Low-Rise Multifamily (LRMF) Project Team
Three Studies:
1. Baseline and Energy Study
2. Market Research Study
3. Air Tightness Testing Study
Collective LRMF Field Study Goals

- Estimate regulated energy use in typical low-rise multifamily buildings
- Identify opportunities for energy and cost savings through increased compliance with energy code
- Improve understanding of baseline characteristics of this under-represented building type
Why Low-Rise Multifamily?

Almost 30% of new residential units are in MF buildings

Nearly 85% of new MF buildings are low-rise
It’s a Hybrid

- Single-Family Residential
- Low-Rise Multifamily
- Commercial

LRMF Field Study Objectives

**Baseline and Energy Study**
- Adapt single-family (SF) protocol to low-rise multifamily (MF)
- Collect baseline and energy characteristics
- Model energy use

**Market Research Study**
- Gain better understanding of firms in LRMF construction market
  - Design/build practices
  - Energy code education/training

**Air Tightness Testing (ATT) Study**
- Understand relationship between test types
- Range of air leakage observed
- Recommendations for revising MF ATT protocols and requirements
Target Population in Four States

Includes
• New construction (~3 years)
• 1-3 stories, 5 + units
• Mixed occupancy buildings

Excludes
• Single-family
• Townhouses/rowhouses
• Duplexes, triplexes, fourplexes
• Dorms, assisted living, nursing homes, hotels, etc.
Baseline and Energy Study Objectives

- Adapt single-family field study protocol to low-rise multifamily
- Collect baseline and energy characteristics
- Model energy efficiency performance
Baseline and Energy Study Activities

**Study Design**
Logic model, task mapping and literature review

**Data Collection Protocol and Tool**
Develop LRMF protocol and data collection tool

**Data Collection**
Plan review, field visit, and data collection completion

**Dataset and Analysis**
Baseline characteristics dataset and energy performance modeling

**Reporting**
LRMF baseline and energy study methodology, baseline dataset
Field Study Progress

DONE

- Logic model
- Literature review
- Data collection approach
- Data collection tool
- Baseline and ATT pre-test
- Market research plan
- Sample plan
- Recruiting
- Data Collection

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- Complete ATT
- Complete Market Research
- Analysis
- Reporting