

ANDREW SCHRADER, PE, SI, CGC

Education:

Master's Degree (M.S.C.E.), Civil Engineering, University of South Florida
Bachelor's Degree (B.S.C.E), Civil - Structural Engineering, University of South Florida
Graduated *cum laude*

Professional Credentials:

- PE #72231 State of Florida, Licensed Professional Engineer

- SI #72231 State of Florida, Special Inspector of Threshold Buildings

- CGC #1521910 State of Florida, Certified General Contractor

- AX #104 State of Florida, Licensed Asbestos Consultant

- StS-1 U.S. Army Corps of Engineers
 Urban Search and Rescue Structures Specialist

- SI #8910200 International Code Council (ICC), Special Inspector
 - Structural Steel and Bolting
 - Soils (Geotechnical)
 - Structural Masonry

- Concrete Construction Special Inspector, American Concrete Institute (ACI)

- Concrete Field Testing Technician—Grade I, American Concrete Institute (ACI)

- Commercial Pilot (Instrument-Rated) #4122450
Remote Pilot (Small Unmanned Aircraft Systems)
 U.S. Department of Transportation
 Federal Aviation Administration (FAA)

- Certified Continuing Education Instructor, Florida Department of Business and Professional Regulation (DBPR)

- Certified Continuing Education Instructor, Florida Division of State Fire Marshal

Summary of Experience:

Mr. Schrader's background encompasses working as a consulting engineer on building envelope, construction defect, building code application and forensic engineering projects as well as service to the State of Florida and the United States as an Urban Search and Rescue Structures Specialist.

Regarding construction and envelope issues, he has designed and managed projects on structures composed of structural steel, reinforced concrete, masonry, and wood framing, as well as re-roofing. His responsibilities have included production of structural surveys, project manuals, bid documents, permit documents, and shop drawing review.

Regarding the building code and forensic engineering, he typically is called upon to investigate how structures should have been built in accordance with the building codes in effect at the time of design and/or construction.

Awards and Recognitions:

- Deployed by State of Florida for Search and Rescue Operations for Hurricanes Hermine (2016), Irma (2017), Michael (2018), and Dorian (2019), and the Champlain Towers Surfside collapse (2021)
- Working Group Chair, Structures Specialist Group, Division of State Fire Marshal / State of Florida – 2019 – Present
- Guest Lecturer, New York State Homeland Security and Emergency Services – 2017, 2019
- Guest Lecturer, FDIC International (Fire Department Instructor's Conference) – 2019, 2022
- Subject Matter Expert Contributor, U.S. Department of State (Italian Consulate) – 2017
- Guest Lecturer, Florida Fire Chief's Association Annual Conference – 2017
- Humanitarian Service Award (Services Rendered Following Hurricane Hermine and Hurricane Irma), Board of County Commissioners, Marion County FL – 2017 - 2018
- Guest Lecturer, College of Engineering, University of South Florida 2014 through 2016
- Official Roofing Consultant, Pinellas County Housing Authority 2012 through 2015
- Keynote Speaker, Community Associations Institute Annual Meeting – 2013
- Parking Structure Restoration of the Year, International Concrete Repair Institute - 2009

Research Background:

While earning his Master's Degree at the University of South Florida, Mr. Schrader performed research on enhanced application methods for fiber-reinforced polymer (FRP) repairs on damaged and deteriorated concrete. This research involved the use of composite building materials including carbon fiber reinforcing polymers (CFRP).

As part of this research he studied alternate scanning systems for infrared thermography testing. Besides non-destructive testing he also utilized destructive tests in accordance with ASTM C1583, "Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength of Concrete Repair Materials." This work contributed to a publication in the American Society of Civil Engineer's *Journal of Composites for Construction*.

Also during his time with the Structural Research Group at the University of South Florida, Mr. Schrader aided in the design, construction and testing of a portable, pressurized enclosure system for flight deck repairs to U.S. Navy warships. This work culminated in the real-world application and testing of the system in order to repair the amphibious transport ship USS Nashville (LPD-13) while docked at Portsmouth, VA.

Professional Experience History:

Founder

Recon Response Engineering, LLC—Clearwater, FL. 8/2015 – Present

Special Projects Manager

Munyan Restoration, Painting & Waterproofing—Clearwater, FL. 6/2010 – Present

Project Engineer

Karins Engineering Group, Inc. –St. Petersburg, FL. 6/2005 – 6/2010

Research Assistant

University of South Florida – Tampa, FL. 9/2005 – 5/2007

Publications:

Schrader, Andrew B., "Urban Search and Rescue and Structural Collapse: It's Everyone's Job to Know," *Fire Engineering Magazine*, September 2019, pp. 57-61

Schrader, Andrew B., "Preparedness Lessons Learned from Hurricane Irma Responders," *RECOIL OFFGRID Magazine*, June 2018, pp. 51-57

Schrader, Andrew B., "Out of the Furnace: Firefighter Survival Preparations," *RECOIL OFFGRID Magazine*, August 2016, pp. 59-64

Schrader, Andrew B., "Trapped: How to Survive a Structural Collapse," *RECOIL OFFGRID Magazine*, January 2016, pp. 60-65

Schrader, Andrew B., "Hurricane Preparation for Structures," *Florida Community Association Journal*, July 2015, pp. 36

Schrader, Andrew B., "Nuts and Bolts of Moisture Intrusion," *Common Ground, CAI'S Magazine for Community Association Leaders*, May-June 2014, pp. 55-56

Schrader, Andrew B., "Exterior Maintenance and Moisture Intrusion: Common Causes and Precautions," *Facilities Today Magazine*, February 2013

Schrader, Andrew B., "Using Non-Destructive Testing to Regain the Client's Trust," *Sealant Waterproofing and Restoration Institute (SWRI) Applicator Magazine*, Spring 2009, pp. 20-24

Schrader, Andrew B. et al., "Half-Cell Potential Corrosion Survey Aids Repair Design," *International Concrete Repair Institute (ICRI) Magazine*, September/October 2008, pp. 2-5

Danny Winters, PhD, PE Gray Mullins, PhD, PE, Rajan Sen, PhD, PE, and Andy Schrader, PE, "Bond Enhancement for FRP Pile Repair in Tidal Waters," *American Society of Civil Engineers (ASCE) Journal of Composites for Construction*, Vol. 12, No. 3, May/June 2008 pp. 334-343

Schrader, Andrew B., "Methods to Improve Bond on FRP Wrapped Piles," *Graduate Thesis, University of South Florida*, 2007

Training & Classes Taught (most classes taught on continual basis)

"Liquid Applied Roof Coatings and Roof Inspections," online Continuing Education instructor for Florida Department of Business and Professional Regulation (FL DBPR) approved course, July 9 2020.

"An Engineer's Guide to Structural Collapse", New York State Homeland Security and Emergency Services, New York State Technical Rescue Conference, Oriskany, NY 2017, 2019

"An Engineer's Guide to Structural Collapse", FDIC International (Fire Department Instructor's Conference), Indianapolis, Indiana, 2019

"Community Association Manager's Guide to Moisture Intrusion," Innisbrook Management Conference, Oct. 6. 2017, Palm Harbor, FL

"US&R Structural Collapse Refresher," Marion County (FL) Technical Rescue Teams, August 10-11 2016, Ocala, FL

"US&R Structural Collapse Refresher," Pinellas County (FL) Technical Rescue Team, Manatee County (FL) Technical Rescue Team, Florida USAR Task Force 3, May 24, 25, 26 2016, St. Petersburg, FL

"US&R Structural Collapse Refresher," City of Gainesville (FL) Fire Rescue, April 2016, January 2017 Gainesville, FL

"Moisture Intrusion and Repair Methods on Structures," Structural Rehabilitation Course, University of South Florida College of Engineering, guest lecture for Dr. Rajan Sen, January 27, 2016

"Community Association Manager's Guide to Property Inspections," Community Associations Institute (CAI) Gold Coast, May 14, 2015, Delray Beach, FL

"Architects and Engineers—An Owner's Manual," Associa Property Management, May 2, 2014, Clearwater, FL

"Ethics of Condominium Repairs," Engineering Ethics Course, University of South Florida College of Engineering, guest lecture for Dr. Gray Mullins, February 7, 2014

"Detecting Moisture Intrusion Vulnerabilities through Structural Inspections," Graduate Course on Structural Repair and Rehabilitation, University of South Florida College of Engineering, guest lecture for Dr. Rajan Sen, January 16, 2014

Urban Search and Rescue Qualifications / Deployments

Urban Search and Rescue Structures Specialist (StS-1)
U.S. Army Corps of Engineers, 2014 – Present

Marion County (FL) Technical Rescue Team, Volunteer Support Firefighter,
November 2015 – Present

Champlain Towers Condominium, US&R Deployment with Florida Task Force 3,
Surfside FL, June-July 2021. Worked as Structures Specialist (StS).

Statewide Drone Mapping Exercise, St. Petersburg FL January 6 2021
Florida State University Emergency Management and Homeland Security Program

Hurricane Dorian, US&R Deployment with Florida Task Force 8, Ocala, FL.
September 1-5 2019. Worked as Structures Specialist (StS).

Hurricane Michael, US&R Deployment with Florida Task Force 3, Florida Panhandle,
October 10 – 15 2018. Worked as Structures Specialist (StS).

Hurricane Irma, US&R Deployment with Florida Task Force 8, Palatka, FL September
11-15 2017. Worked as lead Structures Specialist (StS).

Hurricane Hermine, US&R Deployment with Florida Task Force 8, Steinhatchee, FL,
September 2, 2016. Worked as lead Structures Specialist (StS).

Florida Task Force 8 Operation Integration VII, Camp Blanding, FL September 2015.
Helicopter / Night Ops. Worked as Lead StS.

Florida Task Force 8 Structural Collapse Disaster Response Exercise, Florida State
Fire College, Ocala, FL July 2015. Worked as Lead StS.

South Florida Hurricane Exercise (SoFLEX) 2015, Florida Task Force 4, Structural
Collapse Disaster Response Exercise, Florida State Fire College, Ocala, FL March
2015. Worked as assistant StS.

Hazardous Materials Training, Marion County Fire Rescue Training Group,
Recertified Annually,

Infection Control Training, Marion County Fire Rescue Training Group, Recertified
Annually

CPR, AED, and Basic First Aid , American Red Cross, Recertified Bi-Annually

Legal Services, Court Appearances, Testimony and Arbitration (partial listing)

Mr. Schrader's expertise includes moisture intrusion, building exterior envelopes, and construction. His work includes assisting council and serving as expert witness.

Hyde Park Place II Condominium Association Inc. . Munyan Restoration, Waterproofing & Painting Service of Tampa Bay, Inc., Case No. 19-CA009106-CA

Construction Contract Dispute

Client: Defendant

Circuit Court of Hillsborough County,

Philippe Abrahams vs. ER Construction, Inc.

Crawlspace Ventilation Construction Defect Investigation

Client: Defendant

Jurisdiction: In the Circuit Court of the 11th Judicial Circuit, Miami-Dade County, FL

Activity: Provided document review and commentary regarding design oversight and construction errors.

Frank & Stein LLC vs. Underwriters at Lloyd's, London

Hurricane Irma Wind Damage and Moisture Intrusion Investigation

Client: Plaintiff

Judiciary: In the Circuit Court of the 7th Judicial Circuit in and for Volusia County, Florida

Activity: Provided onsite existing conditions review, document review, and commentary on probable causes of damage to structure.

Lindsey Carriera vs. Stirling Ridge Properties

Moisture Intrusion (window and door leak) Exploration and Analysis

Client: Defendant

Activity: Provided oversight of water testing and existing condition analysis, as well as door re-design to accommodate flashing installation.

Waterside at Coquina Key vs. ZMG Construction, Inc.

Wood Truss and Wood Framing Repair Review, Exploration and Analysis

Client: Defendant

Activity: Provided onsite existing conditions review, analysis of as-built conditions versus as-specified shown on drawings, and provided professional opinion on repair methodology.

Legal Services, Court Appearances, Testimony and Arbitration (continued):

Mary Ann and Martin Schaffel vs. EWI Construction, Inc.

Metal Roof Review, Exploration, and Analysis

Client: Defendant

Activity: Issued Condition Assessment Reports, Document Review, Performed onsite exploratory testing, Issued Supplementary Findings and Opinions Report; Oversaw uplift resistance testing including UL 580 laboratory testing.

Robert Jaffe vs. M.B. Enterprises Roofing & Sheet Metal Inc.

Metal Roof Review and Analysis

Client: Defendant

Activity: Issued Condition Assessment Reports, Document Review, Issued Supplementary Findings and Opinions Report to Certify Roof as Code-Compliant

Catanzarite and Caicedo Families vs. CalAtlantic Homes

Residential Foundation/Soils Inspection, Review and Analysis

Client: Defendant

Activity: Onsite Inspection, Analysis of Existing Conditions, Document Review

Robert Homan vs. Complete Property Services, Inc., Case no. 14-005854-CI

Plaza Deck Expansion Joint Installation Inspection, Trip and Fall Complication

Judiciary: In the Circuit Court of the Sixth Judicial Circuit in and for Pinellas County, Florida

Client: Defendant

Activity: Provided Document Review,

Manatee Association of Realtors® Inc. vs. Manasota Commercial Construction Co

Exterior Tile Installation and Waterproofing Failure

Negotiation and Settlement, Wesley Chapel, FL

Client: Plaintiff

Activity: Issued Condition Assessment Reports, Document Review, Performed onsite exploratory testing, Issued Supplementary Findings and Opinions Report; Produced Project Manual and oversaw Bid Process

Legal Services, Court Appearances, Testimony and Arbitration (continued):

Patrick L. Jinks and Kristen N. Scott vs. Parkcrest Harbour Island LLC, a Florida limited liability company, CKT-Parkcrest at Harbour Island, LLC, a Florida limited liability company, and Cindy Knott Taylor, Case No.: 08-0008184

Moisture Intrusion and Stucco Installation Investigation

Judiciary: In the Circuit Court of the Thirteenth Judicial Circuit in and for Hillsborough County, Florida Civil Division

Client: Plaintiff

Activity: Issued Condition Assessment and Document Review Report, Issued Supplementary Findings and Opinions Report; Issued Remediation Cost Estimates,

Grand Key Condominium Association, Inc., vs. Dale Mabry Development,

Moisture Intrusion, Waterproofing and Stucco Installation Investigation

Judiciary: In the Circuit Court of the Thirteenth Judicial Circuit in and for Hillsborough County, Florida

Client: Plaintiff

Activity: Performed Document Review, Condition Assessment, Designed and Oversaw Exploratory On-Site testing, Issued Stucco Repair Estimates, Issued Findings and Opinion Report,

The Promenade at West Meadows HOA vs. Rottlund Homes of Florida

Exterior Stucco and Waterproofing Investigation

Arbitration under American Arbitration Association, Tampa, FL

Client: Plaintiff

Activity: Issued Multiple Condition Assessment Reports, Document Review, Oversaw onsite exploratory testing, Issued Supplementary Findings and Opinions Report; Provided Testimony

Straiton at Ballentrae HOA vs. M/I Homes

Roofing, Exterior Stucco and Waterproofing Investigation

Negotiation and Settlement, Wesley Chapel, FL

Client: Plaintiff

Activity: Performed Structural Assessment and Issued Subsequent Report, Oversaw Onsite Exploratory Testing of Roofs and Walls, Issued Findings and Opinions Report, Issued Opinion of Probable Cost for Remediation

Legal Services, Court Appearances, Testimony and Arbitration (continued):

Tides at Pelican Landing Condominium Association Inc. vs. Pelican Landings

Exterior Stucco and Waterproofing Investigation

Judiciary: In the Circuit Court of the Twentieth Judicial Circuit, Lee County, Florida

Client: Plaintiff

Activity: Performed Structural Assessment and Issued Subsequent Report, Issued Findings and Opinions Report, Issued Opinion of Probable Cost for Remediation

George Ciporkin vs. 475 LLC, Clemmons Architecture Inc., Irwin Contracting Inc

Judiciary: In the Circuit Court of the Sixth Judicial Circuit, Pinellas County, Florida

Client: Plaintiff

Activity: Performed Moisture Intrusion Assessment and onsite testing, Oversaw Onsite Exploratory Testing, Issued Findings and Opinions Report

Design and Consultation References (partial listing):

Existing Conditions Structural Survey and Evaluation
River Yacht & Racquet Club (threshold building), Bradenton FL
Mr. David Denner, Board President
November 2021

Existing Conditions Survey and Evaluation for Water Intrusion and Waterproofing
Bahia Vista 2 Condominiums (multiple threshold buildings), St. Petersburg FL
Scott Fisher, Property Manager, Resource Property Management
June 2021

Wood Piling Foundation Inspection
Meridian Condominium, Sand Key FL
Ms. Tiffany Jackson, Community Association Manager, Resource Property Management
October 2020

Guardrail and Handrail Inspections (DBPR HR-7020 format)
Sailwinds / Royal Yacht Condominiums (5-story threshold buildings), Tarpon Springs FL
Ms. Tri Morocco, Community Association Manager, Melrose Partners
September 2020

Bike Room / Package Room Conversion and Structural Alterations
Signature Place Condominium (32-story threshold building), St. Petersburg FL
Mr. Joe Dobson, Community Association Manager, First Service Residential
August 2020

Balcony Structural Inspection, Production of Permit Drawings for Concrete Repair
Riverside Condominium (6-story threshold building), Marco Island FL
Venture Construction Group of FL
May 2020

Balcony Structural Inspections and Evaluation (94 balconies, 7-story threshold building)
Forbes Building (Royal Stewart Arms), Dunedin FL
Ms. Suann Schey, Community Association Manager (Resource Property Management)
January 2020

Large-Scale Vehicular Impact Damage to Guardhouse
Inspection, Review and Production of Concrete Replacement Permit Drawings
Rosedale Golf and Country Club, Bradenton FL
Ms. Ronda Veaghn, Association Manager (Resource Property Management)
November 2019

Design and Consultation References (continued)

Precast Concrete Parking Garage Ceiling and Floor Slab Inspection
Sunbow Bay Condominium, Holmes Beach FL
Ms. Kaitlyn Morkus, Association Manager (Resource Property Management)
October 2019

Roof Replacement Consulting and Project Management (16 buildings, 170,000 SF)
Lexington Place Condominiums, Orlando FL
Mr. Paul Daiya, Board Member
January 2019

Asbestos Consulting and Survey prior to Complete Demolition (21 single-family villas)
Westminster Shores Retirement Communities, St. Petersburg FL
Mr. Joel Leonard (LEED AP), Hennessy Construction Services
December 2018

Reinforced Masonry Special Inspections (Threshold Building, 5 Stories High)
Art Center Lofts, Tampa FL
Mr. David Creamer (CGC), Creamer Construction Inc.
November 2018

Hurricane Damage Evaluation, Flewwellin Residence (single family home)
Marathon, FL
Bernheim Dolinsky Kelley (BDK) Law Firm
April 2018

Reinforced Concrete Repairs Design and Inspection (Threshold Building, 4 Stories High)
Crimson on the Gulf Condominium, Madeira Beach, FL
Mr. Gary Heller, Board President
November 2017

Low-Slope Roof Inspections, Scope of Work Recommendations and Bid Review
Montierra Apartments, Tampa FL (10 buildings, 42,000 SF)
Mr. Carlos Ortiz, Property Manager
May 2017

Structural Collapse and Earthquake Response Training
U.S. Department of State, U.S. Consulate General Naples, Italy.
Provided assistance to course development as Subject Matter Expert.
Mr. Frank Dehnisch
December 2016

Design and Consultation References (continued)

Balcony, Exterior Envelope and Guardrails Inspections

Meridian Condominium, Sand Key, FL (108 unit condominium, 21 stories high)

Ms. Peggy Buss, Licensed Community Association Manager (Progressive Management)

December 2011

ConEx Container Burn Building Design

Florida State Fire College, Ocala, FL

Chief Robert Graff, Marion County (FL) Fire Rescue

September 2016

Balcony, Exterior Envelope and Guardrails-Repair and Replacement (28 balconies) Bay View Condominiums, Indian Shores, FL

Mr. Jason Ferrell, President, Dixie Construction Services LLC

February 2016

Tile Cladding and Exterior Envelope Investigation / Repairs with EIFS System (32 columns)

Realtor Association of Sarasota and Manatee Headquarters, Lakewood Ranch, FL

Ms. Kathy Roberts, Construction Committee Head, Realtor Association Sarasota-Manatee

Wood Floors Framing Inspections and Consultation

Osprey Ridge Homes, Palm Harbor, FL

Mr. George P. Stamas, Owner, Pioneer Developers of America,

December 2014

Roof Inspection and Certification

The Hurricane Restaurant, Pass-A-Grille Beach, FL

Ms. Marilyn Williams, Vice President (BB&T Bank)

November 2014

Concrete Boat Landing Repair and Launch Enlargement

Gulf Landings Condominium Association, New Port Richey, FL

Ms. Jackie Bachellor, Association Manager (Resource Property Management)

September 2014

Wood Walkway and Pier Framing Replacement and Restoration

Mansions by the Sea Condominium, Treasure Island, FL

Ms. Cascie Rich, Association Manager (Condominium Associates)

August 2014

Design and Consultation References (continued)

Deteriorated Concrete Balconies Survey and Restoration Project
524

Beach Road Condominium Association, Sarasota, FL
Mr. Jason Ferrel, President, Dixie Construction Services
August 2014

Southwest Florida Water Management District (SWFMD) Drainage Inspections
Forest Lakes at Largo Townhomes, St. Petersburg, FL

Mr. Brian Davis, Association Manager (Associa Gulf Coast)
July 2014

Roof and Attic Fireproof Assembly Investigation

South Hampton Townhomes, Tampa, FL
Mr. Glenn Koury, Association Manager (Condominium Associates)
July 2014

Shingle and Low-Slope Roof Inspections/Consulting

Pinellas County Government (Housing Authority), St. Petersburg, FL
Omar Arce, Director of Construction Services

Responsible for reviewing sloped shingled roofs and low-slope roofs for approximately
8,500 individual tenants.

2012-2015

Deteriorated Concrete Stair Landings and Walkways, Survey and Restoration Project
Waterside I and Waterside III Condominiums, Tampa, FL (10 buildings)

Ms. Kelly Moran, Association Manager (Resource Property Management)
July 2014

Exterior Inspection and Turnover Study Report

Glendale Villas Condominium, Land O'Lakes, FL (12 buildings)

Ms. Rose Stowers, Association Manager (Condominium
Associates) May 2014

Stucco and Moisture Intrusion Inspections

Highland Park Neighborhood Association Townhomes, Tampa, FL (41 homes)

Mr. Mark Eary, Association Manager (Greenacre Properties)
April 2014

Differential Settlement Investigation

Banyan Bay Townhomes

St. Petersburg, FL

Ms. Ronda Veaghn, Association Manager (Associa Gulf Coast)
February 2014

Design and Consultation References (continued)

Exterior Paint Coatings Inspections and Consultation
Surrey Park Townhomes, Apollo Beach, FL (74 buildings, 296 homes)
Ms. Kimberly Rodgers, Association Manager (Rizetta and Company)
December 2013

Mold and Moisture Intrusion Inspection, Analysis and Specifications Production
Shipwatch Condominiums Clubhouse, Largo, FL
Mr. Scott Fisher, Association Manager (Resource Property Management)
November 2013

Exterior Paint Coatings and Moisture Intrusion Inspections
Jupiter Ocean Grande Condominiums, Jupiter, FL (Four 7-story Buildings)
Mr. Robert Gardner, Association Manager (First Service Residential)
August 2013

Concrete Columns Analysis and Carbon Fiber Strengthening Restoration
Mansions by the Sea Condominium, Treasure Island, FL
Ms. Monique Faison, Association Manager (Condominium Associates)
October 2012

Stucco and Moisture Intrusion Inspections and Consultation
Courtyards of Tampa Condominiums (25 single-family homes)
Mr. Nicholas Disparte, Association Manager (Rizetta and Company)
March 2012

Roof Inspections and Analysis
Alexandria Place Townhomes, Brandon, FL (15 buildings, 84 single-family homes)
Ms. Charlene Adewunmi, (Community Association Management Services LLC)
February 2012

Elevated Plaza Deck and Parking Garage Concrete Repair and Waterproofing
Restoration Mansions by the Sea Condominium, Treasure Island, FL (20,000 SF plaza
deck)
Ms. Monique Faison, Association Manager (Condominium Associates)
November 2011

Post-Graduate Seminars and Training Attended (partial listing):

International Code Council (ICC) 25-hour Special Inspection Training Structural Steel and Bolting, February 2019

International Code Council (ICC) 30-hour Special Inspection Training Soils (Geotechnical) Inspection, August 2018

OSHA 30-hour Construction Safety and Health Training, Clearwater, FL March 2017

Geotechnical Awareness in US&R Operations, U.S. Army Corps of Engineers Regional Training Meeting, Nov. 25 2016, Tampa FL

Assessment of Damage and Hazards in Structures, U.S. Army Corps of Engineers Regional Training Meeting, Nov. 24 2016, Tampa FL

OSHA 10-hour Construction Safety and Health Training, Oct. 27-28 2016, Clearwater, FL

Building Design for Homeland Security for Continuity of Operations, FEMA Emergency Management Institute, February 2016

Safe Rooms and Shelters: Protecting People Against Terrorist Attacks, Feb. 4 2016, PDHlibrary.com

Evaluation and Repair of Concrete Structures, Pt. 3, Feb. 8 2016, PDHlibrary.com

Tunnel and Bridge Awareness and Damage Assessment, U.S. Army Corps of Engineers Regional Training Meeting, Nov. 15 2014, Tampa FL

Structural Repair and Strengthening Techniques, U.S. Army Corps of Engineers Regional Training Meeting, Nov. 15 2014, Tampa FL

Residential Construction in High-Wind Regions Using the Florida Building Code and ICC 600, Contractor's Institute, July 1-3 2014, Hudson, FL