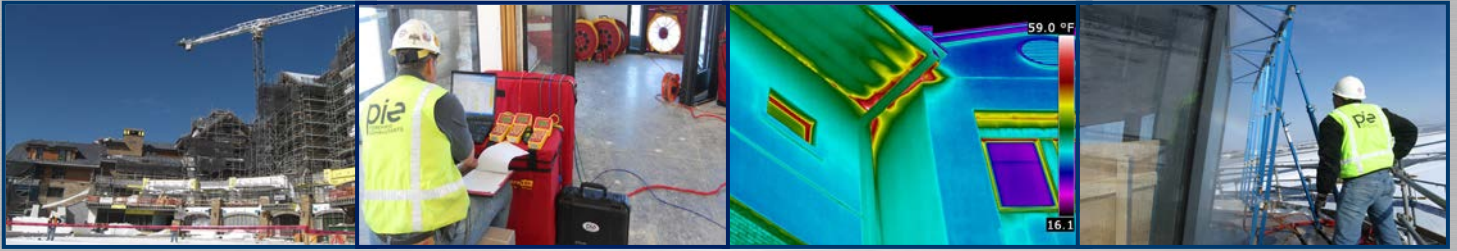


# BUILDING ENCLOSURE COMMISSIONING: BECx



SOLVING YOUR COMPLEX CHALLENGES

*A 2007 study found that out of 17,000 construction defect claims examined, 69% were due to moisture-related defects in the building enclosure systems. (July 2008 ASHRAE Journal)*

## BEcx PROGRAM

The Pie BEcx program has been proven to provide Owners, Designers, and Contractors a significantly reduced level of risk, exposure to claims and callbacks, and improved building envelope performance by providing expert consultation on the following failure prone enclosure systems:

- Exterior Moisture Barrier
- Air Barrier
- Thermal Barrier
- Vapor Barrier

Pie's BEcx program is modeled after NIBS (National Institute of Building Sciences) Guideline 3-2006: Exterior Enclosure Technical Requirements for the Commissioning Process. Pie's expert staff of engineers and specialists has BEcx experience on a variety of projects types ranging in size from 20,000 to as large as 947,000 finished square feet.

## PRE-DESIGN & DESIGN PHASE

- Establish the client's BEcx objectives and scope
- Design development and design phase consultation
- Technical peer reviews of drawings and specifications
- Hygrothermal analysis and 2-D heat transfer simulation
- Value analysis review and recommendations

## PRE-CONSTRUCTION PHASE

- Sub-contractor bid/proposal reviews
- Submittal and shop drawing reviews
- BEcx verification plan and sub-trade checklists development
- Contractor/sub-contractor training & pre-construction meetings

## CONSTRUCTION PHASE

- Mock-up consultation and testing for performance measurement and verification
- Quality assurance observations with interactive reporting

## PERFORMANCE TESTING

- ASTM E1105 and E783 water and air performance testing
- ASTM E779 and E1827 whole building air tightness testing
- ASTM E1186 and C1060 air leakage and thermal diagnostics
- FM 1-52 roof uplift testing and other enclosure testing services

## PROJECT CLOSEOUT

- Project close out reporting, operations manual, and training

## REPRESENTATIVE PROJECTS

### **Carl R. Darnall Army Medical Center Replacement Hospital - Fort Hood, Texas**

947,000 square-foot facility including a 6-story patient/bed tower, three clinic buildings, central utility plant, and 3 parking garages

### **47th Brigade Combat Team Dining Facility - Fort Carson, Colorado**

25,900 square-foot dining facility with a seating capacity of 624 in order to feed 1,300 soldiers per meal

### **Solera - Denver, Colorado**

12-story, 120-unit apartment building, which was the first LEED Gold-certified, for-lease building in downtown Denver

### **Soldier Family Care Center and Behavioral Health Clinic - Fort Carson, Colorado**

One 2-story, 21,298 square-foot soldier family care center and a 26,298 square-foot behavioral health clinic



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*Pie's BEcx program can qualify for a LEED® ID Credit*