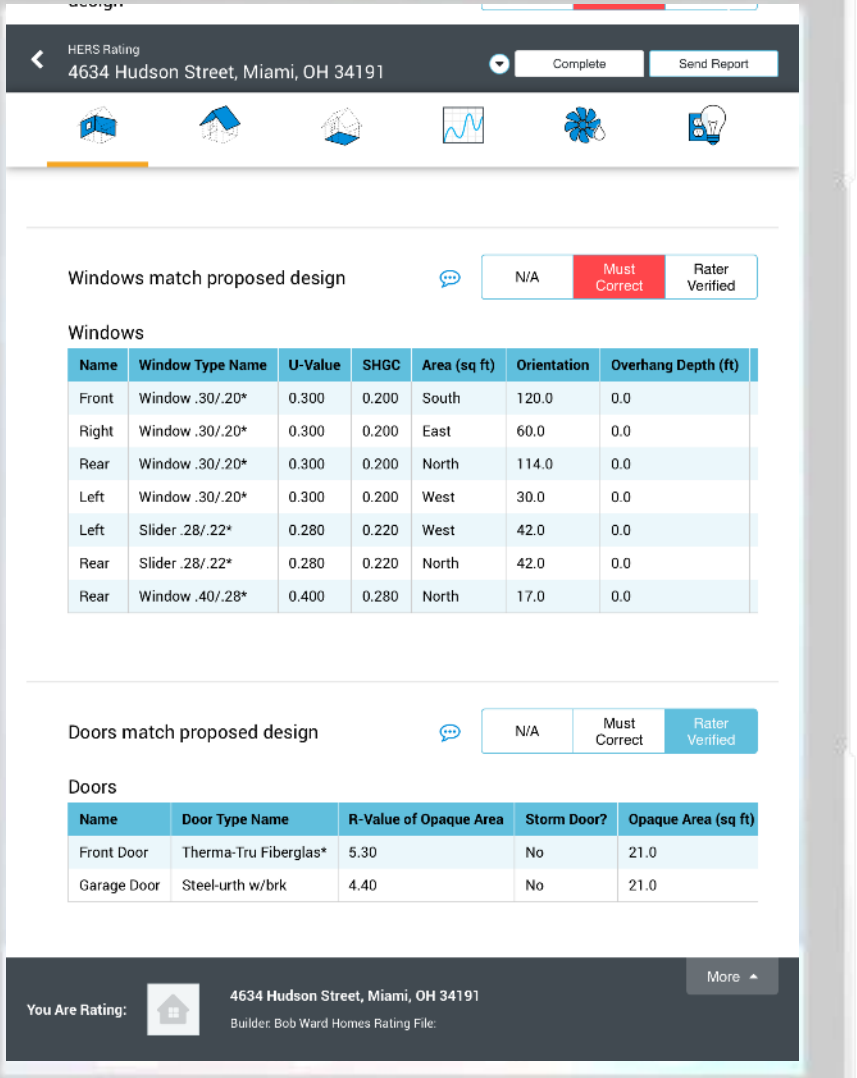


Completion percentages

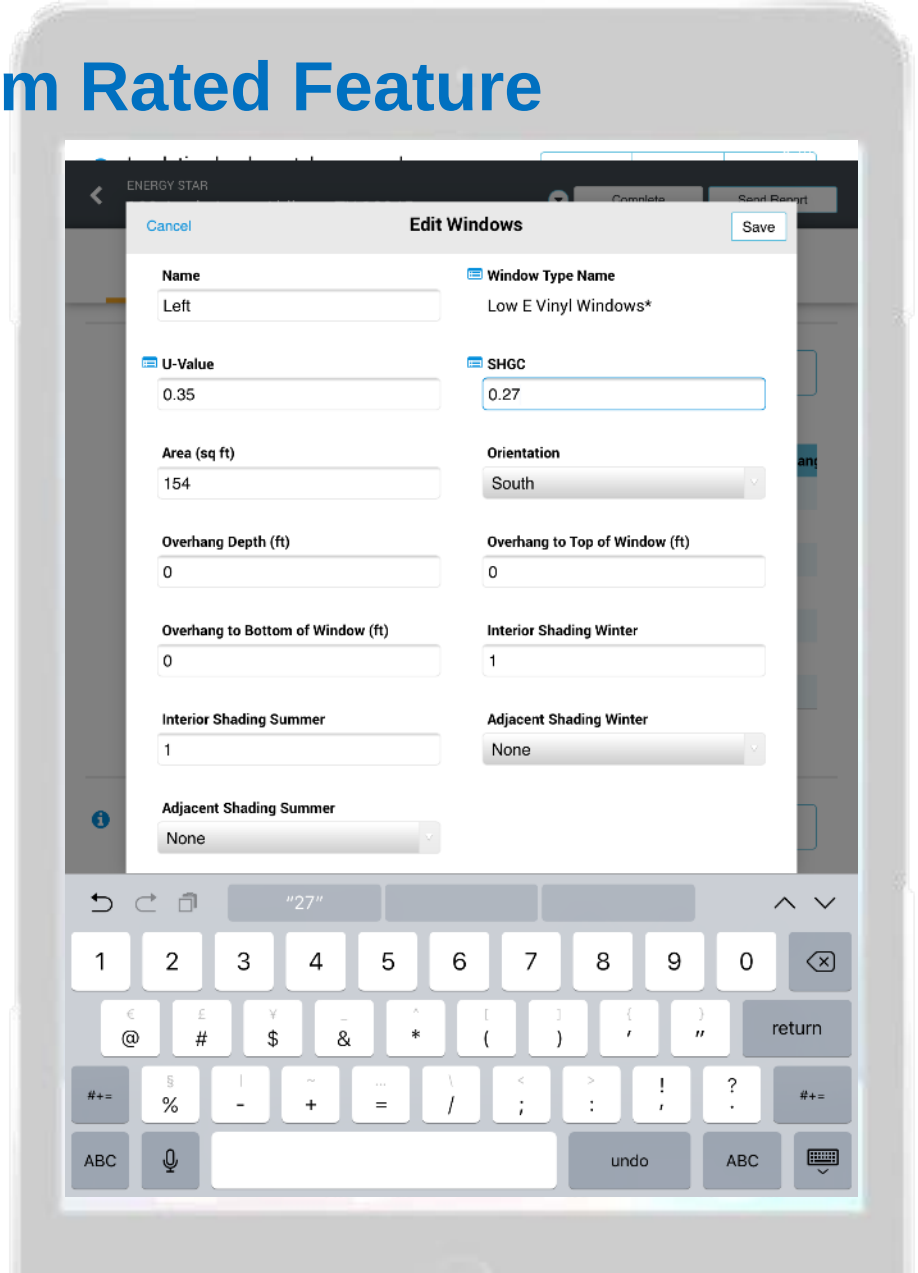
Comments

Status

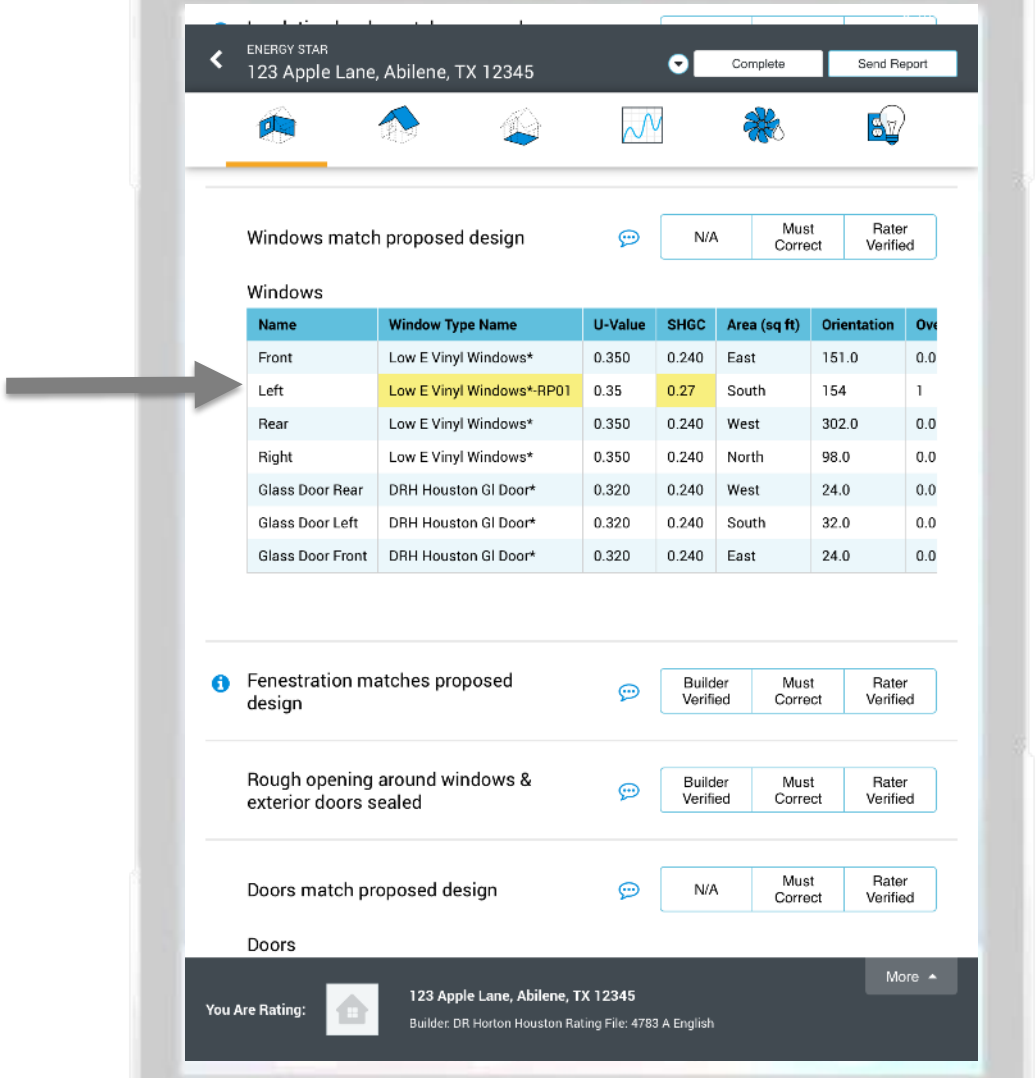
Edit Minimum Rated Feature



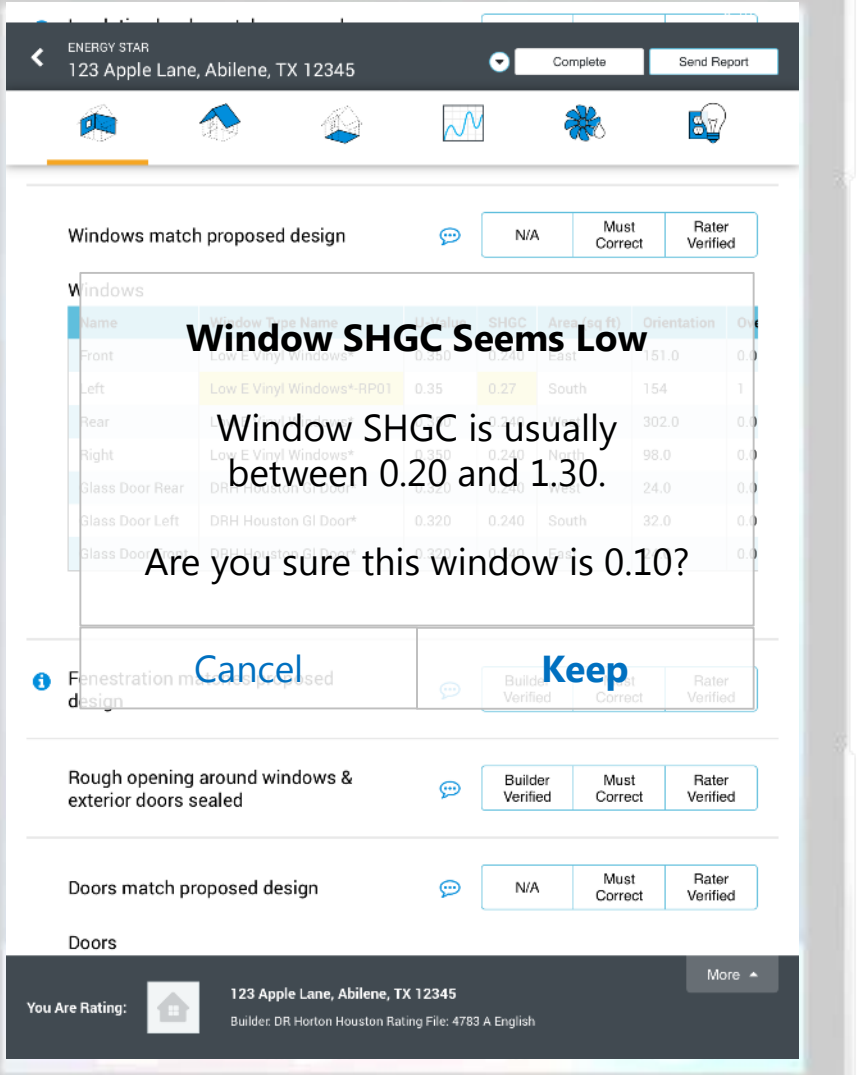
Edit Minimum Rated Feature



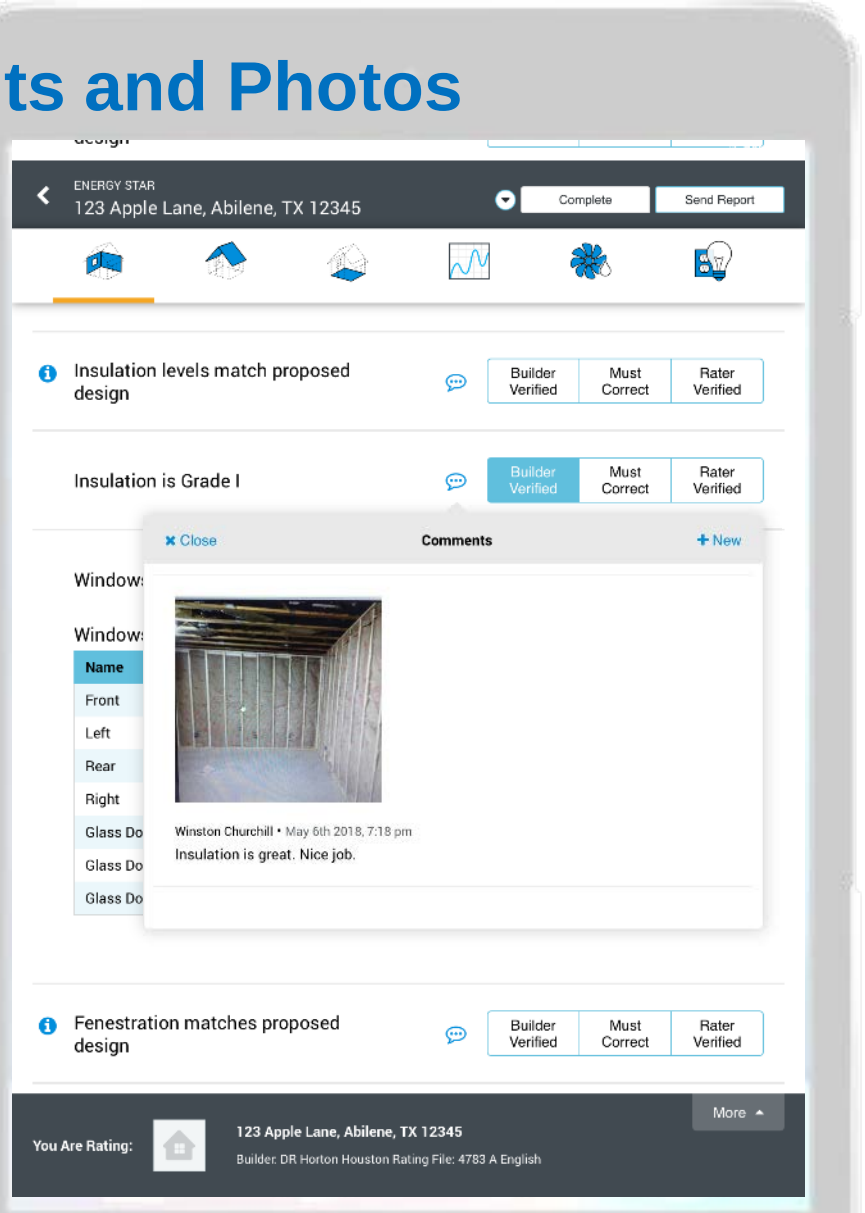
Edit Minimum Rated Feature



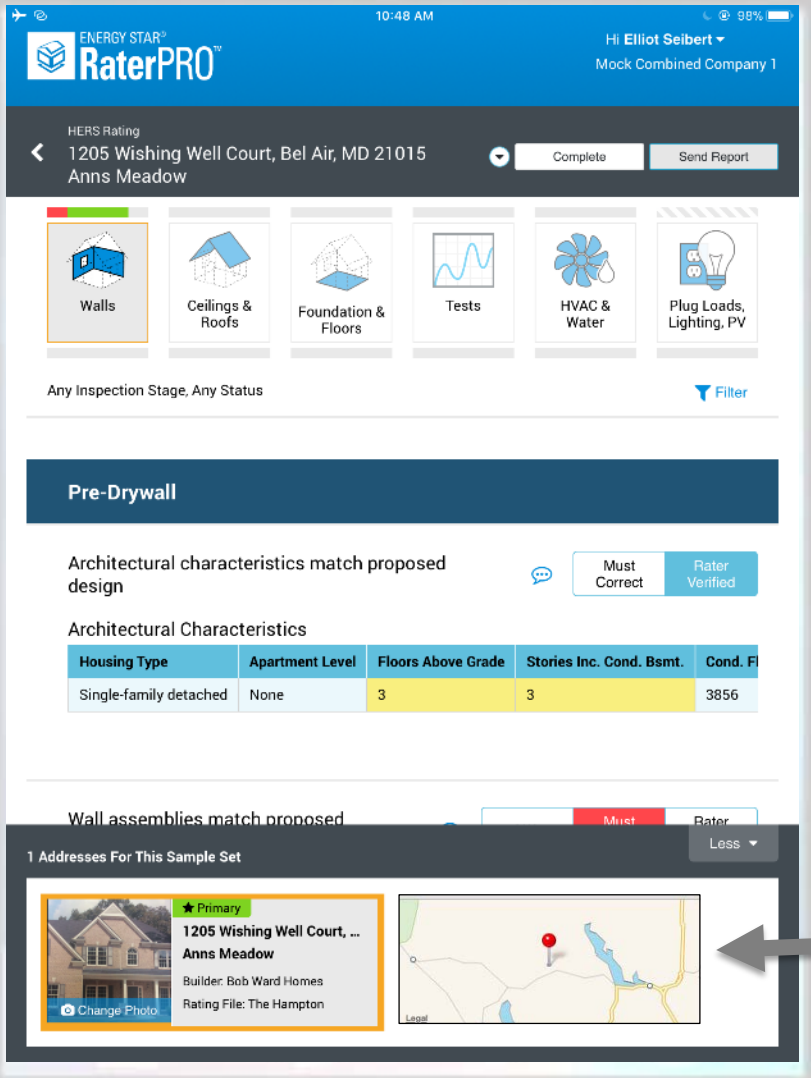
Instant Error Checking (Coming Soon)



Add Comments and Photos

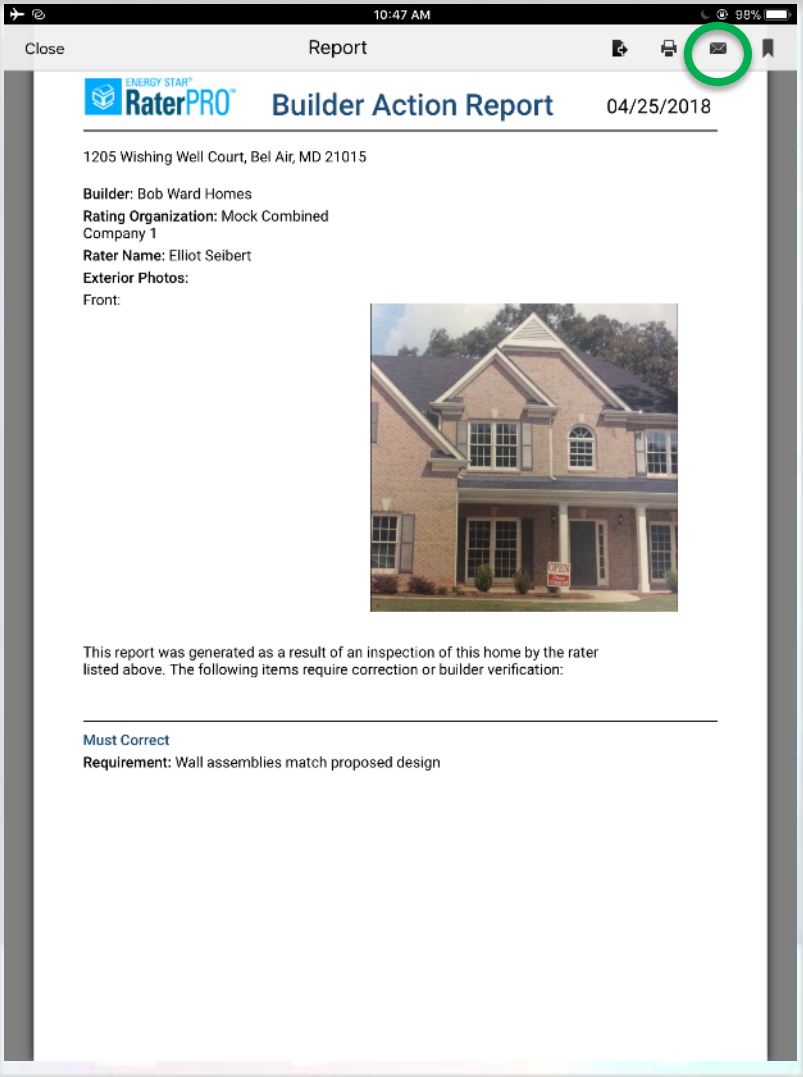


Front Photo



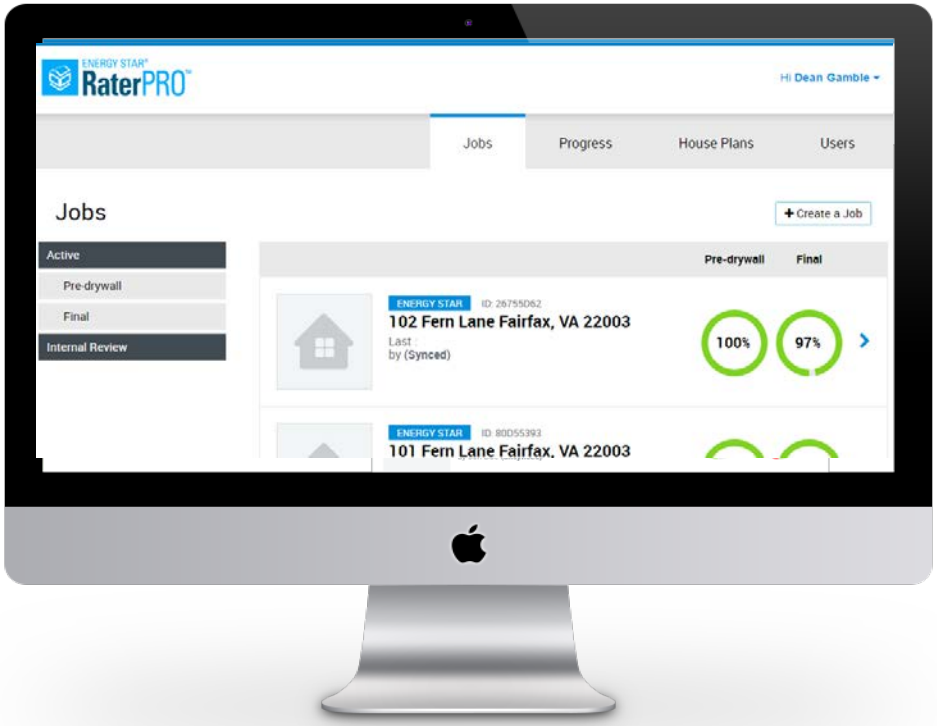
Coming soon:
Geo-tagging

Builder Report

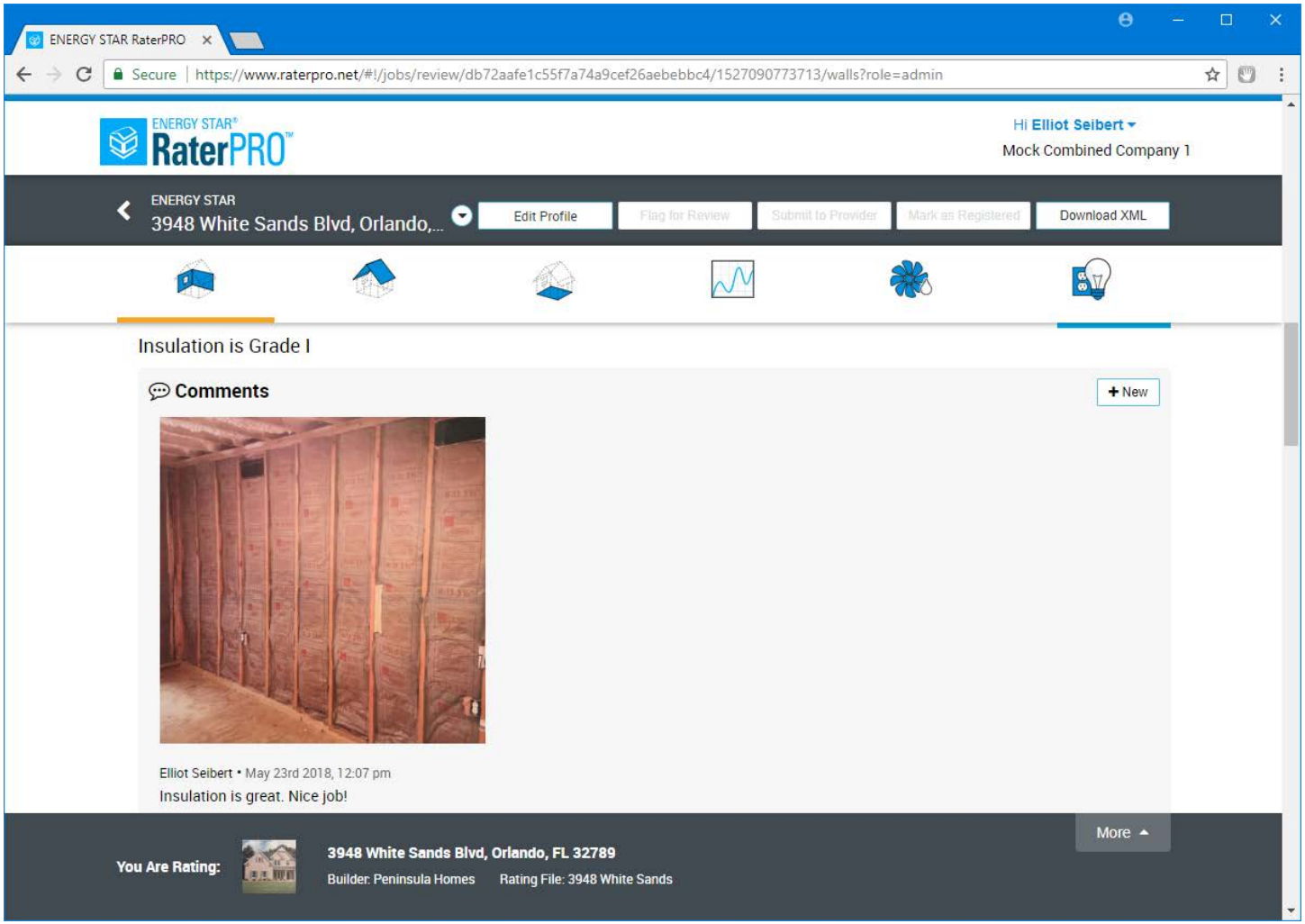


Share via e-mail (Will use default e-mail program)

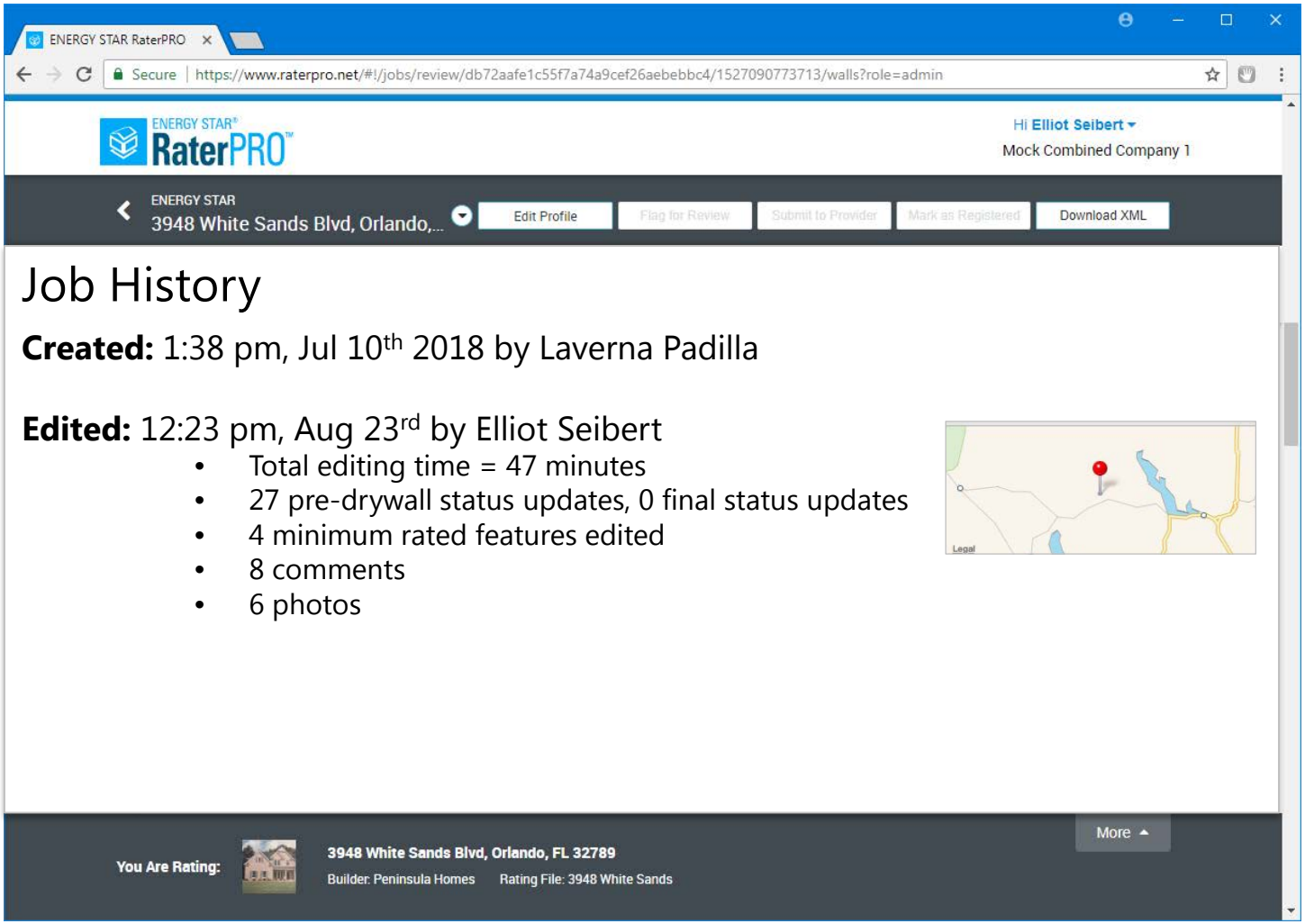
Admin Site


ENERGY STAR
RaterPRO
Hi Dean Gamble
Jobs
Progress
House Plans
Users
Jobs
+ Create a Job
Active
Pre-drywall
Final
Internal Review
Pre-drywall
Final
ENERGY STAR
ID: 26755D62
102 Fern Lane Fairfax, VA 22003
Last
by (Synced)
100%
97%
ENERGY STAR
ID: 80D55393
101 Fern Lane Fairfax, VA 22003

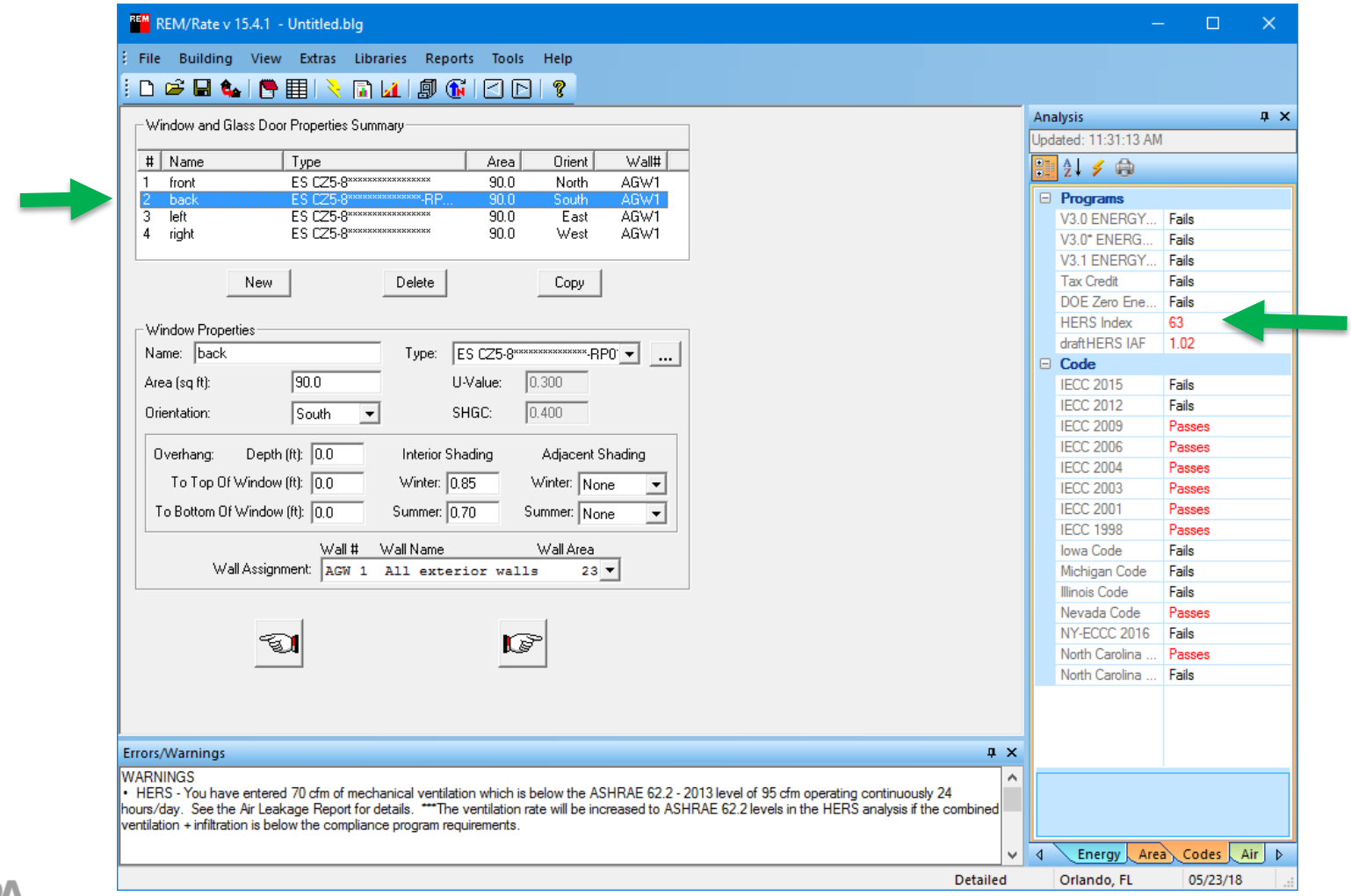
Review Details and Comments



Job History (Coming Soon)



Load XML in REM/Rate



RaterPRO's Role in the Market

- We strongly believe in digital inspection apps and would love to see them universally adopted
- There are lots of great alternatives available in the market, and more to come
- RaterPRO is intended to offer a *baseline* feature set that we consider the *minimum* for a modern inspection platform
- A free baseline makes it possible for everyone to participate in this digital future
- RaterPRO will eventually be open-source to allow 3rd party developers to leverage RaterPRO for core rating functions while adding their own 'special sauce' on top.

ENERGY STAR Certified Homes

Web & Email:

Main: www.energystar.gov/newhomespartners
Technical: www.energystar.gov/newhomesguidelines
Training: www.energystar.gov/newhomestraining
HVAC: www.energystar.gov/newhomesHVAC
Email: energystarhomes@energystar.gov

Social Media:

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facebook.com/energystar

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