

# Donald B. Snell, CIAQP

## Senior Forensic Consultant

### HVAC

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#### Education

B.S., Mechanical Engineering Technology (Minor: Mechanical Power Engineering Technology), Wentworth Institute of Technology (1986)

#### Professional Registrations

Professional Engineer: Pennsylvania (PE56078-E)

Professional Engineer: Georgia (PE032389)

Certified Mechanical Contractor – Florida (CMC1249861)

National Council of Examiners for Engineering and Surveying (NCEES) 2007 (32495)

Certified Indoor Air Quality Professional™ (CIAQP): Association of Energy Engineers

#### Distinguishing Qualifications

- Extensive experience in the application and analysis of insulated chilled water systems in warm, humid climates
- Extensive experience in the application and analysis of moisture control in warm, humid climates
- Extensive code compliance experience
- Expert at analysis of and compliance with ASHRAE Standard 62, *Ventilation for Acceptable Indoor Air Quality*, that sets minimum ventilation rates and other requirements for commercial and institutional buildings
- Experienced in the application and analysis of psychrometrics, the measurement of the heat and water vapor properties of air
- Experienced in the applications of passive and active dehumidification control systems requiring high percent outside air in both chilled water and direct expansion systems.
- Extensive building envelope analysis experience
- Extensive experience with construction cost control measures, programs, and monitoring

#### Relevant Experience

Donald Snell is a heating, ventilation, and air conditioning (HVAC) consulting and building systems professional with 20 years of experience in forensic building investigations related to moisture control, indoor air quality (IAQ), and construction management. He applies his warm, humid climate design and building moisture control experience in providing building solutions.

Mr. Snell is a Forensic Consultant on projects requiring litigation support, mold & moisture assessment, evaluation, remedial HVAC concepts, and life-cycle cost analysis. This experience includes both forensic and non-forensic projects:

### **Forensic Related Experience**

- South Florida Skilled Nursing and Assisted Living Facility – Led the forensic investigation of failed building systems due to moisture intrusion and the interaction of the HVAC systems. Provided expert opinions on the failure solutions for the building system fix. Failed HVAC systems included chilled water pipe insulation. Performed condensation control limit analysis. Managed infrared thermal imaging validation testing.
- Southwest Florida Skilled Nursing Facility – Led the forensic investigation of failed building systems due to moisture intrusion and the interaction of the HVAC systems. Provided expert opinions for the possible causes and solutions for the building system fix.
- Central Florida Walk-in Healthcare Clinic – Led the forensic investigation of failed building systems due to moisture intrusion and the interaction of the HVAC systems. Provided expert opinions for the possible causes and solutions for the building system fix.
- South Florida Financial District High-Rise – Led the validation and acceptance phases for re-insulation of approximately 20,000 LF of chilled water piping. Managed infrared thermal imaging validation testing. Performed condensation control limit analysis.
- South Florida Multi-Use High-Rise – Led the investigation into the causes and extent of moisture related damage.
- South Florida Multi-Use High-Rise – Led the investigation into the potential causes and extent of recommended replacement of flexible hoses that serve several hundred water-source heat pumps.
- South Florida Multi-Use High-Rise – Co-led the investigation and analysis into the causes of a failed plastic fire suppression piping system.
- South Florida Multi-Story Condominium – Led the moisture intrusion investigation into the causes and extent of moisture and mold damage of building materials and provided recommendations for corrective actions.
- Central Florida Office Building – Performed an expert moisture intrusion investigation and developed opinions (pre-mediation) on a bodily injury case.
- South Florida Condominium – Performed a moisture intrusion investigation into the causes of moisture and mold related damage and developed opinions.
- North Florida Condominiums – Performed a winter condensation investigation; reported observations and findings; developed conclusions and recommendations.
- North Florida Condominiums – Performed moisture intrusion investigations and investigations for mechanical code compliance in multiple buildings; developed and issued report.
- North Florida Condominium – Performed a moisture intrusion investigation into the causes and extent of moisture and mold related damage; performed remedial solutions and performed quality assurance services during the build-back.
- Multiple Office Buildings in Warm, Humid Climates – Performed development

- problem avoidance peer reviews related to moisture control.
- Hong Kong Hotel and Convention Center – Performed a moisture intrusion investigation into the causes of moisture and mold related damage and developed conclusions and recommendations.
  - Central Florida Hotel & Convention Center – Led the investigation into the causes of wet insulation on chilled water piping and provided recommendations for short and long-term corrective actions.
  - Seminole County Public Safety Complex – Lead in HVAC system and support to Bailey Engineering & Associates, Inc.
  - Alachua County Chiller Replacement – Lead in selection and alternative equipment options.
  - Animal Kingdom Lodge (Walt Disney World) Building Envelope – Assisted in Building Envelope Assessment.
  - Paragon Casino Hotel – Assisted in IAQ Building Assessment.
  - "B" Toll Plaza Administration Building – Led the HVAC and Moisture Intrusion Investigation.
  - Public Storage Building – Assisted in the HVAC and Moisture Intrusion Investigation.
  - Via Tuscany Apartments – Led Mold Sampling Investigation.
  - Gainesville, Florida Hotel – Investigated functions of the HVAC System related to moisture control-pressurization, dehumidification and ventilation and provided recommendations for short and long term corrective actions.
  - Ocala Hotel & Convention Center – Investigated sources of moisture intrusion and extent of mold growth in this two-story, six building hotel.
  - Los Angeles, CA Hotel – Led the investigation into the extent of mold growth in hotel guest rooms. Project tasks included mold sampling and the development of a mold remediation plan.
  - San Diego Hotel and Convention Center – Led the investigation into sources of moisture intrusion and mold growth. Project tasks included mold sampling and building envelope and HVAC system evaluations. Provided recommendations for short and long term corrective actions.
  - Tampa Hotel – Investigated functions of the HVAC system related to moisture control-pressurization, dehumidification, and ventilation and provided recommendations for short and long term corrective actions.
  - Central Florida Hotel – Investigated pathways of rainwater intrusion, sources of moisture intrusion and extent of mold growth.
  - Central Florida Hotel – Investigated functions of the HVAC system related to moisture control-pressurization, dehumidification, and ventilation and provided recommendations for short and long term corrective actions.
  - Central Florida Resort – Moisture mapping investigation to determine the extent of flood damage from a pipe leak.
  - Additional related experience available upon request.

### **Non-Forensic Related Experience**

- Performed HVAC consulting and project management on a Central Florida Cancer Center.

- Performed HVAC consulting on the renovation of a New Jersey Hospital Cancer Center.
- Performed a peer review of a four-story hospital HVAC renovation project in Pennsylvania.
- Performed HVAC design on a Central Florida medical center.
- Consulted on a new cooling tower and condenser water piping system for an existing 5000-ton chilled water plant for a Central Florida medical center.
- Produced HVAC design development drawings and life-cycle cost analysis for a 470-bed, 811,000-sf design/build medical center in Central Florida.
- Performed HVAC construction administration responsibilities on two large courthouse projects in Jacksonville, Florida and Wilmington, Delaware from January 2000 through March 2002. These projects total more than 980,000 square feet (sf) of gross building area with connected cooling capacities of more than 2740 tons.
- Led HVAC design on two 1,000-bed design/build county jails in Georgia; one 1,000-bed design/build county jail in Florida; and five 50-bed design/build juvenile detention facilities in Florida
- Investigated automatic temperature control systems that provide effective active forms of dehumidification control using direct expansion equipment in hot, humid climates.
- Performed, or managed, the development of cooling load calculations, development of air and waterside calculations, equipment selection, energy code compliance, life-cycle cost.
- Additional related experience available upon request.

## Professional Societies

American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE)  
Correspondent of the National Academy of Forensic Engineers (NAFE)

Association of Energy Engineers (AEE)

National Society of Professional Engineers (NSPE)

## Honors, Awards, and Publications

- Young Engineer of the Year – Central Florida, ASHRAE Award, National Engineers Week Banquet, 1998
- Authored: Healthcare Facility Services, a bulletin published by CH2MHILL.  
This bulletin is an overview of the revised risk assessment guidelines for construction-related work and an explanation of the requirements in an infection control risk assessment (ICRA).
- Presentation: “The Importance of Indoor Air Quality in Environmentally Conscious Hotels,” Orlando, FL. September 2007.

## Licenses and Certifications

Professional Engineer: Pennsylvania (PE056078E)

Professional Engineer: Georgia (PE032389)

Certified Indoor Air Quality Professional™ (CIAQP): Association of Energy Engineers (since 1999)

Florida Certified Mechanical Contractor (CMC1249861)  
National Council of Examiners for Engineering and Surveying (NCEES) 2007 (32495)