



PCI PERSONNEL

KARL A. SCHAACK **PRESIDENT**

COMPANY: Price Consulting, Inc.
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Spring, Texas 77379
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EDUCATION: Bachelor of Science Civil Engineering
Clemson University
Clemson, South Carolina; 1983

**PROFESSIONAL
REGISTRATION:** Professional Engineer; TX, #70234
Professional Engineer; NC, #15291
Professional Engineer; LA, #47490
Professional Engineer; ID, #P-21652
IIBEC Registered Roof Consultant #197

ASSOCIATIONS: International Institute of Building Enclosure
Consultants (IIBEC)

Gulf Coast Chapter of IIBEC

**SPECIALIZED
TRAINING:** Certified Roofing Torch Welding Applicator
Instructor by MRCA: 1995

Better Understanding of Roofing Systems Institute
(BURSI): 1993

Association of the Wall & Ceiling Industry (AWCI) –
Certified EIFS Inspector: 2009

Tile Roofing Institute – Installer Certification
Program for Moderate Climates: 2009



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RECOGNITIONS/ AWARDS:

IIBEC Richard Horowitz Award For Excellence in Writing for Interface - 2007

IIBEC Richard Horowitz Award For Excellence in Writing for Interface – 2015

IIBEC Richard Horowitz Award For Excellence in Writing for Interface – 2024

U.S. Department of State – Award of Excellence 2008

PUBLICATIONS:

"Staying on Top of Roof Maintenance"; Cleaning and Maintenance Management, May 1996.

"Roof Moisture Surveys: An Effective Tool for New Construction and Maintenance Programs"; Roofer Magazine, March 1996.

"Granulated Cap Sheets", Architectural Specifier, Jan/Feb 1997.

"Guidelines for Achieving Long-performing Seams for Granule Surfaced Roofing Materials" RCI Interface, April 1997.

"Roof Moisture Surveys: An Effective Tool for the Industry", RCI Interface, March 1997.

"A Roofing Alternative: Lightweight Insulating Concrete", Texas Architect, Sept./Oct. 1997



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“Testing of Lightweight Insulating Concrete”, The Roofing Specifier, November 1997.

“Rx For Roofs”, Civil Engineering, December 1997.

“Don’t Tread on Me: Guidelines & Helpful Hints for Walking on Roofs”, RCI Interface, April 1998.

“Walkways”, RCI Interface, June 1998.

“Minimizing Odors & Fumes”, Contractors Guide, August 1998.

“Sealant Specs That Work”, The Roofing Specifier, April/May 1999.

“The Use of Sealants in Roofing”, RCI Interface, May 2001.

“Cool Roofing – A Component of the Cool Houston Plan” September 2003.

“Garden Roof in the Southwest for Environmental Benefits”, Greening Rooftops for Sustainable Communities, June 2004.

“The Art of Detailing and Specifying”, RCI Interface, April 2005.

“The Environmental Benefits of a Texas Garden Roof”, RCI Interface, December 2005.

“The Underlying Facts: Product Types, Standards, and Characteristics of Underlayments”: Part 1 of 2, RCI Interface, February 2006.



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“Industry Guidelines & Recommendations for Underlayments”: Part 2 of 2, RCI Interface, April 2006.

“The Day After: Documentation of Damage to Roofs from a Hailstorm & the Subsequent Restoration Efforts”, RCI Interface, February 2008.

“Wet Sealing”, RCI Interface, August 2008.

“Roof-top Equipment Supports”, RCI Interface October 2009

“The Daily Ritual: Common Practices for Maintaining a Watertight Roof During Installation”, RCI Interface October 2012

“Infrared Thermography in Today’s Roofing World”, RCI Interface December 2012

“Fasteners and Self Sealability of Weather-Resistive Barriers”, RCI Interface September 2014

“On The Edge: Sheet Metal Edge Flashings”, RCI Interface December 2016

“Modified Bitumen Can Both Look Good and Be Cool”, IIBEC Interface January 2020

“Potential Issues with Applications of Weather Resistive Barriers”, IIBEC Interface May 2020

“Frustrations with Fenestrations”, IIBEC Interface October 2024



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EMPLOYMENT

8/83 – 6/85: Law Engineering; Greenville, S.C.

7/85 – 6/89: Law Engineering; Charlotte, N.C.

7/89 – 10/89: Moisture Systems, Inc.; Houston, Texas

11/89 – 5/92: Law Engineering; Houston, Texas

6/92 – 6/95: Spectrum Associates; Houston, Texas

6/95 – Present: Price Consulting, Inc.; Houston, Texas

BUILDING ENVELOPE EXPERIENCE

Mr. Schaack has conducted numerous moisture and condition surveys for a variety of roof systems including built-up, modified bitumen, single-ply, metal, spray-applied polyurethane, tile, and shingles. Mr. Schaack has also performed condition surveys on a variety of building envelope systems including, but not limited to, EIFS, stucco, stone/masonry, window wall systems, plaza decks, and sealants. These evaluations typically include repair/replacement recommendations and associated opinions of construction costs for each type of system. He has also performed life cycle cost analyses to assist in determining replacement and/or repair options. Mr. Schaack has prepared plans and specifications and provided contract administration for a variety of roof and waterproofing repair/replacement projects. He has performed roof failure studies and roofing material testing and analyses.

He has also performed and supervised construction monitoring during new and renovation activities. Mr. Schaack has performed peer review on building envelope specifications as prepared by others. Mr. Schaack has been involved in dispute resolution cases supporting both the defendant and the plaintiff. Mr. Schaack has participated in seminars, technical/training schools, and manufacturing plant visits sponsored by industry entities and various material manufacturers.



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ASSOCIATION INVOLVEMENT

Mr. Schaack is a current active participant with IIBEC – International Institute of Building Enclosure Consultants (formerly RCI) including Region Director 2002-2005; Officer for the Gulf Coast Chapter of IIBEC; member of panel that authored the 2004 RCI Registered Waterproofing Consultant Examination; member of the IIBEC Registered Roof Consultant Examination committee; member of 2008 Task Force for development of 10-year Plan for RCI; technical review member for IIBEC Manual of Practice; and current member of IIBEC Technical Advisory Committee.

REPRESENTATIVE PROJECTS

Roof Evaluations – Multiple Facilities

Fidelis Realty Partners; Spring, Texas: Performed and managed roof visual conditions surveys for approximately 56 retail facilities encompassing over 5,700,000 square feet of existing roof systems including thermoplastic single ply roofs, modified bitumen roofs; and built-up roofs at various locations throughout Texas, New Mexico, Louisiana, Nebraska, Wisconsin, Illinois, Indiana, Ohio, and South Dakota. Prepared an engineering reports for roof repairs, maintenance, and/or roof replacements with associated budgets for the subject buildings.

United States Airforce Air Combat Command, Langley AFB, Virginia: Performed engineering roof condition assessment study and developed computerized data base for a Roof Maintenance Management Program at Mountain Home AFB, Cannon AFB, Seymour Johnson AFB, Beale AFB, Offutt AFB, Whiteman AFB, Holloman AFB, Langley AFB, Nellis AFB, Minot AFB, Moody AFB, Dyess AFB, Ellsworth AFB, Barksdale AFB, Shaw AFB, Davis Monthan AFB, & Lajes AFB encompassing over 5,200 buildings and 50 million square feet.

Houston Independent School District, Houston, Texas: Performed condition assessments, developed computerized data base for a Roof Maintenance Management Program for 248 schools campuses and 21 Administration buildings encompassing over 18 million square feet.

Asphalt Built-up Roofing

Spring ISD/Smith Elementary School, Spring, Texas: Prepared specifications and drawings and performed QAI/CA for roof replacement consisting of a 4-ply asphaltic gravel surfaced built-up roof over two layers of rigid board insulation over a steel deck encompassing approximately 65,000 square feet.



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US Postal Service: Beaumont GMF, Beaumont, TX: Prepared specifications and drawings and performed QAI/CA for roof replacement consisting of a 4-ply built-up roof membrane with a modified bitumen cap sheet over rigid board insulation and cementitious fibrous plank deck assembly encompassing approximately 170,000 square feet.

Coal-tar Built-up Roofing

Southwestern Bell Telephone, Capitol Central Office, Houston, TX: Prepared specifications/drawings and performed QAI/CA for roof replacement consisting of an aggregate-surfaced coal-tar built-up roof assembly, rigid insulation, and concrete deck on a 12-story high-rise telecommunications building encompassing approximately 25,000 square feet.

Parker Elementary School, Houston, TX: Prepared specifications/drawings and performed QAI/CA for roof replacement consisting of an aggregate-surfaced coal-tar built-up roof membrane, tapered insulation, and concrete deck on approximately 65,000 square feet.

Modified Bitumen Roofing

UTHSC/Medical School Building, Houston, TX: Prepared specifications/drawings and performed QAI/CA for roof replacement utilizing 2-ply SBS modified bitumen roof membrane and white elastomeric coating over a new tapered lightweight insulating concrete fill substrate, over a secondary roof membrane on an existing concrete deck of an existing teaching/research medical facility.

Memorial Hermann Hospital Southwest, Houston, TX: Performed condition assessment, prepared specifications/drawings, and performed QAI/CA for replacement system consisting of self-adhered and torch-applied two-ply SBS modified bitumen roof system over rigid insulation board on concrete deck encompassing over 180,000 square feet on an existing multi-story, multi-level hospital.

IRMA

United States Department of State, Arlington, VA: Performed evaluation of existing EPDM single-ply roof system and prepared specifications/drawings and performed QAI/CA for replacement and installation of new IRMA roof assembly consisting of two-ply modified bitumen membrane on concrete deck, drainage board, extruded polystyrene insulation and concrete pavers for US Embassy in Gaborone, Botswana.



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United States Department of State, Arlington, VA: Performed evaluation of existing EPDM single-ply roof system and prepared specifications/drawings and performed QAI/CA for replacement and installation of new IRMA roof assembly consisting of 2-ply modified bitumen roof membrane on concrete deck, drainage board, extruded polystyrene insulation and concrete pavers for building at US Embassy in La Paz, Bolivia.

Single-ply Roofing

Klein Independent School District, Klein, TX: Prepared specifications/drawings and performed QAI/CA for installation of new mechanically-attached and fully-adhered TPO/PVC/KEE single-ply roof membrane assemblies for replacement applications and new installations on 48 school facilities encompassing over 5,500,000 square feet over past 10-years.

UTHSC/Operations Center Bldg., Houston, TX: Prepared specifications/drawings and performed QAI/CA for application of new mechanically attached PVC single-ply membrane and insulation over existing standing-seam metal panel roofing on approximately 185,000 square foot office/warehouse building.

Magnolia ISD/Williams Elementary School; Magnolia, Texas: Prepared specifications and drawings, assisted during bidding, and performed QAI/CA for application of new adhered PVC single-ply membrane with standing seam profiles and insulation over existing standing-seam metal panel roofing on approximately 56,000 square foot school classroom building.

Spray-applied Polyurethane Foam Roofing

Greensboro Coliseum Exhibition Hall, Greensboro, N.C.: Performed an infrared thermographic roof moisture survey on an existing spray-applied polyurethane foam roof system encompassing approximately 70,000 square feet.

Prairie View A & M/Nick's Field House, Prairie View, TX: Performed visual condition survey, slit tests, and compression tests of samples of existing spray-applied polyurethane foam roof on approximately 60,000 square feet dome-shaped structure.



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Metal Roofing

University of Houston: Student Recreation Center, Houston, Texas: Prepared specifications and drawings, assisted during bidding phase; and performed QAI/CA for replacement of single ply roof with pre-finished standing-seam metal panel roof system on barrel-shaped and curved substrates on approximately 120,000 square feet existing facility.

Villages Fire Station, Hedwig Village, Texas: Prepared specifications and drawings; assisted during bidding; and performed QAI/CA services for installation of standing seam metal retrofit roof system over and existing standing seam metal panel roof system on an existing fire station.

Tile Roofing

University of Houston, Cullen Administration Building, Houston, Texas: Performed visual roof evaluation of existing clay barrel tile roofing originally installed in early 1920's. Prepared specifications/drawings and performed QAI/CA for salvaging and re-installation of tile.

U.S. Department of State: US Embassy Office Building, Prague, Czech Republic: Prepared specifications and drawings for salvaging and re-installation of scalloped-shaped tile on an existing building built in the early 1800s.

Shingle/Slate Roofing

Higher Dimension Church: "D" Spot, Houston, Texas: Performed conditions assessment and prepared specifications/drawings for replacement for an existing dimensional strip shingle roof and related sheet metal flashings.

U.S. Department of State: Ambassador's Residence, Dublin, Ireland: Performed quality assurance inspections during replacement of slate roofing, metal roofing, low-slope roofing, and sheet metal flashings on 28,000 square foot residence constructed in 1776.

Specialty Roofing

University of Texas Health Science Center, School of Public Health, Houston, Texas: Prepared specifications/drawings and performed QAI/CA for an extensive garden roof assembly consisting of a two-ply modified bitumen membrane, growing medium, insulation/pavers, and vegetation for roof replacement on a 12-story medical educational building encompassing approximately 21,000 square feet.



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City of Houston, Police Academy, Houston, Texas: Prepared specifications and drawings and performed QAI/CA for a composite roof system consisting of a multi-ply built-up roof membrane and a fleece-back single-ply membrane top ply over tapered insulation for roof replacement on four 2-story educational/office buildings encompassing approximately 85,000 square feet.

Roof Moisture Surveys

L.B. Johnson Space Center, Houston, Texas: Performed infrared thermographic moisture survey on eight buildings encompassing over 250,000 square feet of built-up roof assemblies over perlite insulation board over lightweight insulating concrete fill.

UTH/Institute of Molecular Medicine, Houston, Texas: Performed infrared roof moisture survey on multiple roofs encompassing approximately 52,000 square foot facility with TPO single ply membrane roof assembly over cover board and polyisocyanurate insulation and concrete deck on an existing medical research/educational facility.

Miscellaneous Testing

Shriners Hospital, Galveston, Texas: Performed field wind uplift testing using negative pressure chamber of newly installed fully-adhered single ply roof membrane over cover board and polyisocyanurate insulation and concrete deck on an existing medical facility.

UT Dallas: Callier Richardson Expansion, Richardson, Texas: Performed field chamber water infiltration testing of glass curtainwall and window systems, air barrier adhesion testing, and infrared moisture testing of roof on newly constructed educational building.

Exterior Walls

Domain Shopping Complex, Austin, Texas: Performed special field inspections of Exterior Insulation Finish System (EIFS) installations during new construction on several buildings located on the subject complex.

Klein ISD: Klein Forest High School, Klein, Texas: Performed condition assessment and exploratory excavations and prepared Design Documents/Drawings for repairs/renovations of building envelope systems including brick masonry, metal panels, skylights, roofing, and storefront on an existing high school building.



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Design Review

Brazoria County Justice Center, Alvin, Texas: Performed technical review of drawings and specifications prepared by Architect related to the building enclosure systems; performed on-site inspections and testing during construction for an existing and new addition to an existing public court house facility.

Cy-Fair ISD Richard Berry ESC & Stadium, Houston, Texas: Performed a technical review for the General Contractor of drawings and specifications prepared by an Architect related to the building enclosure systems and performed on-site inspections and testing during construction for a new multi-use and athletic facility.

Forensic, Dispute Resolution, & Insurance Claims

Pharr High School, Pharr, Texas: Performed a visual condition assessment, infrared thermographic moisture survey, and roof cores on a modified bitumen roof system for representation of a roof material manufacturer as a defendant in a dispute (Quilling, Selander, Lownds, Winslett & Moser, PC).

Wayne County Schools, Wayne County, Mississippi: Performed a visual condition assessment, infrared thermographic moisture survey, water spray testing, and roof cores on thermoplastic single ply roof systems installed on 12 storm shelters at various schools for representation of a roof material manufacturer as a defendant in a dispute (Baker, Donelson, Bearman, Caldwell & Berkowitz, PC).

Building Enclosure Commissioning

Memorial Hermann The Woodlands Hospital Bed Tower Expansion, The Woodlands, Texas: Performed Building Envelope Commissioning that included review of specifications and drawings prepared by Architect; reviewed submittals of building envelope systems; performed quality assurance site inspections during construction/installation of building envelope systems; and performed water spray testing and chamber testing of windows and curtain wall systems on a new addition comprised of TPO single ply and modified bitumen roofing; stucco and metal panel cladding over fluid applied air barrier; and aluminum-framed punched windows and curtain wall systems.



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Memorial Hermann Cypress Hospital, Cypress, Texas: Performed Building Envelope Commissioning that included review of specifications and drawings prepared by Architect; reviewed submittals of building envelope systems; performed quality assurance site inspections during construction/installation of building envelope systems; performed wind uplift testing; and performed water spray testing and chamber testing of windows and curtain wall systems on a new hospital comprised of modified bitumen roofing; precast concrete panels and metal panel cladding over fluid applied air barrier; and aluminum-framed punched windows and curtain wall systems.

Klein ISD: Lemm Elementary School Addition, Klein, Texas: Performed Building Envelope Commissioning that included review of specifications and drawings prepared by Architect; reviewed submittals of building envelope systems; performed quality assurance site inspections during construction/installation of building envelope systems; and performed water spray testing and chamber testing of storefront windows on a new addition comprised of TPO single ply roofing; brick masonry veneer over fluid applied air barrier; and aluminum-framed punched windows and curtain wall systems.

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