

Level I Building Science Thermography

Individuals completing the requirements for SWA Consulting's Level I Building Science Thermography are considered competent as Building Science Thermographers, qualified to perform building thermographic analysis and basic infrared thermography as relevant to an advanced Level I Thermographer.

Personnel certified as a Level I Building Science Thermographer shall be qualified to:

- a) set up and operate the thermal imaging equipment for safe thermographic data collection
- b) verify the calibration of thermographic measurement systems
- c) apply a specified thermographic measurement technique
- d) competently recognize and prevent or control factors that result in the acquisition of poor quality data (sources of data error)
- e) incorporate applicable standards and procedures for the project
- f) perform basic building envelope fault detection and assessment of the thermal, air and moisture barriers
- g) properly interpret general thermal anomalies for building evaluations (Heat, Air and Moisture flow)
- h) perform basic image post processing (measurement tools, emissivity adjustments including parameter settings, span and scale adjustments, etc.)
- i) evaluate and report investigation results and highlight areas of concern
- j) maintain a data base of projects

Topics and Applications for Thermal Building Evaluations

- Evaluation of wall systems including; Thermal, Air and Moisture Performance of building systems
- Building Science concepts of Heat, Air and Moisture Flow
- Building damage functions
- Insulation quality control and deficiency identification
- Buildings thermal performance evaluation, Thermal comfort evaluations, Energy audit or energy loss inspection
- Methodologies for air infiltration and exfiltration studies
- Blower doors and mechanical systems for manipulation of air pressure control including standards
- Roof moisture/heat loss surveys
- Ice dams
- Radiant heaters
- Identification of masonry and concrete block issues
- Procedures, methodology, safety and reporting
- Electrical Wiring/Hot Spots Inspection
- The ability to identify and report on the conditions of building systems and components
- The ability to identify and apply appropriate inspection techniques
- The ability to recognize and apply accepted standards of professional practice

