Duct and Envelope Tightness Verifier Agenda

DAY 1

8:45 – Registration / coffee
9:00 – Math wake-up problem
9:15 – Introductions and Energy Code Overview
  Building Science overview of airflow
  Defining the Building Envelope
  Mandatory Envelope Requirement – Air Sealing
    o Test Results Form – Example problem of filling in form
    o Air Sealing – Details
    o Envelope Visual Inspection Checklist
    o Blower Door Test Criteria
    o Test Results Form – Envelope Items
10:15 – How to test with Blower Door
  Understanding Blower Door testing
  Test Preparation / Set up
  Equipment & Components
  Hands on with Blower Door equipment
12:00 – Working Lunch
  Measuring Pressure with a Digital Gauge
  Can’t Reach Fifty?
  Calculating Volume and ACH50
  Filling in answers on Test Form
3:30 – Do More with your Blower Door
  o Pressure Pan
  o Zone Pressure testing Criteria
  o Test Results Form – Envelope Items
5:00 – Adjourn
  Day 1 HW
    o Watch both Southface videos on YouTube (Blower Door, Duct Testing)
    o Read factsheet in workbook
    o Watch Bruce Manclark’s duct video [YouTube “Duct Testing” – 12 minutes],
    o Work through “more math” module – ClassMarker link:
      http://www.classmarker.com/online-test/start/?quiz=j6y501a736840f7d
DAY 2

8:45 – Arrival / coffee
9:00 – Math wake-up problem and review class questions
9:15 – Mandatory Mechanical System Provisions
  o HVAC Controls
  o Mechanical Equipment
  o Duct Provisions (Insulation, Sealing)
  o Duct Tightness Test Criteria
10:15 – How to Test for Duct Tightness
  Duct Pressurization Blower Equipment & Components
  Hands on with Duct Testing Equipment
  “Total Duct Leakage” - Test Preparation / Set up
  “Duct Leakage to Outside” - Test Preparation / Set up
  Calculating % Duct Leakage
  Blower Door Subtraction and Flow Hood
  Use Your Duct Blower to do More
11:00 – Depart for Field – dress rehearsal for field test
12:00 – Working Lunch
1:00 – Begin Field Test
  o Breakout groups
  o Determine take-offs for fictional house (A, B, or C)
  o Set up Blower Door Equipment and Prepare for Test
  o Obtain Envelope Leakage Measurement with Blower Door
  o Determine ACH50
  o Set up Duct Testing Equipment and Prepare for Test
  o Obtain “Total Duct Leakage” Measurements with Test Rig
  o Obtain “Duct Leakage to Outside” Measurement with Test Rig
  o Determine % Duct Leakage (Total and Leakage to Outside)
  o Complete Energy Code Test Results form with appropriate Information
2:30 – Begin Written test
  o As individuals complete the field exam, they can begin written test
  o Written test is open book, 25 questions (76% needed to pass), 1 hour
  o Test covers concepts and actual practice of answering problems and filling in Test Results form with problem answers.
5:00 – Adjourn