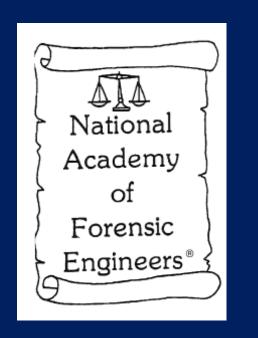
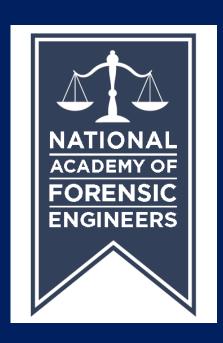
National Academy of Forensic Engineers







Board of Directors Meeting
January 22, 2016
Tampa Sheraton Riverwalk Hotel
Tampa, Florida

PRESIDENT'S WELCOME

WELCOME TO TAMPA!

It is my pleasure to welcome you to our Board Meeting on January 22, to our Regular Seminar on January 23, and to our Special Seminar on January 24 in my hometown of Tampa, Florida. We have a great meeting planned, and many people have worked hard to make it a success. I am confident that you will enjoy the technical presentations, and that you will enjoy your interactions with your fellow Forensic Engineers.

I extend a special welcome to first-time attendees. Your nametag will have a have a green circle with a number '1' which will identify you as a first timer. I am confident that you will be made to feel welcomed. I invite you to feel free to ask questions and to solicit advice from other members.

Following the success at our Summer 2015 Meeting in Seattle, we are again offering a two-track program at our Regular Seminar on Saturday, and have expanded the two-track program to our Special Seminar on Sunday. This is in direct response to feedback we have received from our members and from our Public Relations Committee. Please let us know what you think of the new format.

For the first time since I have been a member of the Academy, we have two off-site activities planned for this meeting. The first is a Behind-the-Scenes Engineering Tour of Busch Gardens, a local amusement and zoological park. The tour was organized by Rebecca Armstrong, and will be hosted by Mark Rose. Mark is a Mechanical Engineer, and is Senior Vice President of Attractions at Busch Gardens. He served as lead design engineer on many of the Park's rides and attractions. Mark has also agreed to volunteer and to provide the tour at no cost to us, so the only expense is for transportation to and from the park.

We have also planned a Dinner Cruise on the Yacht Starship II which will serve as our Friday-night dinner. I've been on this yacht before for other events, and I assure you we will have a great evening. Dinner will be in the form of "Specialty Stations" where you may sample various foods and desserts.

Please be sure to provide your feedback on these activities and on the meeting format and content to a Board member so we can use that feedback in the planning of future meetings.

A year ago I adopted the theme "Raise the Bar" for my presidency. Our Board and our Committees are working hard to Raise the Bar for the Academy. If you would like to help, please let me know and I will find a Committee assignment or other task where you can help out.

My term as President will end at this meeting. It has been an honor to serve as your President for the last year. I hope to have the opportunity to speak with each of you at our meeting. Please feel free to come speak with me, and let me know how I can best serve you during my remaining years on the Board of National Academy of Forensic Engineers. I wish all the best for our incoming President, John Leffler. I have every confidence that he will continue to lead the Academy in a positive direction. Please do whatever you can to help him in the coming year.

I hope you enjoy the meetings!

Jeffrey D. Armstrong

MEETING SCHEDULE

Thursday, January 21 SOLD OUT

Special behind-the-scenes Engineering Tour of Busch Gardens theme park, hosted by the park's Vice President of Operations and designer of many of the park's attractions. Our tour will then travel to the historic Ybor City neighborhood of Tampa for dinner at the famous Columbia Restaurant. Dinner will be <u>Dutch Treat</u>. We will depart the hotel promptly at 2:00 PM.

- Tour cost is \$25 per person, including bus transportation (no park admission) limited to **20** people!
- Private dining at Columbia Restaurant (<u>www.columbiarestaurant.com</u>) after the tour (dinner costs on your own)

Friday, January 22

- 8:00 NAFE Committee Meetings
- 9:15 NAFE Board of Directors Meeting Morning Session (including Committee Reports)
- 11:30 Lunch break (on your own)
- 1:00 NAFE Board of Directors Meeting Afternoon Session (Board Business)
- 4:00 ASTM E58 Forensic Engineering Technical Committee meeting adjourns by
- 6:30 Dinner Cruise (see menu below) and see www.yachtstarship.com

Saturday, January 23 - NAFE Regular Seminar - Morning Session

8:15 Opening Remarks and Introductions: Jeffrey Armstrong, PE _ 2015 NAFE

Breakfast and Roundtable Discussions

- 8:15 Opening Remarks and Introductions: Jeffrey Armstrong, PE 2015 NAFE President
- 9:00 Morning Session: Five 30-minute Technical Presentations General Topics, Part A
 - 9:00 BioMedical Engineering Evidence Based Analytical Methods Laura Liptai
 - 9:30 Forensic Considerations Regarding Traction and Tribometry of Bathing Surfaces John Leffler
 - 10:00 Forensic Engineering Analysis of a Sequence of Power Infrastructure Failures atop an Office Building Maurice Cueva-Eguiguren
 - 10:30 Forensic Engineering of Personal Watercraft Off-Throttle Steering Accidents Paul Kamen
 - 11:00 Forensic Engineering Investigation of PVC Piping Failures in Multistory Condominium Building John Certuse
- 11:30 Membership Meeting, Report on NAFE Activities, and Installation of 2016 Officers: Jeffrey Armstrong, PE
- 12:15 Lunch and Roundtable Discussions

7:00

Saturday, January 23 - NAFE Regular Seminar – Afternoon Session

2:00 Afternoon Session: Two Tracks of Five 30-minute Technical Presentations

Track 1 – General Topics, Part B

- 2:00 Forensic Engineering Analysis of a Shopping Mall Explosion Jerry Tindal
- 2:30 Gas Well Integrity and Associated Gas Migration Investigations in the Marcellus Shale Dan Arthur
- 3:00 Forensic Engineering Analysis of the Instability of a Wheeled Cart Used to Move a Large Sculpture Mark Webster
- 3:30 Forensic Engineering Analysis of Failed UTV Roll Cages Allen Molitoris, Mark Kittel, Olof Jacobsen, Stephen Batzer, Jesse Grantham, Guy Barbera
- 4:00 FE Analysis of Unvented Gas Appliances in High Altitudes Jim Petersen

Track 2 – Vehicle-Related Topics

- 2:00 Advanced Forensic Engineering Analysis of a School Bus/Tractor Trailer Crash Richard Ziernicki and William Pierce
- 2:30 Injury Biomechanics An Engineering Discipline? Bill Lee
- 3:00 Forensic Engineering Technology Solutions For Highway Work Zone Temporary Traffic Control Investigations – Daniel Melcher & Rachel Keller
- 3:30 Highway Accident Rates for Deaf and Hard of Hearing Drivers: Forensic Engineering Application Martin Gordon
- 4:00 Forensic Engineering Analyses of Trailer Sway-Induced Vehicle Crashes Donn Peterson
- 4:30 Open Discussion on Forensic Engineering Practice
- 5:00 Adjourn
- 6:00 Cocktails (Cash Bar)
- 7:00 Dinner (see menu below)

Sunday, January 24 - NAFE Special Seminar (8 PDHs)

- 7:00 Breakfast and Roundtable Discussions
- 8:15 Opening Remarks and Introductions: John Leffler, PE 2016 NAFE President
- 9:00 Ethics for Engineers": Arthur Schwartz, Esq., CAE NAFE Executive Director and Samuel Sudler III, PE
- 10:45 "The Intersection of Law, Forensic Engineering, and the Insurance Industry": Rebecca Levy-Sachs, Esq.
- 12:00 Lunch and Roundtable Discussions
- 1:30 Afternoon Session: Two Tracks of Educational Presentations

Track 1 – Accident Reconstruction

- 1:30 "Follow up on Italian Train Accident and Trial Outcome" Prof. Fabrizio D'Errico, Maurizio Dalla Casa, Esq.
- 2:30 "Forensic Engineering Analysis of Video-Captured Pedestrian Collisions" Rachel Keller, PE
- 3:30 Special Technical Presentation: Bulldozer Visibility Impairments and Landfill Operations Defects Result in a Serious Injury: A Case Study Harold Josephs, PhD, PE

Track 2 – Developing and Maintaining a Forensic Engineering Practice

- 1:30 "Ten Cardinal Rules for Forensic Engineers" David Icove, PhD, PE
- 2:45 "Practical Advice for Resolving Problems That Occur in Forensic Engineering Practice" Panel Discussion: Michael Leshner facilitator. Panel members: Smith Reed, Paul Swanson, Jeffrey Armstrong.
- 4:00 Q&A All Speakers All Topics
- 4:30 Adjourn

Friday Night NAFE Dinner Cruise:

The Dinner Cruise will be on the Yacht Starship II, and will be departing from the Tampa Convention Center. To get to the Convention Center, exit the hotel on the west side, walk across the pool deck and out the gate to the River Walk. Head south on the River Walk (the river will be on your right), and walk 0.4 mile to the Starship II. It is an easy ten-minute walk with no traffic or hills. Most of the yacht is enclosed and heated, but there is an open deck, so you may want to bring a coat or jacket. See www.yachtstarship.com

The menu for our Dinner Cruise will be handled a little differently from our traditional NAFE Dinners which have typically been either plated table-service dinners or buffet dinners. On the cruise there will be various "Specialty Stations" around the deck providing the following:

Fruit and Cheese Station

Fresh fruit, imported and domestic cheeses served with assorted crackers

Garden Crudité Station

An assortment of fresh vegetables served with a variety of dressings

Mac & Cheese Martini Station

Creamy Macaroni & Cheese served in martini glasses with a variety of toppings. Includes: Fresh Gulf Shrimp, herbed bread crumbs, caramelized onions, crumbled gorgonzola cheese, Applewood smoked bacon, scallions, and diced tomatoes.

Pasta Station

Fresh Gulf Shrimp & Scallop Pasta with Marinara or Classic Alfredo Sauce

Carving Station

Slow-roasted Prime Rib of Beef served with Au Jus, Creamy Horseradish Sauce, rolls and condiments

Skewer Station

Savory assortment of international flavors served on lollipop sticks and accompanied by their own dipping sauces

- Oriental Sesame Chicken
- Cajun Spiced Pork

International Dessert Bar

An assortment of International Desserts including Mini Cannoli, Biscotti, Tiramisu, Napoleans, Eclairs, Assorted Cookies, Petit Fours, and Fudge Brownies

Beverages

There will be a CASH BAR

Saturday Night - Cash Bar Reception and Dinner

NAFE dinner buffet:

Yellow Tomatoes and Red Onion Salad with Chopped Cilantro and Sherry Vinaigrette

Chopped Romaine with Lemon, Olive Oil and Warm Bacon Dressing

Roasted Mojo Chicken

Mahi Mahi a la Francesca with a Lemon Cilantro Rub

Marinated Cuban Pork with Fresh Herbs

Traditional Paella – Chicken, Yellow Rice & Vegetables

Fried Plantains

Crusty Cuban Bread with Butter

Bananas Dulce de Leche: Sautéed Bananas with Brown Sugar and Dark Rum served over Vanilla Bean Ice Cream

Freshly Brewed Starbucks Coffee

Iced Tea

NAFE Winter Meeting Technical Program – Saturday, January 23, 2016 – Tampa – Expected presentations:

GENERAL SESSION "A" - morning

Author: Laura Liptai, PhD (NAFE 887 Associate Member)

Title: BioMedical Engineering Evidence-Based Analytical Methods

Abstract: This paper reports examples of how biomedical engineering contributed to the analyses of vehicular, pedestrian versus auto, bicycle versus auto and motorcycle impacts. Examples illustrate where the biomedical engineer offered insights beyond quantification of forces/accelerations and contributed to the analysis of causation and liability. Comparing information from experiments and/or biomedical analysis of the physical evidence, the biomedical engineer can supplement traditional accident reconstruction deductions.

Testing methods are also discussed to illustrate how case-specific experiments can be performed to acquire data not available by traditional sources. Data collection follows federal standards, acquiring data using software at a frequency of 10,000 HZ utilizing a 4th-order Butterworth filter with a cut off frequency of 1650 HZ, as per SAE J211. To determine and replicate impact speeds, an inverted pendulum impact protocol was utilized onto the same type of surfaces impacted in the case. Triaxial piezoelectric ICP accelerometers were instrumented onto an anthropometric crash test dummy head and neck. Multi-axial direct contacts to different surfaces and modes were then studied.

Author bio: Dr. Liptai (BioMedical Engineering, PhD, MS; Mechanical Engineering, BS) specializes in biomedical engineering analysis of human trauma and accident reconstruction. Dr. Liptai has testified in over 100 trials in the United States as well as military assignments on the North American continent, Europe, and South America. Dr. Liptai serves on five boards (AAFS, IBFES, LEADR, UCDBME and SFES as President) and had the privilege of reviewing the engineering chapter in the Reference Manual on Scientific Evidence, 2nd Edition for the Judicial Research Center in WDC.

Author: John Leffler, PE (NAFE 709 Senior Member)

Title: Forensic Considerations Regarding Traction and Tribometry of Bathing Surfaces

Abstract: In the mid 1970s, the federal Consumer Product Safety Commission funded a study of injury patterns on bathing surfaces. The study found the majority of injuries were due to slips and falls, and tribometry research was conducted (with the cooperation of bathing surface manufacturers) to come up with a test specification and minimum traction threshold. The standard that resulted in 1979, ASTM F462, was a positive step forward — but, over time, the shortcomings of this long-obsolete standard have become increasingly evident. Nevertheless, F462 remains the sole codified standard for bathing surface traction in the United States. This paper will discuss the limitations of F462, the use (and misuse) of the standard in claims resolution and litigation, the efforts to modernize F462, and some considerations for investigating bathing surface incidents.

Author bio: John Leffler is a mechanical engineer with Forcon International in Atlanta. He earned his bachelor's degree from Georgia Tech, where he also currently lectures (part-time) in Industrial Design. He designed consumer products for Motorola, Herman Miller, Sears, and other companies for 10 years before beginning forensic work. Prior to college he was a race car mechanic, machinist, and fabricator for 8 years (including on an Indy 500-winning team). Mr. Leffler's main areas of expertise are vehicle, machinery, and product design, as well as pedestrian safety. He was lead author of two ASTM standards, and remains active in standards development. He is the Technical Review Committee Chair for NAFE as well as the 2016 President of the Academy.

Author: Maurice Cueva-Eguiguren, PE (NAFE 776 Senior Member)

Title: Forensic Engineering Analysis of a Sequence of Power Infrastructure Failures atop an Office Building

Abstract: A series of equipment failures occurred in a high rise office building in Puerto Rico. The top 18th floor was occupied by the infrastructure systems, including heating, air conditioning, electrical and plumbing systems and two 1,500kVA emergency generators, which provided power for the entire building when the utility power was not available. The first failure occurred on the

3,000kVA, 13.8kV/480-277VAC step down power transformer on a Sunday night — the day after annual maintenance of the electrical equipment took place. Failure of this transformer resulted in the operation of the two emergency generators, last maintained a month earlier. The second failure occurred in one of the two control panels associated with the day tanks for the emergency generators due to power disturbances (harmonics) in the electrical distribution system in the building. This resulted in an overflow of oil in one of the day tanks (615 gallon) and the spill of approximately 1,000 gallons of fuel oil on the 18th floor and lower floors, including the cellar.

Author bio: Maurice Cueva-Eguiguren, president of Acticon Engineering, P.C. has more than 38 years of electrical engineering experience, including managing and overseeing multi-discipline engineering and design services for projects related to the electric utilities, industrial, commercial, residential and government markets. Utility projects include fossil and nuclear fueled power plants and substations up to 765kV. Also provides forensic engineering services for various investigations related to electrical engineering systems and equipment.

Author: Paul Kamen, PE (NAFE 731 Member) and Chris Barry, PE

Title: Forensic Engineering of Personal Watercraft Off-Throttle Steering Accidents

Abstract: Personal watercraft (PWC), or "jet skis" as they are commonly called, account for a disproportionately large number of serious boating accidents. A major contributing factor is off-throttle steering. PWCs are propelled by a water jet and steered by directing the jet nozzle. When power is cut, as in a panic stop, all steering response is lost almost immediately. This has been compared to driving a car that disconnects the steering when the gas pedal is released, and there are no brakes. Methods of establishing off-throttle steering as a risk factor, possible design work-arounds, regulatory history, and full-scale testing programs are discussed in this presentation.

Author bio: Paul Kamen is an independent naval architect specializing in small craft accident reconstruction, surface-piercing propulsion, planing hull performance and urban ferry system design. He holds a B.S. in naval architecture and marine engineering from Webb Institute of Naval Architecture (1973) and an M. Eng. in Naval Architecture from the University of California at Berkeley (1979). Paul has been a senior naval architect for Morris Guralnick Associates in San Francisco, where he developed preliminary designs for large-scale Ocean Thermal Energy Conversion (OTEC) power plants. He has been Applications Naval Architect at Arneson Marine (then in Corte Madera) and currently consults from his office in Berkeley, CA.

Author bio: Chris Barry is a graduate of the University of California, Berkeley in Mechanical Engineering specializing in Naval Architecture and Marine Engineering. He is currently a senior naval architect with the U. S. Coast Guard Surface Forces Logistics Center, naval architecture section, providing engineering support for design, acquisition, new construction, maintenance, and upgrades for the Coast Guard's fleet of boats and small cutters, including response boats, surf rescue boats, cutter embarked boats, smaller aids to navigation craft, and patrol boats. Prior to the Coast Guard, he was chief engineer at small shipyards in San Diego and Seattle, design firms in San Francisco and Seattle, a defense contractor in San Jose, and offshore oil firms in San Francisco and London.

Author: John Certuse, PE (NAFE 708 Fellow)

Title: Forensic Engineering Investigation of PVC Piping Failures in Multistory Condominium Building

Abstract: Polyvinyl chloride (PVC) piping systems in larger commercial buildings are subjected to greater stresses due to normal building movement, when segment length, diameter, and schedule are increased (in comparison to smaller residential installations). The likelihood for increased stresses in larger system installations must be recognized and accommodated for in the initial piping system design. Performance aspects, such as thermal expansion and building settling, must be considered as well as piping configurations and hanger support placement. This paper addresses the investigation methodology used to identify the causes and responsible party of chronic building construction defects that resulted in water and mold damage to a recently renovated multistory multi-use condominium building.

Author bio: John Certuse is a licensed professional engineer and director of engineering at ISE Engineering in Attleboro, MA. ISE Engineering performs forensic engineering examinations for the insurance industry with a large concentration based upon heating system failures.

VEHICLES TRACK - afternoon

Author: Richard Ziernicki, PhD, PE (NAFE 308 Fellow) and William Pierce (NAFE 846 Correspondent)

Title: Advanced Forensic Engineering Analysis of a School Bus/Tractor Trailer Crash

Abstract: This paper presents a state of the art technique to reconstruct a motor vehicle accident involving a fully loaded semi and school bus with 17 young students. The accident reconstruction included a high definition laser scanning, surveillance video analysis, PC Crash simulation, and finally photo match animation. Furthermore, analysis of the occupant kinematics (velocities) and dynamics (acceleration and forces) is performed and discussed. The reconstruction was then compared to a report and analysis performed by the National Transportation Safety Board (NTSB), which was also involved in the accident reconstruction. Multiple graphics are used to demonstrate the accident reconstruction and occupant kinematics and dynamics.

Author bio: Richard Ziernicki, chairman and CEO of Knott Laboratory, has evaluated several thousand industrial and vehicular accidents. He has presented papers and lectured at technical conferences in the United States, Europe, and South America. He is the author of more than 60 publications, primarily in the fields of mechanical engineering and vehicle accident reconstruction. His accident reconstruction expertise has been featured more than 30 times on local and national television including the Discovery Channel, Dateline NBC, Dr. Oz Show, MSNBC, FOX News Channel, and National Geographic Channel on the Princess Diana accident, the Air France Flight 447 accident, and more. Dr. Ziernicki was a member of several past SAE Standards Committees. He is past president and current board member for the National Academy of Forensic Engineers and also serves on many committees for the organization. Dr. Ziernicki has testified in court a few hundred cases and has been deposed more than 500 times. He has testified on behalf of clients such as U.S. Department of Justice, U.S. Department of Defense, State of Colorado Attorney General's Office, District Attorneys, and Public Defenders.

Author bio: William Pierce is a forensic engineer employed by Knott Laboratory, LLC, a forensic engineering and animation company founded in 1982. Pierce has a bachelor's of science degree in mechanical engineering from Purdue University (West Lafayette, IN) and is a licensed professional engineer. He gained interest in forensic engineering while interning with Rimkus Consulting Group, Inc. over two summers during college. After graduating in 2009, Pierce began working full-time for Rimkus Consulting Group, Inc., where he gained experience developing and testing tribometers and investigating motor vehicle accidents and product failures. In 2012, he began working at Knott Laboratory, LLC where he has investigated a variety of motor vehicle accidents involving pedestrians, motorcycles, cars, and heavy commercial vehicles. Pierce has also investigated numerous product liability claims involving consumer products, heavy commercial vehicles, and material handling equipment. In addition, he has published technical papers with the National Academy of Forensic Engineers and American Society of Mechanical Engineers.

Author: Bill Lee, PhD, PE (NAFE 655 Senior Member)

Title: Injury Biomechanics – An Engineering Discipline?

Abstract: Engineers with expertise in biomechanics are often retained by attorneys to provide analysis and render opinions in the area of injury biomechanics. Typically, an individual is making an injury claim as the result of a specific event, such as a vehicular collision, slip and fall, falling object, etc. Forensic engineering experts are retained to provide opinions in areas such as what types of forces might have been experienced by the claimant, what types of injury mechanisms might have been established (or not), etc. During the litigation process, it is not uncommon for opposing counsel to present an argument that "injury biomechanics" is a subject of medicine; therefore, only an M.D. can offer any such opinions. Stated alternately, a PhD in an appropriate area of engineering is not qualified to do so since "biomechanics" is not a subject of any engineering discipline. It should be noted that there are indeed opinions such as: was the claimant injured; was the diagnosis appropriate; was the treatment appropriate, issues related to impairment, etc. However, the argument that engineers cannot offer injury biomechanics opinions because "biomechanics" is a medical subject (not an engineering one) is invalid. Evidence to support this claim will be presented from the following sources: 1) an analysis of engineering academic programs in this country where biomechanics and related subjects are taught; 2) an analysis of

medical academic programs; 3) an analysis of established research groups/centers/institutes/etc. in the area of injury biomechanics; 4) an analysis of the literature in injury biomechanics (coauthor status, affiliations, etc.) and subject areas addressed (including methodology); and 5) other relevant information. The results of this investigation will clearly show that biomechanics and the focus area of injury biomechanics are clearly grounded in engineering.

Author bio: Bill Lee is a professor in the Department of Chemical & Biomedical Engineering at the University of South Florida since 1985 and also has research affiliations at the VA Hospital and Florida Orthopaedics Institute. He has been providing forensic engineering analysis with a focus on biomechanics for the last 22+ years. Bill has published widely in the areas of biomechanics and related subjects in forensic engineering.

Author: Daniel Melcher, PE (NAFE 711 Senior Member) and Rachel Keller, PE (NAFE 873 Member)

Title: Forensic Engineering Technology Solutions for Highway Work Zone Temporary Traffic Control Investigations

Abstract: Incidents or collisions involving pedestrians, bicyclists, motorcycles, automobiles, or tractor-trailers frequently occur in areas affected by highway construction projects. When such events arise, the ensuing claims or litigation process usually concerns whether or not the temporary traffic control (TTC) system in place at the time was compliant with the applicable standard of care. Due to the short-term and constantly changing nature of construction projects and work zones, the hardest challenge for the forensic engineer is often to determine what exactly was in place at the time and location of the incident. This paper will introduce and expound on the application of modern technology solutions to address these questions. Data sources to be discussed include numerous sources of time-stamped photographs, potential video capture of the work zone, aerial photography methods, and 3D scanning technology. Methods for extraction of useful information from the raw data will be addressed, along with examples and case studies demonstrating the engineering application of this data to the underlying legal questions.

Author bio: Daniel Melcher is a Professional Engineer in the field of Transportation Safety Engineering and has practiced in Forensic Engineering for 15 years. He is currently the Director of Engineering for Focus Forensics LLC.

Author bio: Rachel E. Keller is a Professional Engineer in Mechanical Engineering and has practiced in Forensic Engineering for 15 years. Her primary practice involves accident reconstruction. She is currently a Managing Engineer for Focus Forensics LLC.

Author: Martin Gordon, PE (NAFE 699 Senior Member)

Title: Highway Accident Rates for Deaf and Hard of Hearing Drivers – Forensic Engineering Application

Abstract: According to the World Health Organization, there are more than 360 million people worldwide with hearing loss. The National Highway Traffic Safety Administration has reported that close to 30% of the United States population 65 years or older has significant hearing loss. The objective of this study was to determine if deaf and hard of hearing drivers are more likely to be involved in motor vehicle accidents than hearing drivers. Data was extracted from the National Automotive Sampling System (NASS) and motor vehicle accident records from the Rochester Institute of Technology (RIT) and National Technical Institute for the Deaf (NTID) campuses. The results of the NASS data analysis indicate that deaf and hard of hearing drivers are one and a half to nine times as likely to be seriously injured or killed in a motor vehicle accident. Motor vehicle accident records from RIT and NTID suggest that deaf and hard of hearing drivers are approximately three times as likely to be involved in a motor vehicle accident as hearing individuals. Forensic engineers may be able to use this data to assist in establishing cause in cases where drivers with hearing loss or physical limitations are involved.

Author bio: Martin Gordon is Professor and Program Director for Undergraduate Studies in the Manufacturing and Mechanical Engineering Technology department at the Rochester Institute of Technology. He has been teaching at RIT since 1995. Martin specializes in Traffic Accident Reconstruction, Product Liability and Machinery Accidents. He is a NAFE Senior Member and serves on the Board of Directors. He is past Chairman of the Western New York Section of SAE and is the Faculty Advisor for the RIT Baja SAE team. Martin is a past recipient of RIT's Provost's Excellence in Teaching Award. Research interests involve accident reconstruction, highway safety and human factors.

Author: Donn Peterson, PE (NAFE 239 Fellow)

Title: Forensic Engineering Analyses of Trailer Sway-Induced Vehicle Crashes

Abstract: The author was retained to evaluate parameters and variables involved in causation of trailer sway that led to a fatal crash in a freeway re-construction zone. An understanding of the unstable operation of the SUV and camper trailer combination was desired in order to assess the driver's contributory negligence compared to negligence of other parties. The author developed a mathematical model that incorporates more parameters and is an expansion of the basic mathematical model discussed by Hans B. Pacejka in the 2006 SAE publication "Tire and Vehicle Dynamics." Relevant fourth order linear differential equations, solutions, and stability criteria are presented and discussed.

GENERAL SESSION "B" - afternoon

Author: Jerry Tindal, PE (NAFE 642 Member)

Title: Forensic Engineering Analysis of a Shopping Mall Explosion

Abstract: When a catastrophic explosion occurs, widespread attention is rapidly captured by the mainstream news outlets and subsequently the public. Substantial investigative resources from both public and private sectors are quickly poured into determining the cause of the event so that appropriate actions can be implemented to avoid future occurrences. On May 7, 2009, a catastrophic explosion occurred at a shopping mall located just outside of Washington, D.C. in Forestville, MD. As a result of the explosion, several persons, including multiple firefighters, were injured, and a large portion of the mall was destroyed. This paper examines the cause of the explosion.

Author bio: Jerry Tindal is a licensed professional engineer in 20 states. He holds both a Bachelor of Science and Master of Science in Mechanical Engineering from the University of South Carolina. Jerry is a Certified Fire and Explosion Investigator by the National Association of Fire Investigators and was also a Certified State Fire Marshal while employed with the South Carolina State Fire Marshal's Office. He currently serves as a governor-appointed board member on the South Carolina Liquefied Petroleum Gas Board.

Author: Daniel Arthur, PE (NAFE 908 Member)

Title: Gas Well Integrity and Associated Gas Migration Investigations in the Marcellus Shale

Abstract: The Marcellus Shale is one of the largest natural gas fields in the world and has been the site of a massive natural gas development effort, involving hundreds of oil & gas companies. With the onslaught of the shale revolution, developers moved into states like Pennsylvania and began drilling and completing gas wells by the hundreds. This development occurred so rapidly, attention to issues such as wellbore methane intrusion was not initially given the priority it demanded in all cases. This led to instances of alleged gas migration and impacts to groundwater supplies in several areas of the region. Although there has been an onslaught of evaluations geared toward the study of groundwater contamination, the author has researched gas wells themselves. Based on thousands of wellbore integrity studies in the Marcellus and other worldwide shale regions, this paper will summarize the forensic processes, analysis methods, and approaches used in assessing wellbore integrity as part of a gas migration investigation. The paper will also present details that pertain to remedial alternatives and approaches to wells requiring attention.

Author bio: Dan Arthur is a registered professional petroleum engineer specializing in fossil energy, planning/engineering analysis and environmental issues. He has 30 years of diverse experience that includes work in industry, government and consulting. Dan Arthur is a founding member of ALL Consulting and has served as the company's President since its inception in 1999. Prior to founding ALL Consulting, Arthur served as a Vice President of a large international consulting engineering firm managing the firm's upstream energy business. Arthur's experience also includes serving as an enforcement officer and National Expert for the U.S. Environmental Protection Agency (EPA); a drilling and operations engineer with an independent oil producer; and supporting both cementing and completion operations for a large international services company.

Author: Mark Webster, PE (NAFE 868 Member)

Title: Forensic Engineering Analysis of the Instability of a Wheeled Cart Used to Move a Large Sculpture

Abstract: A large sculpture overturned and injured a worker while it was being transferred on a wheeled dolly from a delivery truck onto a dock lift. Determining the motion at the time of this accident required calculation of the mass properties of an irregular object. Although this is most easily completed by approximating the distribution of mass of the object by discretizing it into a number of smaller masses, a more accurate method is to scan the object through the use of lasers or photogrammetry, creating a "point cloud" of data representing the surface. This raw data is then processed and converted to a solid model. Conventional mechanical CAD and multi-body physics software is then used to determine the mass properties and ultimately to calculate and illustrate the dynamic motion.

Author bio: Mark Webster has a BSME from Milwaukee School of Engineering, MSME and MBA from Marquette University. He has more than 30 years of experience in the custom-engineered material handling industry, including conveyors, material lifts, and industrial controls. Training and experience in dynamic analysis and multi-body physics software. Has been practicing Forensic Engineering since 2009. Member of the ASME B20.1 Safety Standard for Conveyors and Related Equipment. Vice Chair of the ASME Board on Safety Codes and Standards.

Author: Mark Kittel, PE (NAFE 757 Member), Allen Molitoris, PE (NAFE 464 Correspondent), Olof Jacobson, MS, PE (NAFE 496 Fellow), Stephen Batzer, PhD, PE (NAFE 677 Member), Jesse Grantham, PhD, PE (NAFE 597 Senior Member), Guy Barbera, PE (NAFE 732 Member)

Title: Forensic Engineering Analysis of Failed UTV Roll Cages

Abstract: Two cases were analyzed that involved rollover accidents of the same model side-by-side utility terrain vehicle (UTV). In each case, the UTV ran over a bump on a dirt road and rolled over. The roll cages collapsed, exhibiting similar failure modes, and the drivers were seriously injured. The design and failure modes of the roll cage structure were analyzed. Engineering analysis included vehicle dynamics, laboratory testing, finite element modeling, and fundamental mechanical engineering design concepts. The suitability of the design and the existing standards for roll cages were evaluated in the context of the subject UTV's overall performance capabilities and foreseeable use. Reasonable design improvements were recommended.

Author bio: Mark Kittel is a principal engineer at Veritech Engineering who specializes in accident reconstruction and product failure analysis, with an emphasis on issues involving on-road motorcycles, dirt bikes, ATVs, and UTVs. He is a former professional motorcycle road racer and previously worked as a product development engineer for Honda R&D of America. His experience as a testing and development engineer gives him extensive knowledge and industry experience related to product design and product development as well as experience with numerous manufacturing methods and processes.

Author bio: Allen Molitoris is a Principal Engineer with Jacobson Forensic Engineering, Inc. He is a licensed professional engineer who specializes in vehicle accident reconstruction, mechanical failure analysis and product defect investigations. He conducts forensic investigations of vehicle accidents involving all types of commercial and passenger vehicles, bicycles, motorcycles and pedestrians. Molitoris provides engineering services for both plaintiff and defense cases. Prior to entering the field of forensic engineering, he worked as a mechanical systems design engineer for new aircraft development and as a mechanical engineer designing components for a laser-based industrial furnace monitoring system. His background enables him to analyze mechanical failures associated with manufacturing equipment, machine guarding and safety devices, and consumer products.

Author: Jim Petersen, PE (NAFE 631 Senior Member)

Title: FE Analysis of Unvented Gas Appliances in High Altitudes

Abstract: A family moves into a house about 4,000 feet above sea level. They use a refrigerator powered by LP gas. A short time after the refrigerator was installed, they notice and complain about smells and soot. They take their 9-month-old to a hospital in response to his persistent crying. A short time later, they notify the refrigerator manufacturer, who examines and tests the refrigerator. They find the refrigerator's burner venturi blocked, generating high levels of carbon monoxide (CO). Twelve years later,

the parents bring a lawsuit against the installers of the refrigerator. The appliance is not available, and the house has been remodeled. A forensic engineering study is assigned to determine the effect high altitude has on this particular appliance design.

Author bio: James Petersen graduated in 1975 with BS degrees in mathematics and mechanical engineering. He was employed by a valve manufacturer for 20 years. Introduced to forensic engineering in 1988, he started Petersen Engineering in 1995. He specializes in products liability matters involving propane and natural gas.

Also – on Sunday afternoon (January 24)

Author: Harold Josephs, PhD, PE (NAFE 295 Fellow)

Title: Bulldozer Visibility Impairments and Landfill Operations Defects Result in a Serious Injury: A Case Study

Abstract: This case study reviews the hazards involved with the work procedures and work environment combined with large mobile equipment associated with a landfill operation. An active landfill is a very busy work environment. There typically is a constant stream of municipal solid waste (MSW) trucks of various sizes and dimensions approaching and dropping their waste load onto the landfill active work area, which is referred to as the landfill face or tipping area. In addition to the MSW delivery truck traffic, the active face in this case study was being traversed back and forth by two large industrial vehicles: one a bulldozer (or tracked vehicle) and the other a wheeled compactor vehicle. The injured party, who was just transferred to the job of "waste spotter," or just spotter, had the responsibility of directing the incoming stream of MSW trucks as to where to dump their loads while also directing (and avoiding) the tracked loader bulldozer and the wheeled compactor vehicle as they operated on the landfill active face. Additionally, due to the dumped MSW, the active landfill face topography is constantly changing, and the pedestrian spotter therefore must constantly be moving on the active face to avoid being struck by the vehicular traffic. The bulldozer manufacturer acknowledged that the bulldozer travels in reverse approximately fifty percent of its operating time on the landfill space. Hence, any static visibility impairments were further compounded when the bulldozer traveled in reverse over changing topography. Other issues that negatively affected the landfill face hazardous environment were a lack of any safety procedures for the landfill face and a lack of hazard training and instructions provided to the waste spotter working the landfill face. Another issue involving this case study was the existence of a vertically gas vent pipe located in the tipping area that had to be avoided by the tipping area truck traffic.

Author bio: Harold Josephs is a Professor Emeritus at Lawrence Technological University. Dr. Josephs is the author of numerous technical papers and is the co-author of two engineering texts. He has nine patents and he has presented numerous seminars to industry focusing on quality, safety, fastening and joining.

PRESIDENT'S REPORT

PRESIDENT'S REPORT JANUARY 2016

As I approach the end of my term as President of the National Academy of Forensic Engineers, I want to thank each of you for granting me this honor. It has been a privilege to serve you and to serve the Academy in this role, and I look forward to my remaining three years on the Board as Past President. I am thankful to have worked with such an outstanding Board. The engineers that serve on your Board put in many hours of volunteer time on your behalf to ensure that this Academy continues to represent us and serve us well as Forensic Engineers.

I extend my thanks to retiring Board Member Richard Ziernicki for his eight years of service on the Board of Directors, and especially for the year he served as President in 2012. Richard played a key role in our management transition that has occurred over the past three years, and the success of this transition is largely due to his efforts. It has been an honor to serve with him, and I look forward to his continued activity in the Academy.

I also extend my thanks to retiring Board Member Bill Bracken. As many of you know Bill serves as Chairman of the Florida Board of Professional Engineers, and the demands of this assignment did not allow him to continue as a member of our Board. I have known Bill for a long time, and I enjoyed serving with him on the Board the last few years. He played a key role in some of the recent changes in our membership requirements and in the forthcoming updating our logo.

I extend my thanks to Marvin Specter for his long service as Editor of the *Journal of the National Academy of Forensic Engineers*. The final issue of The Journal under his editorship will be distributed to the members in the near future. I have a shelf in my office with every issue of The Journal that has been printed, and these Journals are a valuable technical resource in my engineering practice. When you see Marvin at our January meeting, be sure to take a minute to express gratitude to him for his service in this role.

I am also thankful to our Executive Director, Art Schwartz, and his staff at our headquarters in Alexandria, Virginia. Art has worked hard for the Academy, and I have enjoyed working with him. Be sure to thank him for his many behind-the-scenes efforts when you see him at our meetings.

We enjoyed a successful summer meeting in Seattle, which was highlighted by a riveting presentation by guest speaker, Mr. Allan J. McDonald. Mr. McDonald is the author of *Truth*, *Lies, and O-Rings: Inside the Space Shuttle Challenger Disaster.* He spoke of his role in the design of the solid rocket motors for the space shuttle, his role in the events leading up to the January 1986 launch of the Challenger, and his role in the subsequent investigation of the Challenger Disaster. I don't think I've ever seen an NAFE audience so riveted on a presentation as it was during his.

At our Summer Board Meeting, the Board voted to amend its Articles of Incorporation to allow the inclusion of engineers with a Canadian P.Eng. registration to apply for membership in the

Academy. The Board also elected to enhance the requirements for the Fellow Grade which will make this a more prestigious achievement for Academy members. Details of the new requirements to apply as a Fellow are available on the NAFE website. All actions taken by the Board were ratified by the membership at our general business meeting.

Following the resignation of Bill Bracken from the Board of Directors, the Board was tasked with the responsibility of electing a Board Member to fill the vacancy, in compliance with the requirements in our Bylaws. Following a Board vote, Mike Leshner was elected to serve as President-elect, Marty Gordon was elected to serve as Senior Vice President, and John Certuse was elected as a new Board member to serve as Director-at-Large. Please refer to the Secretary's Report for more details regarding this election.

Due to a change in the scheduling of NSPE meetings, we will now be on our own to plan and organize our Winter meetings for the foreseeable future. This Tampa Meeting is our first meeting since the change in the NSPE schedule.

In summary, I am pleased to report the following achievements by the Academy during the past year:

- Revised the Articles of Incorporation and Bylaws to allow admission of Professional Engineers registered in Canada as full Board-Certified members of the Academy
- Completion of the final Journals under the editorial responsibility of Marvin Specter
- Implementation of split sessions in our meetings
- Enhanced requirements for advancement to the grade of Fellow in the Academy
- Greater activity of Committee Members, moving some of the Committee work from Committee Chairs to Committee Members
- Design of a new Academy logo/insignia which will be presented to the Board and to the general membership at our January meeting
- Successful inclusion of a paid guest speaker (Allan McDonald) at our Summer Meeting in Seattle
- Successful planning of our January meeting which, for the first time in many years, is being held independent of NSPE
- Election by the Board of John Certuse, P.E. to fill a Board vacancy

Best regards,

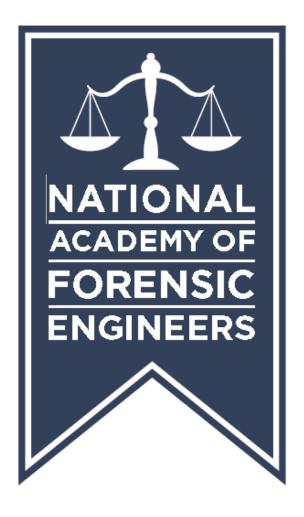
Jeffrey D. Armstrong, P.E. (NAFE 644F)

PROPOSED LOGO/INSIGNIA

When I became President last year, the most common request I heard from members was that we need to update the appearance of our logo, documents, and website. In response to this oft-repeated request, I appointed a Task Force consisting of Bill Bracken, Art Schwartz, and myself to pursue a "rebranding" effort which would center on the design of a new Academy logo. We retained the services of SCN Design, a graphic design firm which specializes in Corporate Branding. SCN Design interviewed me and Bill Bracken to learn as much as they could about the Academy and our membership. They reviewed our logo, website, and many of our documents to learn as much as they could about us to aid in their design process. We asked them to provide samples that retained elements of our traditional identity, and to provide other samples that would be completely new.

Those who were at the summer meeting saw drafts of various logos that were developed by our designers. Members were invited to provide comments and feedback regarding the various designs. We listened carefully to comments and input from the members at the meeting, and provided that feedback to the designers. Based on that feedback, we now have a new proposed logo / insignia which will be presented to the Board of Directors for their approval during our January 22 Board Meeting. If the Board votes to adopt the proposed logo / insignia, it will then be presented to the general membership during our January 23 Business Meeting for ratification.





The above representations are black-and-white and color versions of the proposed logo. A key element of the member feedback we received in Seattle is the replacement of a generic image at the top of the logo with the "scales of justice" which is present in the current logo. The ribbon shape is simple, bold, and works equally well on stationery, business cards, jewelry such as lapel pins, and embroidered on shirts.

If this new design is accepted by the Board and the Membership, we will then initiate work to provide members with the following "Member-use" version of the logo:







These insignia, which invert the colors of the Academy logo, would potentially be made available to Members, Senior Members, and Fellows for use on the signature line of their correspondence and reports, or for placement on business cards. If the new logo receives approval, the next step will be to draft an official "Administrative Procedure" which would specify the requirements for use of this insignia; so DON'T USE IT YET! NSPE presently has procedures in place for members' use of their logo in a similar fashion. This issue will be discussed at our January 22 Board Meeting, and we would anticipate that a proposed Administrative Procedure would be presented to the Board for approval at our Summer Meeting in Dallas.

The next two pages show proposed stationery that would be used for Academy business, and business cards that would be used by Headquarters staff.



1420 King Street Alexandria, VA 22314-2794

Tel: 813.948.8010 Dir: 813.279.2153

WWW.NAFE.ORG

Dear Client,

Lorem ipsum dolor sit amet, consectetuer adipiscing elit. Aenean commodo ligula eget dolor. Aenean massa. Cum sociis natoque penatibus et magnis dis parturient montes, nascetur ridiculus mus. Donec quam felis, ultricies nec, pellentesque eu, pretium quis, sem. Nulla consequat massa quis enim. Donec pede justo, fringilla vel, aliquet nec, vulputate eget, arcu. In enim justo, rhoncus ut, imperdiet a, venenatis vitae, justo. Nullam dictum felis eu pede mollis pretium.

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John Smith

Jeffrey D. Armstrong

Title Goes Here

Tel: 813.948.8010 Dir: 813.279.2153 Cel: 813.205.3539

jeff@armstrongforensics.com



1420 King Street Alexandria, VA 22314-2794

WWW.NAFE.ORG



EXECUTIVE DIRECTOR'S REPORT

Arthur E Schwartz, Executive Director

Report to the National Academy of Forensic Engineers Board of Directors January 22, 2016

Tampa Florida

NAFE headquarters continues to be very busy responding to many membership inquiries, membership renewal, CPD and other activities. Staff continues to explore opportunities for improvements and enhancements as we seek better and more efficient ways to serve you. The survey conducted following the 2015 NAFE Summer Meeting gathered extremely important data to assist NAFE in planning future Meetings and programs. NAFE volunteers and staff continue to study and explore ways to improve the NAFE national meetings to make them more valuable to members and potential members. The NAFE leadership also continues to press forward on the development of a refreshed NAFE logo with more information announced and discussed at the 2016 NAFE Winter Meeting.

Inquiries for various NAFE membership categories and affiliation continue to come to NAFE headquarters on a daily basis. With the NAFE membership category modifications earlier this year, questions have been coming in from existing and potential members both in the US and abroad regarding the Associate Member category. Staff has also been reaching out to NAFE members have apparently not been receiving NAFE e-mail in an effort to reconnect with them so that they can better access NAFE member benefits. NAFE headquarters filed necessary amendments to the NAFE Articles of Incorporation with the Virginia State Corporation Commission to facilitate the membership changes and they were finally approved on December 31, 2015. Recent heightened interest in the NAFE Journal is clearly apparent now that the NAFE Journal is accessible online and been granted an ISSN number by the United States Library of Congress Office of Copyright. A NAFE Journal indexing process is being considered for action in Tampa by the NAFE Board. AS NAFE Executive Director, I have been invited and I plan to participate in an upcoming national engineering public policy forum in Washington, DC with members of Congress and other officials in April in Washington, DC. NAFE will also participate in the Council of Scientific and Engineering Specialty Board (CESB) Annual Meeting in March 2016.

I continue to receive many inquiries from engineering students, young engineers and mid-level practitioners with a growing interest in forensic engineering practice, and in their efforts to seek guidance in their career paths, have been contacting NAFE seeking mentors through the NAFE Mentorship Program. NAFE headquarters staff responds on a daily basis to inquiries from the media, public officials and members of the public regarding forensic engineering practice issues. Very attractive NAFE Membership certificates for new members have been designed, printed and distributed to all new members.

Following on the heels of the very successful 2015 NAFE Summer Meeting in Seattle with great participation and excellent attendance, NAFE is looking forward to another very successful

January 2016 NAFE Winter Meeting in Tampa, Florida. Registration numbers are high in comparison to other recent NAFE meetings. As always, the NAFE leadership is doing a phenomenal job assembling a superb and stimulating program on current issues in forensic engineering practice as well as a variety of very exciting social events. A special Busch Gardens Engineering Tour is scheduled for Thursday, January 21st, followed by a dinner at the historic Columbia Restaurant. On Friday, January 22nd, the NAFE Board of Directors will convene, followed by a meeting of the ASTM E-58 Forensic Engineering Technical Committee. That evening, NAFE members will enjoy a combined dinner and river cruise. Outstanding technical and professional seminars are planned for Saturday and Sunday January 23-24th with excellent speakers for NAFE's Regular and Special Seminars. A collegial reception and dinner is planned for Saturday evening. In addition to general morning sessions each day, for the first time ever, NAFE will conduct two tracks during each afternoon session. A special effort has also been made to encourage "first timers" as well as Florida professional engineers with an interest in forensic engineering to attend the conference. A special ad was placed the Florida Engineering Society Magazine to promote the 2016 NAFE Winter Meeting and NAFE membership.

I continue to be extremely impressed with NAFE members use of and access to the NAFE website, updating their personal and professional information, using the NAFE membership directory and the NAFE document library. The NAFE Yahoo Group List Serve continues to be very active on a variety of professional practice and related issues, with NAFE members generously sharing their expertise and experience with their peers.

Please feel free to contact me at any time at 703-684-2845 or aschwartz@nafe.org

Hope to see you in Tampa and Dallas!



COMMONWEALTH OF VIRGINIA STATE CORPORATION COMMISSION

Office of the Clerk

December 31, 2015

ARTHUR E SCHWARTZ NATIONAL ACADEMY OF FORENSIC ENGINEERS 1420 KING ST ALEXANDRIA, VA 22314-2794

RECEIPT

RE:

NATIONAL ACADEMY OF FORENSIC ENGINEERS

ID:

0315090 - 1

DCN:

15-11-25-0028

Dear Customer:

This is your receipt for \$25.00 to cover the fee(s) for filing articles of amendment for a corporation with this office.

The effective date of the amendment is December 31, 2015.

Thank you for contacting our office. If you have any questions, please call (804) 371-9733 or toll-free in Virginia, (866) 722-2551.

Sincerely,

Joel H. Peck

Clerk of the Commission

COMMONWEALTH OF VIRGINIA STATE CORPORATION COMMISSION

AT RICHMOND, DECEMBER 31, 2015

The State Corporation Commission has found the accompanying articles submitted on behalf of

NATIONAL ACADEMY OF FORENSIC ENGINEERS

to comply with the requirements of law, and confirms payment of all required fees. Therefore, it is ORDERED that this

CERTIFICATE OF AMENDMENT

be issued and admitted to record with the articles of amendment in the Office of the Clerk of the Commission, effective December 31, 2015.

The corporation is granted the authority conferred on it by law in accordance with the articles, subject to the conditions and restrictions imposed by law.

STATE CORPORATION COMMISSION

Mark C. Christie Commissioner

Executive Director Emeritus' Report

Report by Marvin M. Specter, PE-LS NAFE 001FL, Fdg. Pres, Exec. Dir. Emer., Dir.@Lrg. and Journal Ed.

to Pres. Armstrong, PE and the NAFE BOD for the 1/22/16 BOD Agenda,

Last month approval was given for printing and distribution of the last of the original Journals. A summary and brief closure report is made with regard to the creation of those Journals:

HISTORY OF THE "ORIGINAL" NAFE JOURNALS

From its conception in the late 1970's NAFE was intended as an educational institution to foster and teach competent practice by PE's in the legal system, avoiding commercialism and emphasizing ethics. A program of lectures giving examples of actual FE practice situations would be the modality of the presentations, followed then by Technical Peer Review prior to Publication. After drafting of the governing documents, filing of the new NAFE corporation was made in the District of Columbia on May 25, 1982 [later moved to Virginia]. As Founding President I then called for a general meeting which was held in conjunction with the NSPE meetings of January,1984 in San Francisco. Ninety FE's attended and detailed lectures about FE practice were presented. My longtime associate E. Joyce Dixon was the NAFE Executive Director and Journal Editor planning the lectures until her passing in 1999, and I have directed the Technical Peer Review of the Journal from the beginning until the present and also acted as Executive Director and Journal Editor after Joyce died.

During the 32 years of publishing these "Original" NAFE Journals more than 60 editions have been distributed in print format. Those of recent vintage also have been provided electronically. A total of more than 600 peer reviewed and edited articles have been so published. In addition a special edition was produced detailing our successful Amicus Curiae intervention with the US Supreme Court in the Kumho case which modified Daubert favorably to FE practice as we know it. Also we acquired from NSPE the rights to the "Guidelines" for the PE as a Forensic Engineer which I had written for NSPE PEPP a dozen years previous, and re-published it in the format of the NAFE Journal. Seeking improvement we invited critique from readers of each edition. None was ever received, suggesting [we think] that the NAFE peer review process had succeeded. Conversely praise has been frequent and gratifying. We have held tightly to avoidance of adhominem comments in descriptions of the legal proceedings, and precluded commercial identifications unless vital to the facts of the case. Authors, of course were bylined, but their corporate trade names excluded. Inquiries requesting advertising space in the NAFE Journal have abounded, but all have been courteously declined with the explanation that this forensic engineering publication is not a "trade" style magazine, but is a professional journal intended to be for purposes of education, ethics and competence in a very demanding and specialized field of practice.

GRATITUDE:

E. Joyce NAFE Dixon played a major role in the creation of the NAFE Journal [as well as in the creation of the NAFE as an organization]. Sixty of these "Original" Journals were created between her work, and as supplemented by my inputs over the course of 32 years, resulting in publication of more than 600 articles. The creative professional level authorship and professional level technical peer review has depended upon the competence and dedication of about 1,200 NAFE members and affiliates. Devoted service and publishing competence have been provided by Wayne Printing of White Plains, NY. Approval and encouragement has been received from the NAFE membership and from the wider engineering community. We are grateful to all who have contributed.

FE MENTORING, Mentoring and mentoring and etc.

Been doing such for a half century; and have answered to requests for FE advice from middle school students and up to full Professors and 30-40 year Consultants. A newly created NAFE Mentoring Comm. ably chaired by PP Stephens, PE has now begun listing those of interest and initiated pairings. At least seven generalized announcements/ goal statements have been issued in the last year. It is now important that the details of operation be refined and consolidated for ALL to see and accept. The proper modality is the drafting of a detailed Operating Procedure [OP] by the Mentoring committee, review by the Policy and Procedures Comm. and adoption by the BOD. I will assist this process in any way feasible.

Marvin

SECRETARY'S REPORT



Board of Directors

- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone ileffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, FL 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike @leshner.com
- [] TREASURER Jerry Scott Ogden, P.E. OEC Forensics P.O. Box 621519 Littleton, CO 80162-1519 (303) 795-1515 – Phone jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
- [] PAST PRESIDENT Richard M. Ziernicki, Ph.D., P.E. Knott Laboratory, LLC 7185 South Tucson Way Englewood, CO 80112-3987 (303) 925-1900 – Phone rziernicki@knottlab.com
- [] DIRECTOR AT LARGE Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] DIRECTOR AT LARGE
 Marvin M. Specter, P.E.,L.S., F.NSPE,
 Honorary M. ASCE
 Executive Director Emeritus
 7 Douglas Place
 Eastchester, NY 10709
 (914) 779-6161 Phone
 specter @nafe.org

NAFE HONORS: E. Joyce Dixon, Founder and Executive Director (1982-1999)

National Academy of Forensic Engineers®

Chartered Affinity Group of the National Society of Professional Engineers (NSPE)
Charter Member of the Council of Engineering and Scientific Specialty Boards (CESB)
1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

December 30, 2015

SECRETARY REPORT

To: Jeffery D. Armstrong, P.E. (President)

From: Paul Swanson, P.E., Secretary

Re: Secretary Report

The By Laws Committee met on July 17, 2015 in the presence of the NAFE Board of Directors to resolve outstanding issues related to proposed modifications to the grade of Fellow. Minutes of the meeting are attached.

The NAFE Board of Directors met on July 17, 2015 in Seattle for the semi-annual business meeting to discuss various topics including changes to the NAFE Articles of Incorporation and By Laws. Minutes of the meeting are attached.

A meeting of the general membership was held at the NAFE semi-annual seminar in Seattle, Washington on July 18, 2015. Minutes of the meeting are attached.

Due to the resignation of William Bracken from the Board of Directors, the Nominating Committee and the NAFE Board of Directors, in accordance with Article IX, Section 6 of the NAFE Bylaws, proposed modifications to the slate of nominees for officers and directors for the 2016 administrative year. A majority vote of the Board of Directors approved the following modifications:

President Elect: Michael D. Leshner, PE [NAFE 559F]
Senior Vice President: Marty Gordon, PE [NAFE 699S]
Director at Large John Certuse, PE [NAFE 708F]

As a result, the following slate of nominees will be installed at the Membership meeting the morning of January 23, 2016:

President:	John P. Leffler, PE	[NAFE 709S]
President Elect:	Michael D. Leshner, PE	[NAFE 559F]
Sr. Vice Pres:	Martin E. Gordon, PE	[NAFE 699S]
Vice Pres:	Klas C. Haglid, PE, RA	[NAFE 599S]
Treasurer:	Jerry S. Ogden, PE	[NAFE 561F]
Secretary:	Paul G. Swanson, PE	[NAFE 653M]
Past Pres:	Jeffrey D. Armstrong, PE	[NAFE 644F]
Past Pres:	E. Ross Curtis, PE	[NAFE 571S]
Past Pres:	Paul R. Stephens, PE	[NAFE 560F]
Dir. At Large:	Marvin M. Specter, PE, LS, F.NSPE	[NAFE 001FL]
Dir. At Large:	John Certuse, PE	[NAFE 696F]

A meeting of the NAFE Board of Directors was held via telephone conference on December 8, 2015. The Board discussed various topics in preparation for the semi-annual meeting in Tampa, Florida. Minutes of the meeting are attached.

Paul Swanson, P.E., Secretary

CC: Arthur Schwartz, Esq., Executive Director

Jeffrey D. Armstrong, P.E., President



Board of Directors

- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone ileffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, Fl. 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike@leshner.com
- [] TREASURER Jerry Scott Ogden, P.E. OEC Forensics P.O. Box 621519 Littleton, CO 80162-1519 (303) 795-1515 – Phone jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
- [] PAST PRESIDENT Richard M. Ziernicki, Ph.D., P.E. Knott Laboratory, LLC 7185 South Tucson Way Englewood, CO 80112-3987 (303) 925-1900 – Phone rziemicki@knottlab.com
- [] DIRECTOR AT LARGE Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] DIRECTOR AT LARGE
 Marvin M. Specter, P.E.,L.S., F.NSPE,
 Honorary M. ASCE
 Executive Director Emeritus
 7 Douglas Place
 Eastchester, NY 10709
 (914) 779-6161 Phone
 specter@nafe.org

NAFE HONORS: E. Joyce Dixon, Founder and Executive Director (1982-1999)

National Academy of Forensic Engineers®

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Charter Member of the Council of Engineering and Scientific Specialty Boards (CESB)
1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

MINUTES OF BOARD OF DIRECTORS MEETING

(7/17/2015)

Meeting called to order at 9:30a.m. All Board members present.

A summary of the Hollywood, Florida BOD meeting minutes, January 9, 2015, were reviewed. The date of the minutes was corrected. It was noted that Marty Gordon was present during the meeting. The motion to join AAES under NSPE was amended to read join "AAES as an affiliate" under NSPE. A motion to accept the minutes as amended was offered, seconded, and approved.

The Executive Director's report, Secretary Report, and Treasurer's report were reviewed. The reports were provided in the BOD documents for this meeting. There was a discussion concerning the advantages and disadvantages of offering an open bar at the reception/dinner offered at the semi-annual meetings. No formal Board position was adopted. A motion was offered to accept the Executive's report, Secretary's report, and Treasurer's report. The motion was seconded and approved.

A motion by Marvin Spector, in recognition of pending discussion of changes to the Bylaws, to temporarily suspend the requirement for minimum 20-day notice of changes to the Bylaws to the BOD. Motion was seconded by Ross Curtis. Motion to approve was unanimous.

The following committee reports were presented:

Journal & Publications, CPD, Nominations Committee (summarized as part of the Secretary's report), Education Committee, Admissions, Web Site, Meeting Arrangements, Mentorship, Public Relations, New Members, Long-range Planning Committee, Bylaws and Articles of Incorporation Committee. Committee reports were provided in the BOD documents. A motion to approve committee reports was made, seconded and approved.

The Executive Director presented examples of possible changes to the NAFE logo. It was agreed that the various versions of the designs would be available for the membership to comment on at the membership meeting.

The BOD agreed with the proposed amendment to the NAFE Articles of Incorporation to allow membership by qualified Canadian P.Eng.s into NAFE and allow the membership assembled at this semi-annual meeting in Seattle to vote on the issue.

The BOD approved the proposed changes to the Bylaws for membership as a Fellow and admission of the Canadian P.Eng.s

The BOD resolved to send a 30-day notice to members currently significantly behind in CPD status. Two members were recommended for termination due to CPD status

and lack of dues payment. A motion to accept the recommendation was made, seconded, and approved.

There being no further business, a motion to adjourn the meeting was made, seconded, and approved. The meeting was closed at 3:24p.m.

Paul G. Swanson, P.E., Secretary

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Board of Directors

- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone jleffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, FL 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike@leshner.com
- [] TREASURER Jerry Scott Ogden, P.E. OEC Forensics P.O. Box 621519 Littleton, CO 80162-1519 (303) 795-1515 – Phone jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
- [] PAST PRESIDENT Richard M. Ziernicki, Ph.D., P.E. Knott Laboratory, LLC 7185 South Tucson Way Englewood, CO 80112-3987 (303) 925-1900 – Phone rziernicki@knottlab.com
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(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

MINUTES OF GENERAL MEMBERSHIP MEETING

(7/18/2015)

Meeting called to order By President Armstrong at 11:50a.m.

Secretary Swanson reviewed the results of the Board of Director's meeting that took place July 17, 2015.

Treasurer Ogden provided a review of the NAFE financial status as summarized in the Treasurer's report.

President Armstrong summarized the Executive Director's report to the membership.

Director Bracken reported on the activities of the Bylaws Committee.

Director Bracken informed the membership that the BOD approved changes to the membership qualifications for the membership grade of "fellow" in NAFE. Director Bracken summarized the changes to the membership. Director Bracken referred the membership to the BOD materials which detailed the changes to the Bylaws. These changes are available to the membership on the NAFE web site.

President Armstrong informed the membership that the Bylaws Committee had also recommended an Amendment to Articles of Incorporation to allow Canadian P.E. membership in NAFE. President Armstrong moved, with a quorum of membership present, to change the NAFE Articles of Incorporation to allow Canadian P.E. membership in NAFE. The motion was seconded and unanimously approved.

A motion was made by Michael Kravits to adopt actions of the Board of Directors. The motion was seconded and approved by unanimous vote of the membership present.

President Armstrong formally recognized the services of past presidents Paul Stephens and Ross Curtis. President Armstrong also presented Ross Curtis an award recognizing Ross Curtis' attainment of the grade of Fellow with NSPE.

There being no further business, a motion to adjourn the meeting was made, seconded, and approved. The meeting was closed at 12:20p.m.

Paul G. Swanson, P.E., Secretary

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Board of Directors

- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
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 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
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(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

MINUTES OF BOARD OF DIRECTORS MEETING

(12/8/2015)

Meeting called to order By President Armstrong at 1:08p.m.

List of attendees and meeting agenda attached.

President Armstrong provided a summary of the Tampa meeting attendees to date (attached). A discussion about the availability of the hotel block followed. Executive Director Schwartz noted that since the hotel block had been sold out, a link had been created on the web site to direct members to nearby hotels for accommodations.

There was discussion about potential changes to the Bylaws that may be voted upon at the upcoming meeting in Tampa concerning the recent changes to the Article of Incorporation allowing qualified Canadian P.E.s membership in NAFE. Board members would be notified of the specific changes in wording to be considered by email.

There was discussion concerning possible changes to the Admission Committee size and composition as defined in the Bylaws (Article X Section 2) from the current three which includes the current President-elect to serve as committee chair and two past presidents appointed by the current president. A suggestion was offered to add the current Senior Vice President as a vice-chair to the committee. The suggestion was discussed and withdrawn.

The Executive Director summarized the status of the NAFE logo design efforts. The logo would be used for promotional branding of the Academy and used by the members as identification of membership in the Academy. The design would incorporate the member grade level (member, senior member, fellow). The Academy would issue the graphic file for use to the membership to maintain quality of the image. Suggestions were made concerning the preferred method for obtaining input from the membership. There was a consensus of the Board to provide the membership with a few alternatives on which to provide commentary.

Harold Josephs provided a summary of the progress toward reaching a decision about indexing of the NAFE Journals. To date, NAFE has no specific contract to provide this service. Mr. Josephs reviewed his discussions with Cengage, a firm that could provide the service to NAFE at no cost to the Academy. The service would index title, author, abstract, and keywords. The service would reference NAFE for access to journal text. Mr. Josephs noted that the service has a "legal group" subcategory. Participation in that grouping may be possible after signing a contract for the service. A Board vote on this issue is anticipated at the Tampa meeting.

President Armstrong requested the Board review their responsibilities for their various positions in advance of the upcoming winter meeting. Officer and committee reports should be provided prior to the Christmas holiday to assure inclusion in the BOD documents for the meeting.

There being no further business, the meeting was closed at 2:24p.m.

Paul G. Swanson, P.E., Secretary

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TREASURER'S REPORT

NAFE Treasurer Report

Jerry S. Ogden, PhD, PE NAFE 561F, Treasurer

BOD Meeting

January 22, 2016

- 1: NAFE Profit & Loss Summary 2015
- 2: NAFE Profit & Loss Summary Previous Year Comparison
- 3: NAFE Balance Sheet as of December 31, 2015
- 4: NAFE Balance Sheet as of January 13, 2016
- 5. Budget Data FY2015
- 6. Regular Seminar Revenue January 2016
- 7. Special Seminar Revenue January 2016
- 8. Dinners and Tour January 2016

1: NAFE Profit & Loss Summary 2015

National Academy of Forensic Engineers Profit & Loss

January through December 2015

	Jan - Dec 15
Ordinary Income/Expense	
Income	2 200 00
Application Fees Interest Income (Dividends)	3,200.00 119.51
Membership Dues	87,872.80
Miscellaneous Income	21,212.2
Late Fees, Income #	25.00
Meals (Bkfst,Blun,Din) Income #	12,580.00
Seminar Income #	72,500.00
Total Miscellaneous Income	85,105.00
Publication Sales	2,350.75
Total Income	178,648.06
Gross Profit	178,648.06
Expense	
Board of Directors	
Mtg Room & Refreshments (BOD)	24,354.91
Printing, BOD Hdbk, incl Ship	10,755.03 11,018.73
Travel, BOD Mtgs, to/from (BOD)	11,016.73
Total Board of Directors	46,128.67
Education Chairman, Office Exp	
Postage & Shipping (EdChm)	190.03
Travel Exp (EdChm)	1,762.26
Total Education Chairman, Office Exp	1,952.29
Executive Director	
Contract Fee	73,300.00
Travel (ExecDir)	806.65
Total Executive Director	74,106.65
Headquarters Exp	
Office Exp (H/Q)	400.05
Office Supplies (H/Q)	139.95 177.03
Postage & Shipping (H/Q)	177.03
Total Office Exp (H/Q)	316.98
Total Headquarters Exp	316.98
Journals	
Editing (Journals)	24,166.69
Printing & Mailing (Journals)	49,203.81
Total Journals	73,370.50
Newsletters	
Editing (Newsltrs)	3,000.00
Total Newsletters	3,000.00
Other Expenses	
Advertising	4,422.00
Bank Charge	7,063.43
CESB, Annual Dues	5,300.00 3,535.04
Insurance Miscellaneous Evn	2,535.04 3,650.63
Miscellaneous Exp Plaques, Awards & Gifts	200.46
Print & Publication Exp (Other)	4.10
Prof Services, Accout & Legal	1,718.00
Total Other Expenses	24,893.66
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2:47 PM 01/13/16 Accrual Basis

National Academy of Forensic Engineers Profit & Loss

January through December 2015

	Jan - Dec 15
Seminar Exp # Meals	
Meals, Bkfst, Exp	3,112.91
Meals, BLun, Exp	9,495.02
Meals, Din, Exp #	17,499.38
Meals - Other	1,984.38
Total Meals	32,091.69
Meeting Room, AV Equip	2,470.69
Print Handout Mtls, Handbooks	592.38
Stipend, Registration Asst	3,515.40
Total Seminar Exp #	38,670.16
Treasurer, Office Exp	
Office Supplies (Treas)	137.56
Postage & Shipping (Treas)	67.62
Total Treasurer, Office Exp	205.18
Total Expense	262,644.09
Net Ordinary Income	-83,996.03
Net Income	-83,996.03

2: NAFE Profit & Loss Summary Previous Year Comparison

National Academy of Forensic Engineers Profit & Loss

January through December 2015

	Jan - Dec 15	Jan - Dec 14
Ordinary Income/Expense		
Income	3 300 00	3.000.00
Application Fees Initiation & Upgrade Fees	3,200.00 0.00	3,900.00 200.00
Interest Income (Dividends)	119.51	167.56
Membership Dues	87,872.80	80,500.00
Miscellaneous Income	07,072.00	00,300.00
Late Fees, Income #	25.00	25.00
Meals (Bkfst,Blun,Din) Income #	12.580.00	14,267.56
Seminar Income #	72,500.00	126,515.00
		-
Total Miscellaneous Income	85,105.00	140,8 0 7.5 6
Publication Sales	2,350.75	2,143.25
Uncategorized Income	0.00	95.00
Total Income	178,648.06	227,783.37
Gross Profit	178,648.06	227,783.37
Evenes		
Expense Board of Directors		
	24 254 01	518.11
Mtg Room & Refreshments (BOD)	24,354.91 10,755.03	11,177.31
Printing, BOD Hdbk, incl Ship	11,018.73	4.552.46
Travel, BOD Mtgs, to/from (BOD)	11,016.73	4,002.40
Total Board of Directors	46,128.67	16 ,24 7.88
Education Chairman, Office Exp		
Office Supplies (EdChm)	0.00	1,085.54
Postage & Shipping (EdChm)	190.03	853.69
Travel Exp (EdChm)	1,762.26	3,282.65
Total Education Chairman, Office Exp	1,952.29	5,221.88
Executive Director		
Contract Fee	73,300.00	73,300.00
Stipend (ExecDir)	0.00	5,833.33
Travel (ExecDir)	806.65	2,573.29
Total Executive Director	74,106.65	81,706.62
Headquarters Exp		(D) (A)
Office Exp (H/Q)		1
Office Supplies (H/Q)	139.95	284.86
Postage & Shipping (H/Q)	177.03	430.99
Telephone (H/Q)	0.00	1,669.21
Total Office Exp (H/Q)	316.98	2,385.06
Office Rent & Storage (H/Q)	0.00	4,160.00
Headquarters Exp - Other	0,00	1,150.00
Total Headquarters Exp	316.98	7,695.06
Journals		
Editing (Journals)	24,166.69	8,333.35
Printing & Mailing (Journals)	49,203.81	22,496.16
Total Journals	73,370.50	30,829.51
Newsletters		
Editing (Newsltrs)	3,000.00	3,000.00
Total Newsletters	3,000.00	3,000.00

National Academy of Forensic Engineers Profit & Loss

January through December 2015

	Jan - Dec 15	Jan - Dec 14
Other Expenses		
Advertising	4,422.00	1,999.50
Bank Charge	7,063.43	4,302.31
CESB, Annual Dues	5,300.00	7,800.00
Computer Software, Maint	0.00	119.40
Insurance	2,535.04	1,565.00
Miscellaneous Exp	3,650.63	2,685.00
Plaques, Awards & Gifts	200.46	1,617.23
Print & Publication Exp (Other)	4.10	0.00
Prof Services, Accout & Legal	1,718.00	2,905.00
Total Other Expenses	24,893.66	22,993.44
Public Relations		
Copy & Printing (PR & Sem Asst)	0.00	33.10
Total Public Relations	0.00	33.10
Secretary, Office Exp Seminar Exp # Meals	0.00	354.04
Meals, Bkfst, Exp	3,112.91	6,670.73
Meals, BLun, Exp	9,495.02	4,270.28
Meals, Din, Exp #	17,499.38	6,628.18
Meals - Other	1,984.38	8,758.97
Total Meals	32,091.69	26,328.16
Meeting Room, AV Equip	2,470.69	2,115.00
Print Handout Mtls, Handbooks	592.38	0.00
Refreshments, AM & PM	0.00	428.70
Stipend, Registration Asst	3,515.40	0.00
Seminar Exp # - Other	0.00	552.48
Total Seminar Exp #	38,670.16	29,424.34
Strategic Planner	0.00	6,000.00
Treasurer, Office Exp		
Copy & Printing (Treas)	0.00	68.27
Office Supplies (Treas)	137.56	93.46
Postage & Shipping (Treas)	67.62	56.12
Total Treasurer, Office Exp	205.18	217.85
Total Expense	262,644.09	203,723.72
Net Ordinary Income	-83,996.03	24,059.65
Other Income/Expense Other Expense		= 0 u
Ask My Accountant	0.00	668.14
Total Other Expense	0.00	668.14
Net Other Income	0.00	-668.14
Net Income	-83,996.03	23,391.51

3: NAFE Balance Sheet as of December 31, 2015

2:48 PM 01/13/16 Accrual Basis

National Academy of Forensic Engineers Balance Sheet

As of December 31, 2015

	Dec 31, 15
ASSETS Current Assets	
Checking/Savings 1st Bank Checking 1st Bank Liquid Asset	96,989.11 62,260.86
Total Checking/Savings	159,249.97
Accounts Receivable Accounts Receivable	45,730.00
Total Accounts Receivable	45,730.00
Total Current Assets	204,979.97
Fixed Assets Property & Equipment, Computers	682.00
Total Fixed Assets	682.00
TOTAL ASSETS	205,661.97
LIABILITIES & EQUITY Liabilities Current Liabilities Accounts Payable Accounts Payable	18,935.00
Total Accounts Payable	18,935.00
Total Current Liabilities	18,935.00
Total Liabilities	18,935.00
Equity Unrestricted Net Assets Net Income	270,723.00 -83,996.03
Total Equity	186,726.97
TOTAL LIABILITIES & EQUITY	205,661.97

4: NAFE Balance Sheet as of January 13, 2016

National Academy of Forensic Engineers Balance Sheet As of January 13, 2016

		Jan 13, 16
ASSETS Current Assets Checking/Savings 1st Bank Checking		124,995.83
1st Bank Liquid Asset		62,260.86
Total Checking/Savings		187,256.69
Accounts Receivable Accounts Receivable		45,730.00
Total Accounts Receivable		45,730.00
Total Current Assets		232,986.69
Fixed Assets Property & Equipment, Computers		682.00
Total Fixed Assets		682.00
TOTAL ASSETS		233,668.69
LIABILITIES & EQUITY Liabilities Current Liabilities Accounts Payable	**************************************	
Accounts Payable	is the second	20,723.00
Total Accounts Payable		20,723.00
Total Current Liabilities		20,723.00
Total Liabilities	*	20,723.00
Equity Unrestricted Net Assets Net Income		186,726.97 26,218.72
Total Equity		212,945.69
TOTAL LIABILITIES & EQUITY	i	233,668.69
	2	E

5: Budget Data FY2015

2:48 PM 01/13/16 **Accrual Basis**

National Academy of Forensic Engineers Profit & Loss Budget Performance January through December 2015

_	Jan - Dec 15	Budget	Jan - Dec 15	YTD Budget
Ordinary Income/Expense				
Income	0.000.00	0.000.00	2 222 22	0.000.00
Application Fees	3,200.00	3,600.00	3,200.00	3,600.00
Initiation & Upgrade Fees	0.00	2,400.00	0.00	2,400.00
Interest Income (Dividends)	119.51	150.99	119.51	150.99
Membership Dues	87,872.80	89,200.00	87,872.80	89,200.0
Miscellaneous Income				
Late Fees, Income #	25.00		25.00	
Meals (Bkfst,Blun,Din) Income #	12,580.00		12,580.00	
Seminar Income #	72,500.00	130,000.00	72,500.00	130,000.00
Total Miscellaneous Income	85,105.00	130,000.00	85,105.00	130,000.00
Publication Sales	2,350.75	3,000.00	2,350.75	3,000.00
Uncategorized Income	0.00	95.00	0.00	95.00
Total Income	178,648.06	228,445.99	178,648.06	228,445.99
Gross Profit	178,648.06	228,445.99	178,648.06	228,445.99
Expense				
Board of Directors				
Mtg Room & Refreshments (BOD)	24,354.91	1,000.00	24,354.91	1,000.00
Printing, BOD Hdbk, incl Ship	10,755.03	1,000.00	10,755.03	1,000.00
Travel, BOD Mtgs, to/from (BOD)	11,018.73	6,000.00	11,018.73	6,000.00
Total Board of Directors	46,128.67	8,000.00	46,128.67	8,000.00
Education Chairman, Office Exp				
Office Supplies (EdChm)	0.00	1,085.54	0.00	1,085.54
Postage & Shipping (EdChm)	190.03	853.69	190.03	853.69
Travel Exp (EdChm)	1,762.26	3,282.65	1,762.26	3,282.65
Total Education Chairman, Office Exp	1,952.29	5,221.88	1,952.29	5,221.8
Executive Director				
Contract Fee	73,300.00	73,300.00	73,300.00	73,300.00
Lodging & Meals (ExecDir)	0.00	5,000.00	0.00	5,000.00
Stipend (ExecDir)	0.00	0.00	0.00	0.00
Travel (ExecDir)	806.65	4,000.00	806.65	4,000.00
Total Executive Director	74,106.65	82,300.00	74,106.65	82,300.00
Headquarters Exp				
Office Exp (H/Q)				
Office Supplies (H/Q)	139.95		139.95	
Postage & Shipping (H/Q)	7 177.03	430.99	177.03	430.99
Total Office Exp (H/Q)	316.98	430.99	316.98	430.99

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National Academy of Forensic Engineers Profit & Loss Budget Performance January through December 2015

	Jan - Dec 15	Budget	Jan - Dec 15	YTD Budget
Headquarters Exp - Other	0.00	0.00	0.00	0.00
Total Headquarters Exp	316.98	430.99	316.98	430.99
Journals Editing (Journals) Printing & Mailing (Journals) Journals - Other	24,166.69 49,203.81 0.00	23,000.00 20,000.00	24,166.69 49,203.81 0.00	23,000.00 20,000.00
Total Journals	73,370.50	43,000.00	73,370.50	43,000.00
Newsletters Editing (Newsltrs)	3,000.00	4,500.00	3,000.00	4,500.00
Total Newsletters	3,000.00	4,500.00	3,000.00	4,500.00
Other Expenses Advertising Bank Charge CESB, Annual Dues Computer Software, Maint Insurance Miscellaneous Exp Plaques, Awards & Gifts Print & Publication Exp (Other) Prof Services, Accout & Legal	4,422.00 7,063.43 5,300.00 0.00 2,535.04 3,650.63 200.46 4.10 1,718.00	1,999.50 4,302.31 7,800.00 119.40 1,565.00 2,685.00 1,617.23	4,422.00 7,063.43 5,300.00 0.00 2,535.04 3,650.63 200.46 4.10 1,718.00	1,999.50 4,302.31 7,800.00 119.40 1,565.00 2,685.00 1,617.23
Total Other Expenses	24,893.66	21,918.44	24,893.66	21,918.44
Public Relations Copy & Printing (PR & Sem Asst)	0.00	100.00	0.00	100.00
Total Public Relations	0.00	100.00	0.00	100.00
Secretary, Office Exp Seminar Exp # Meals	0.00	0.00	0.00	0.00
Meals, Bkfst, Exp Meals, BLun, Exp Meals, Din, Exp # Meals - Other	3,112.91 9,495.02 17,499.38 1,984.38	7,000.00 4,800.00 7,000.00	3,112.91 9,495.02 17,499.38 1,984.38	7,000.00 4,800.00 7,000.00
Total Meals	32,091.69	18,800.00	32,091.69	18,800.00

Office

2:48 PM 01/13/16 **Accrual Basis**

National Academy of Forensic Engineers Profit & Loss Budget Performance January through December 2015

	Jan - Dec 15	Budget	Jan - Dec 15	YTD Budget
Meeting Room, AV Equip	2,470.69	4,800.00	2,470.69	4,800.00
Print Handout Mtls, Handbooks	592.38	3,000.00	592.38	3,000.00
Refreshments, AM & PM	0.00	2,500.00	0.00	2,500.00
Stipend, Registration Asst	3,515.40	4,000.00	3,515.40	4,000.00
Seminar Exp # - Other	0.00	1,000.00	0.00	1,000.00
Total Seminar Exp #	38,670.16	34,100.00	38,670.16	34,100.00
Strategic Planner	0.00	0.00	0.00	0.00
Treasurer, Office Exp				
Copy & Printing (Treas)	0.00	300.00	0.00	300.00
Office Supplies (Treas)	137.56	393.46	137.56	393.46
Postage & Shipping (Treas)	67.62	450.00	67.62	450.00
Total Treasurer, Office Exp	205.18	1,143.46	205.18	1,143.46
Total Expense	262,644.09	200,714.77	262,644.09	200,714.77
Net Ordinary Income	-83,996.03	27,731.22	-83,996.03	27,731.22
Other Income/Expense Other Expense				
Ask My Accountant	0.00	500.00	0.00	500.00
Total Other Expense	0.00	500.00	0.00	500.00
Net Other Income	0.00	-500.00	0.00	-500.00
Net Income	-83,996.03	27,231.22	-83,996.03	27,231.22

National Academy of Forensic Engineers Profit & Loss Budget Performance January through December 2015

	Annual Budget
Ordinary Income/Expense Income	31
Application Fees	3,600.00
Initiation & Upgrade Fees	2,400.00
Interest Income (Dividends)	150.99
Membership Dues Miscellaneous Income Late Fees, Income # Meals (Bkfst,Blun,Din) Income # Seminar Income #	130,000.00
Total Miscellaneous Income	130,000.00
Publication Sales	3,000.00
Uncategorized Income	95.00
Total Income	228,445.99
Gross Profit	228,445.99
Expense	
Board of Directors	
Mtg Room & Refreshments (BOD)	1,000.00
Printing, BOD Hdbk, incl Ship	1,000.00
Travel, BOD Mtgs, to/from (BOD)	6,000.00
Total Board of Directors	8,000.00
Education Chairman, Office Exp	
Office Supplies (EdChm)	1,085.54
Postage & Shipping (EdChm)	853.69
Travel Exp (EdChm)	3,282.65
Total Education Chairman, Office Exp	5,221.88
Executive Director	
Contract Fee	73,300.00
Lodging & Meals (ExecDir)	5,000.00
Stipend (ExecDir)	0.00
Travel (ExecDir)	4,000.00
Total Executive Director	82,300.00
Headquarters Exp Office Exp (H/Q) Office Supplies (H/Q) Postage & Shipping (H/Q)	430.99
	420.00
Total Office Exp (H/Q)	430.99

National Academy of Forensic Engineers Profit & Loss Budget Performance January through December 2015

	Annual Budget
Headquarters Exp - Other	0.00
Total Headquarters Exp	430.99
Journals Editing (Journals) Printing & Mailing (Journals) Journals - Other	23,000.00 20,000.00
Total Journals	43,000.00
Newsletters Editing (Newsltrs)	4,500.00
Total Newsletters	4,500.00
Other Expenses Advertising Bank Charge CESB, Annual Dues Computer Software, Maint Insurance Miscellaneous Exp Plaques, Awards & Gifts Print & Publication Exp (Other) Prof Services, Accout & Legal	1,999.50 4,302.31 7,800.00 119.40 1,565.00 2,685.00 1,617.23
Total Other Expenses	21,918.44
Public Relations Copy & Printing (PR & Sem Asst)	100.00
Total Public Relations	100.00
Secretary, Office Exp Seminar Exp # Meals	0.00
Meals, Bkfst, Exp Meals, BLun, Exp Meals, Din, Exp# Meals - Other	7,000.00 4,800.00 7,000.00
Total Meals	18,800.00

Are The Mile Miles

National Academy of Forensic Engineers Profit & Loss Budget Performance January through December 2015

	Annual Budget
Meeting Room, AV Equip	4,800.00
Print Handout Mtis, Handbooks	3,000.00
Refreshments, AM & PM	2,500.00
Stipend, Registration Asst	4,000.00
Seminar Exp # - Other	1,000.00
Total Seminar Exp #	34,100.00
Strategic Planner	0.00
Treasurer, Office Exp	
Copy & Printing (Treas)	300.00
Office Supplies (Treas)	393.46
Postage & Shipping (Treas)	450.00
Total Treasurer, Office Exp	1,143.46
Total Expense	200,714.77
Net Ordinary Income	27,731.22
Other Income/Expense	
Other Expense	
Ask My Accountant	500.00
Total Other Expense	500.00
Net Other Income	-500.00
Net Income	27,231.22

6. Regular Seminar Revenue January 2016

Revenue Account	Date	Identifier	Amount	Rece Payment Method
Regular Seminar	11/11/2015 22:56	AdminLeffler		500 ### Mailed Check
Regular Seminar	11/12/2015 9:54	John P. Leffler		500 ### Mailed Check
Regular Seminar	11/12/2015 13:20	Joseph A. Cristino		500 ### American Express
Regular Seminar	11/12/2015 11:04	Wilbur T. Yaxley		500 ### American Express
Regular Seminar	12/2/2015 16:18	Kamran Farahmandpour		500 ### MasterCard
Regular Seminar	11/12/2015 11:21	Roger L. Boyell		500 ### Mailed Check
Regular Seminar	11/24/2015 11:15	Gerald Zadikoff		500 ### Mailed Check
Regular Seminar	11/12/2015 13:42	William R. Keefe		500 ### Mailed Check
Regular Seminar	11/12/2015 15:06	Michael D. Leshner		500 ### Visa
Regular Seminar	11/14/2015 15:13	Babar M. Khan		500 ### Visa
Regular Seminar	11/12/2015 15:52	Jerry Scott Ogden, PhD		500 ### American Express
Regular Seminar	11/13/2015 7:43	· · · · · · · · · · · · · · · · · · ·		500 ### MasterCard
Regular Seminar	11/13/2015 10:30			500 ### Visa
Regular Seminar	11/13/2015 17:11			500 ### American Express
Regular Seminar	11/15/2015 10:25			500 ### MasterCard
Regular Seminar	11/16/2015 16:04	·		500 ### Visa
Regular Seminar	11/17/2015 14:31	· ·		500 ### Visa
Regular Seminar	• •	Jeffrey D. Armstrong		500 ### American Express
Regular Seminar	11/30/2015 17:49	_		500 ### American Express
Regular Seminar	11/18/2015 12:22	•		250 ### American Express
Regular Seminar	11/25/2015 11:14			500 ### American Express
Regular Seminar	11/18/2015 12:19			500 ### MasterCard
Regular Seminar		James A. Petersen		500 ### MasterCard
Regular Seminar	11/18/2015 12:51			500 ### American Express
Regular Seminar	11/18/2015 13:28			500 ### Visa
Regular Seminar	• •	Richard M. Ziernicki		500 ### Visa
Regular Seminar	11/18/2015 14:53			500 ### Visa
Regular Seminar	11/18/2015 15:32	•		500 ### MasterCard
Regular Seminar		Donn N. Peterson		500 ### Visa
Regular Seminar	11/18/2015 21:31			500 ### MasterCard
Regular Seminar	11/19/2015 11:05	·		500 ### MasterCard
Regular Seminar	11/19/2015 11:08			250 ### Mailed Check
Regular Seminar	• •	John A. Murdoch		500 ### Mailed Check
Regular Seminar	11/19/2015 18:07			500 ### Visa
Regular Seminar		Leonard Goldblatt		500 ### Mailed Check
Regular Seminar	11/25/2015 10:39	·		500 ### Visa
Regular Seminar	11/23/2015 9:14			500 ### American Express
Regular Seminar	11/23/2015 13:21			500 ### Visa
Regular Seminar	11/23/2015 13:27			500 ### Visa
Regular Seminar	12/3/2015 15:58			500 ### MasterCard
Regular Seminar	11/25/2015 11:19			500 ### MasterCard
Regular Seminar		Jonathan W. Milton		500 ### Visa
Regular Seminar	11/25/2015 12:25			500 ### Visa
Regular Seminar	11/25/2015 18:05			500 ### Visa
Regular Seminar	11/27/2015 11:12			500 ### American Express
Regular Seminar	11/29/2015 11:25	Maurice E. Cueva-Eguiguren		500 ### Mailed Check

Regular Seminar		Donald J. Fournier		###	
Regular Seminar	12/1/2015 1:24		250	###	American Express
Regular Seminar		Richard H. Moore	500	###	Visa
Regular Seminar		Edward L. Fronapfel	500	###	American Express
Regular Seminar	12/1/2015 11:07	Liberty L. Whitmore Lewis	500	###	American Express
Regular Seminar		Richard W. Grounds	500	###	MasterCard
Regular Seminar	12/1/2015 17:04	Paul G. Swanson	500	###	American Express
Regular Seminar	12/2/2015 14:12	None	250	###	MasterCard
Regular Seminar	12/2/2015 17:54	•	500	###	Visa
Regular Seminar	12/21/2015 19:06	Jason McPherson, PE, IntPE, (500	###	Mailed Check
Regular Seminar	12/4/2015 3:06	Paul Kamen	500	###	American Express
Regular Seminar	12/4/2015 16:10	Marvin M. Specter	500	###	Mailed Check
Regular Seminar	12/23/2015 10:18	D.S.	500	###	American Express
Regular Seminar	12/8/2015 11:37	Jesse A. Grantham	500	###	Mailed Check
Regular Seminar	12/8/2015 14:58	Donald L. Corwin	500	###	American Express
Regular Seminar	12/8/2015 19:23	Mark A.M. Ezra	500	###	Visa
Regular Seminar	12/10/2015 16:02	Steven F. Claxton	500	###	Visa
Regular Seminar	12/10/2015 16:18	Christopher M. Stewart	250	###	Visa
Regular Seminar	12/11/2015 10:02	Mark Svare PE, IntPE, CFEI	500	###	MasterCard
Regular Seminar	12/29/2015 15:50	None	250	###	Visa
Regular Seminar	12/20/2015 13:19	Thomas J. Cocchiola	500	###	Mailed Check
Regular Seminar	12/16/2015 13:11	David K. Aberizk	500	###	Visa
Regular Seminar	12/17/2015 10:43	Paul J. Halyard	500	###	American Express
Regular Seminar	12/17/2015 15:19	Geoffrey Jillson	500	###	Visa
Regular Seminar	12/17/2015 15:32	Lamar T. Hawkins	500	###	Visa
Regular Seminar	12/22/2015 7:36	William E. Lee	500	###	Mailed Check
Regular Seminar	12/22/2015 21:47	Rebecca Ducharme	500	###	Discover
Regular Seminar	12/23/2015 15:44	Timothy R. Murphy	250	###	Visa
Regular Seminar	12/23/2015 23:05	E. Smith Reed	500	###	Visa
Regular Seminar	1/6/2016 11:08	Samuel G. Sudler, P.E., IntPE,	500	###	American Express
Regular Seminar	12/30/2015 11:34	Keith T. McEligot	500	###	Mailed Check
Regular Seminar	12/31/2015 2:15	J. Alan Parham	500	###	Mailed Check
Regular Seminar	12/31/2015 9:30	Richard A. Rice	500	###	MasterCard
Regular Seminar	1/11/2016 15:31	George E. Page	500	###	Mailed Check
Regular Seminar	1/4/2016 14:47	John T. Bell	500	###	American Express
Regular Seminar	1/4/2016 15:11	D. Rowland Lamb	500	###	American Express
Regular Seminar	1/5/2016 11:31	Kathryn Oney	500	###	American Express
Regular Seminar	1/6/2016 10:27	Drew B. Hains	250	###	American Express
Regular Seminar	1/7/2016 12:16	Michael Plick	500	###	MasterCard
Regular Seminar	1/7/2016 12:18	Sidney Rubin	500	###	MasterCard
	_				

1/2016 Regular Seminar Revenue: \$41,000.00

7. Special Seminar Revenue January 2016

Revenue Accoun Da	ate	Identifier	Amount	Re Payment Method
Special Seminar	11/12/2015 13:20	Joseph A. Cristino	500	## American Express
Special Seminar	11/12/2015 11:21	Roger L. Boyell	500	## Mailed Check
Special Seminar	11/12/2015 13:42	William R. Keefe	500	## Mailed Check
Special Seminar	11/12/2015 15:06	Michael D. Leshner	500	## Visa
Special Seminar	11/14/2015 15:13	Babar M. Khan	500	## Visa
Special Seminar	11/13/2015 7:43	Brad Shepherd	500	## MasterCard
Special Seminar	11/13/2015 10:30	Toshi Nobe, P.E.	500	## Visa
Special Seminar	11/13/2015 17:11	Laura LiptaiPhD	500	## American Express
Special Seminar	11/15/2015 10:25	Michael Kravitz	500	## MasterCard
Special Seminar	11/17/2015 16:20	Jeffrey D. Armstrong	500	## American Express
Special Seminar	11/30/2015 17:49	Scott Grainger	500	## American Express
Special Seminar	11/25/2015 11:14	John P. Certuse	500	## American Express
Special Seminar	11/18/2015 12:19	Luke Miorelli	500	## MasterCard
Special Seminar	11/18/2015 12:37	James A. Petersen	500	## MasterCard
Special Seminar	11/18/2015 12:51	Nicholas Bellizzi	500	## American Express
Special Seminar	11/18/2015 13:28	Mark R. Webster	500	## Visa
Special Seminar	11/18/2015 18:21	Donn N. Peterson	500	## Visa
Special Seminar	11/18/2015 21:31	Bruce A Wiers	500	## MasterCard
Special Seminar	11/19/2015 11:05	Bruce W. Crowly	500	## MasterCard
Special Seminar	11/19/2015 18:07	Jon O. Jacobson	500	## Visa
Special Seminar	11/25/2015 10:39	Curtis E. Falany	500	## Visa
Special Seminar	11/23/2015 9:14	None	500	## American Express
Special Seminar	12/3/2015 15:58	E. Ross Curtis	500	## MasterCard
Special Seminar	11/25/2015 11:19	Maureen L. Davis	500	## MasterCard
Special Seminar	12/16/2015 16:27	Jonathan W. Milton	500	## Visa
Special Seminar	11/25/2015 12:25	None	500	## Visa
Special Seminar	11/25/2015 18:05	Martin E. Gordon	500	## Visa
Special Seminar	11/27/2015 11:12	Thomas F. Zarek	500	## American Express
Special Seminar	11/29/2015 11:25	Maurice E. Cueva-Eguigui	500	## Mailed Check
Special Seminar	11/29/2015 16:43	Harold Josephs	500	## Visa
Special Seminar	12/2/2015 16:06	Donald J. Fournier	500	## Visa
Special Seminar	12/1/2015 1:24	David Icove	250	## American Express
Special Seminar	12/1/2015 10:08	Richard H. Moore	500	## Visa
Special Seminar	12/1/2015 11:01	Edward L. Fronapfel	500	## American Express
Special Seminar	12/1/2015 11:07	Liberty L. Whitmore Lewi	500	## American Express
Special Seminar	12/1/2015 16:12	Richard W. Grounds	500	## MasterCard
Special Seminar	12/1/2015 17:04	Paul G. Swanson	500	## American Express
Special Seminar	12/2/2015 13:51	Paul H. Schwartz	500	## Visa
Special Seminar	12/2/2015 14:12	None	250	## MasterCard
Special Seminar	12/2/2015 17:54	Joseph G. Leane	500	## Visa
Special Seminar	12/21/2015 19:06	Jason McPherson, PE, Int	500	## Mailed Check
Special Seminar	12/4/2015 3:06	Paul Kamen	500	## American Express
Special Seminar	12/4/2015 16:10	Marvin M. Specter	500	## Mailed Check
Special Seminar	12/23/2015 10:18	D.S.	500	## American Express
Special Seminar	12/8/2015 11:37	Jesse A. Grantham	500	## Mailed Check
Special Seminar	12/8/2015 14:58	Donald L. Corwin	500	## American Express

Special Seminar	12/10/2015 16:02 Steven F. Claxton	500 ## Visa
Special Seminar	12/11/2015 10:02 Mark Svare PE, IntPE, CFf	500 ## MasterCard
Special Seminar	12/29/2015 15:50 None	250 ## Visa
Special Seminar	12/20/2015 13:19 Thomas J. Cocchiola	500 ## Mailed Check
Special Seminar	12/16/2015 13:11 David K. Aberizk	500 ## Visa
Special Seminar	12/18/2015 9:28 None	500 ## No Payment
Special Seminar	12/18/2015 9:32 None	500 ## No Payment
Special Seminar	12/18/2015 9:36 None	500 ## No Payment
Special Seminar	12/23/2015 15:44 Timothy R. Murphy	250 ## Visa
Special Seminar	12/23/2015 23:05 E. Smith Reed	500 ## Visa
Special Seminar	1/6/2016 11:08 Samuel G. Sudler, P.E., In	500 ## American Express
Special Seminar	12/31/2015 2:15 J. Alan Parham	500 ## Mailed Check
Special Seminar	1/11/2016 15:31 George E. Page	500 ## Mailed Check
Special Seminar	1/4/2016 14:47 John T. Bell	500 ## American Express
Special Seminar	1/4/2016 15:11 D. Rowland Lamb	500 ## American Express
Special Seminar	1/5/2016 11:31 Kathryn Oney	500 ## American Express
Special Seminar	1/7/2016 12:16 Michael Plick	500 ## MasterCard
Special Seminar	1/7/2016 12:18 Sidney Rubin	500 ## MasterCard

1/2016 Special Seminar Revenue: \$31,000.00

8. Dinners and Tour January 2016

Revenue Acc	coı Date	Identifier	Amount	F	Re Payment Method
Dinner 1	11/12/2015 13:20	Joseph A. Cristino	8		# American Express
Dinner 1	11/12/2015 13:42	<u>-</u>	8	85	# Mailed Check
Dinner 1		Michael D. Leshner	8	35	# Visa
Dinner 1	• •	Jerry Scott Ogden, PhD	8	5	# American Express
Dinner 1	11/13/2015 7:43				# MasterCard
Dinner 1	11/16/2015 16:04	•			# Visa
Dinner 1		Jeffrey D. Armstrong	8	5	# American Express
Dinner 1		Jeffrey D. Armstrong			# American Express
Dinner 1	• •	Jeffrey D. Armstrong			# American Express
Dinner 1	11/30/2015 17:49				# American Express
Dinner 1		Arthur E. Schwartz			# Visa
Dinner 1	11/18/2015 12:19				# MasterCard
Dinner 1	11/18/2015 21:31				# MasterCard
Dinner 1		Leonard Goldblatt			# Mailed Check
Dinner 1	12/3/2015 15:58				# MasterCard
Dinner 1	• •	Maureen L. Davis			# MasterCard
Dinner 1	, ,	Jonathan W. Milton			# Visa
Dinner 1	11/25/2015 18:05		8	35	# Visa
Dinner 1	• •	Richard W. Grounds	8	35	# MasterCard
Dinner 1	• •	Paul G. Swanson			# American Express
Dinner 1		Marvin M. Specter			# Mailed Check
Dinner 1		Jesse A. Grantham			# Mailed Check
Dinner 1	12/8/2015 19:23				# Visa
Dinner 1		Timothy R. Murphy			# Visa
Dinner 1	12/31/2015 2:15		8	35	# Mailed Check
Dinner 2	11/11/2015 22:56		-	75	# Mailed Check
Dinner 2	11/12/2015 9:54		-	' 5	# Mailed Check
Dinner 2	·	Joseph A. Cristino			# American Express
Dinner 2	i i	Joseph A. Cristino			# American Express
Dinner 2	11/12/2015 11:04	•			# American Express
Dinner 2	11/12/2015 11:04	•			# American Express
Dinner 2		Michael D. Leshner			# Visa
Dinner 2	• •	Michael D. Leshner	7	7 5	# Visa
Dinner 2	11/13/2015 7:43		7	75	# MasterCard
Dinner 2	11/13/2015 7:43	<u>-</u>			# MasterCard
Dinner 2	11/13/2015 10:30	•			# Visa
Dinner 2	11/13/2015 17:11	·			# American Express
Dinner 2	11/15/2015 10:25	•			# MasterCard
Dinner 2		Jeffrey D. Armstrong			# American Express
Dinner 2		Jeffrey D. Armstrong			# American Express
Dinner 2		Arthur E. Schwartz			# Visa
Dinner 2		Arthur E. Schwartz			# Visa
Dinner 2	11/18/2015 12:22				# American Express
Dinner 2	11/25/2015 11:14	•			# American Express
Dinner 2		James A. Petersen			# MasterCard
Dinner 2	• •	James A. Petersen			# MasterCard
- · · · · · ·	,,		·	-	

Dinner 2	11/18/2015 18:21 Donn N. Peterson	75 # Visa
Dinner 2	11/19/2015 18:07 Jon O. Jacobson	75 # Visa
Dinner 2	11/25/2015 10:39 Curtis E. Falany	75 # Visa
Dinner 2	11/25/2015 11:19 Maureen L. Davis	75 # MasterCard
Dinner 2	11/25/2015 11:19 Maureen L. Davis	75 # MasterCard
Dinner 2	11/25/2015 18:05 Martin E. Gordon	75 # Visa
Dinner 2	11/25/2015 18:05 Martin E. Gordon	75 # Visa
Dinner 2	11/29/2015 11:25 Maurice E. Cueva-Eguig	75 # Mailed Check
Dinner 2	12/2/2015 16:06 Donald J. Fournier	75 # Visa
Dinner 2	12/1/2015 1:24 David Icove	75 # American Express
Dinner 2	12/1/2015 10:08 Richard H. Moore	75 # Visa
Dinner 2	12/2/2015 14:12 None	75 # MasterCard
Dinner 2	12/21/2015 19:06 Jason McPherson, PE, Ir	75 # Mailed Check
Dinner 2	12/4/2015 3:06 Paul Kamen	75 # American Express
Dinner 2	12/4/2015 16:10 Marvin M. Specter	75 # Mailed Check
Dinner 2	12/4/2015 16:10 Marvin M. Specter	75 # Mailed Check
Dinner 2	12/8/2015 11:37 Jesse A. Grantham	75 # Mailed Check
Dinner 2	12/8/2015 19:23 Mark A.M. Ezra	75 # Visa
Dinner 2	12/8/2015 19:23 Mark A.M. Ezra	75 # Visa
Dinner 2	12/10/2015 16:02 Steven F. Claxton	75 # Visa
Dinner 2	12/11/2015 10:02 Mark Svare PE, IntPE, C	75 # MasterCard
Dinner 2	12/16/2015 13:11 David K. Aberizk	75 # Visa
Dinner 2	12/29/2015 22:08 None	75 # No Payment
Dinner 2	12/29/2015 22:08 None	75 # No Payment
Dinner 2	12/23/2015 15:44 Timothy R. Murphy	75 # Visa
Dinner 2	12/23/2015 15:44 Timothy R. Murphy	75 # Visa
Dinner 2	1/6/2016 11:08 Samuel G. Sudler, P.E., I	75 # American Express
Dinner 2	12/30/2015 11:34 Keith T. McEligot	75 # Mailed Check
Dinner 2	12/31/2015 2:15 J. Alan Parham	75 # Mailed Check
Dinner 2	12/31/2015 2:15 J. Alan Parham	75 # Mailed Check
Dinner 2	1/11/2016 15:31 George E. Page	75 # Mailed Check
Dinner 2	1/6/2016 10:27 Drew B. Hains	75 # American Express
Tour	11/12/2015 15:06 Michael D. Leshner	25 # Visa
Tour	11/16/2015 16:04 Paul R. Stephens	25 # Visa
Tour	11/30/2015 17:49 Scott Grainger	25 # American Express
Tour	11/18/2015 14:15 Arthur E. Schwartz	25 # Visa
Tour	11/18/2015 12:22 Gary Thomas	25 # American Express
Tour	11/18/2015 12:19 Luke Miorelli	25 # MasterCard
Tour	11/18/2015 21:31 Bruce A Wiers	25 # MasterCard
Tour	11/25/2015 11:19 Maureen L. Davis	25 # MasterCard
Tour	11/25/2015 18:05 Martin E. Gordon	25 # Visa
Tour	12/1/2015 10:08 Richard H. Moore	25 # Visa
Tour	1/13/2016 0:00 Ross Curtis	50 # Mailed Check
	Dinner 1 / Dinner 2 / Tours	ĆC 250.00

Dinner 1/Dinner 2/Tour: \$6,350.00

COMMITTEE REPORTS

Bylaws and Articles of Incorporation Committee



Board of Directors

- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone jleffler@forcon.com
- [] SENIOR VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike@leshner.com
- [] VICE PRESIDENT Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] TREASURER
 Jerry Scott Ogden, P.E.
 OEC Forensics
 P.O. Box 621519
 Littleton, CO 80162-1519
 (303) 795-1515 Phone
 jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson @feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
- [] PAST PRESIDENT Richard M. Ziernicki, Ph.D., P.E. Knott Laboratory, LLC 7185 South Tucson Way Englewood, CO 80112-3987 (303) 925-1900 – Phone rziemicki@knottlab.com
- [] DIRECTOR AT LARGE John P. Certuse, P.E. ISE Engineering, Inc. 15 Extension Street Attleboro, MA 02703 (508) 226-8800 john@iseengineering.com
- [] DIRECTOR AT LARGE Marvin M. Specter, P.E.,L.S., F.NSPE, Honorary M. ASCE Executive Director Emeritus 7 Douglas Place Eastchester, NY 10709 (914) 779-6161 – Phone specter@nafe.org

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Charter Member of the Council of Engineering and Scientific Specialty Boards (CESB)
1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

MINUTES OF BYLAWS COMMITTEE MEETING

(7/17/2015 conducted in presence of NAFE BOD)

Meeting called to order at 9:18a.m.

All members of the committee present except John Leffler. This was a continuation of a committee meeting held by teleconference and subsequent email transmissions. The discussion to be completed concerned potential changes to the NAFE Articles of Incorporation to allow Canadian P.E. candidates access to membership in NAFE. The committee discussions also included modification to the NAFE By Laws regarding existing criteria for attaining the grade of "Fellow" within NAFE.

Regarding suggested language that had been discussed and that was still in discussion within the Bylaws Committee regarding the criteria for attaining the grade of "Fellow", there was an unresolved motion (from the previous Bylaws Committee meeting) to modify the suggested language to require a candidate for Fellow to attain the highest grade level available in an outside technical organization prior to attaining the grade of Fellow in NAFE. After further discussion of this motion, the motion and second was withdrawn.

A motion was offered to accept the language crafted by the committee into the Articles of Incorporation for admittance of Canadian P.E. The motion was seconded and approved.

John Leffler joined the meeting.

A motion was offered to accept the modifications to the Bylaws regarding the grade of Fellow using the language crafted by the Bylaws Committee (revision of AOI and By Laws included in the BOD documents provided for the meeting). An amendment was offered to Article III Section 1 b. 3 to include the words "Member or Senior Member". The amendment was approved and the motion was approved as amended.

The meeting of the Bylaws Committee was concluded at 9:30a.m.

Paul G. Swanson, P.E., Secretary

653S

Mentorship Committee



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- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone ileffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, Fl. 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike@leshner.com
- [] TREASURER Jerry Scott Ogden, P.E. OEC Forensics P.O. Box 621519 Littleton, CO 80162-1519 (303) 795-1515 – Phone jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [X] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
- [] PAST PRESIDENT Richard M. Ziernicki, Ph.D., P.E. Knott Laboratory, LLC 7185 South Tucson Way Englewood, CO 80112-3987 (303) 925-1900 – Phone rziernicki@knottlab.com
- [] DIRECTOR AT LARGE Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] DIRECTOR AT LARGE
 Marvin M. Specter, P.E., L.S., F.NSPE,
 Honorary M. ASCE
 Executive Director Emeritus
 7 Douglas Place
 Eastchester, NY 10709
 (914) 779-6161 Phone
 specter@nafe.org

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1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

January 5, 2016

To: Jeffrey D. Armstrong, President

Re: NAFE Mentorship Program Status Report

Dear Jeff,

Committee members Mike Leshner, Drew Peake, Ben Railsback, Marvin Specter, Vice Committee Chairman John Murdoch, and I met via Go-To-Meeting on October 14th.

Program effectiveness was discussed. The consensus was that the program is effective but that most of those that had been matched with a mentor, only contacted the mentor when they were faced with an FE problem, such as being confronted with a motion in limine, etc., regular dialogue usually was not occurring. Some committee members had concluded that their mentees had limited interest in an ongoing relationship with their mentors. The committee concluded that it was not necessary to have committee members contact mentors and mentees to assess program effectiveness.

The committee concluded that there was a need to improve member and non-member awareness of the program. One approach was to make program availability more prominent on the website and also to have a mentoring program article in every edition of Interaction. John and I prepared the article and it was published in the last edition of our newsletter.

We also identified the need to enhance existing and new member knowledge of website content, in particular the availability of journal articles for purchase that would be tremendously useful to a new member in finalizing an expert opinion. Mr. Leshner advised that there are a considerable number of long term members that never log into the website except to pay their dues, provide CPD related information, or register for a seminar. An approach to provide brief videotaped presentations on website content and how to access them is being considered. The videotape also could be presented on the website.

As of December 17th, 13 correspondents, one (1) Associate Member, and one (1) member have requested a mentor. As of this date, mentors have been assigned to 11 engineers. John and I will work with the committee to make additional matches.

Marvin Specter recently suggested that an OP be developed to document the mentoring program procedures. John and I will develop a draft and circulate it to the committee with the plan of presenting the OP to the BOD next summer.

Bun Rotunas, PE

Paul R. Stephens, P.E., Mentorship Committee Chairman

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Admissions Committee

Education Committee



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- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone jleffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, FL 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [X] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike @leshner.com
- [] TREASURER Jerry Scott Ogden, P.E. OEC Forensics P.O. Box 621519 Littleton, CO 80162-1519 (303) 795-1515 – Phone jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
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 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
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- [] DIRECTOR AT LARGE Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] DIRECTOR AT LARGE
 Marvin M. Specter, P.E.,L.S., F.NSPE,
 Honorary M. ASCE
 Executive Director Emeritus
 7 Douglas Place
 Eastchester, NY 10709
 (914) 779-6161 Phone
 specter@nafe.org

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1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

To: Jeff Armstrong
From: Mike Leshner

Date: January 6, 2016

Subject: Education Committee Report

The Sunday Seminar at the Seattle meeting in July 2015 had 43 in attendance and featured Guest speaker Allan McDonald, who presented his experiences surrounding the Space Shuttle Challenger disaster. His talk was very well received and was honored with a standing ovation.

Dr. Bob Anderson presented "Analytical Techniques in Forensic Engineering" and Dr. Nigel Ellis presented "Fall Protection Safety with Case Histories, Solutions and Opportunities".

A Panel Discussion - "Practical Advice Resolving Problems That May Occur In Forensic Engineering Practice" elicited a brisk discussion and participation by many attendees. Feedback was especially good on the panel discussion, and it will be repeated in Tampa.

Feedback was also very good on the two-track format "experiment" at the Regular Seminar in Seattle, and will be repeated for both Saturday and Sunday afternoons in Tampa. For the first time, the afternoon session on Sunday will be split into two tracks.

Plans for the Special Seminar in Dallas are still in the formative stages, and suggestions are welcome.

A succession plan is underway for Co-Chair Robin Davies to become Chair-person starting with the next meeting in Dallas. I have really enjoyed my chairmanship of the Education Committee and found it extremely rewarding. As incoming Admissions Chair, I expect to be very busy with that job, and also expect to continue contributing to the Education Committee going forward.

Respectfully submitted,

Michael D. Leshner, PE

Website Committee



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- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone jleffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, FL 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [X] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike @leshner.com
- [] TREASURER Jerry Scott Ogden, P.E. OEC Forensics P.O. Box 621519 Littleton, CO 80162-1519 (303) 795-1515 – Phone jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
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- [] DIRECTOR AT LARGE Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] DIRECTOR AT LARGE
 Marvin M. Specter, P.E.,L.S., F.NSPE,
 Honorary M. ASCE
 Executive Director Emeritus
 7 Douglas Place
 Eastchester, NY 10709
 (914) 779-6161 Phone
 specter@nafe.org

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1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

To: Jeff Armstrong
From: Mike Leshner
Date: January 6, 2016

Subject: Website Committee Report

During the past 6 months the Memberclicks integrated website/database has been operating relatively smoothly. The transition from paper administrative functions to digital is nearly complete. About 90% of the payments for membership applications, dues and meeting registrations are made by credit card. We still have about 5% of the membership who cannot or choose not to communicate with NAFE using email, and are sent messages by U.S. Postal Service.

The database includes the following:

Fellows	96
Senior Members	123
Members	105
Life Members	39
Associate Members	6
International Affiliates	11
Correspondent Affiliates	125
Honorary Members	1
Students	4
Total - January 4, 2016	510
Total - July 2015	498
Total - January 2015	474

The Shopping Cart continues to deliver Journal articles online. 350 NAFE Journal articles from 1995 to present are now available for download. The shopping cart has also been a valuable tool for distributing the link to large files, such as the BoD book, seminar powerpoints, and Journal.

Respectfully submitted, Michael D. Leshner, PE

Continuing Professional Development (CPD) Committee



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 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone jleffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, FL 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [X] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike @leshner.com
- [] TREASURER
 Jerry Scott Ogden, P.E.
 OEC Forensics
 P.O. Box 621519
 Littleton, CO 80162-1519
 (303) 795-1515 Phone
 jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
- [] PAST PRESIDENT Richard M. Ziernicki, Ph.D., P.E. Knott Laboratory, LLC 7185 South Tucson Way Englewood, CO 80112-3987 (303) 925-1900 – Phone rziernicki@knottlab.com
- [] DIRECTOR AT LARGE Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] DIRECTOR AT LARGE
 Marvin M. Specter, P.E.,L.S., F.NSPE,
 Honorary M. ASCE
 Executive Director Emeritus
 7 Douglas Place
 Eastchester, NY 10709
 (914) 779-6161 Phone
 specter@nafe.org

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1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

January 11, 2016

Memorandum

To: NAFE Board of Directors

From: Bruce Wiers, PE, Chairman CPD Committee

Re: CPD Committee Report

This is the second year members were able to submit their CPD activity through the NAFE website. (special thanks to Michael Leshner and others for their diligent work) The response to on-line submissions has been quite positive with over 90% of the membership choosing to submit on-line. We are still making improvements to the system as we receive feedback and suggestions.

Even though the CPD submission deadline was January 7, 2015, submissions are still being received. Given this, I don't feel comfortable recommending Board action on any members since by the board meeting they may be current.

There are 47 members whose total CPD credits for 2015 remain less than required. (100 CPD 5 year total for member and 50 CPD 5 year total for Associate members) Those in jeopardy remain well below a 5 year total of 100. Not included in this list are some of the new members which for some reason have not submitted their CPD's. I anticipate this list shrinking as we continue to receive CPD submissions. Prior to the July meeting, we will be contacting both new members and those on this list to resolve their CPD's. I will provide an updated list prior to the July 2015 meeting with a recommendation for Board action, if necessary.

	Mambar							2011-	CPD
Group	Member #	Contact Name	2011	2012	2013	2014	2015	2011-	Status
Fellow	# 743 F	Elvin L. Aycock	19	58	0	0	0	2013 77	Jeopardy
Fellow	477 F	Herbert S. L. Chock	0	0	0	0	0	0	Jeopardy
Fellow	264 F	James McDonagh	0	0	0	0	0	0	Jeopardy
Fellow	558 F	John A. Bakshis	41	0	0	0	0	41	Jeopardy
Fellow	608 F	John A. D'Onofrio	39	0	0	0	0	39	Jeopardy
Fellow	704 F	John D. Cosgrove	0	0	0	0	0	0	Jeopardy
Fellow	680 F	Paxton B. Starksen	0	0	0	0	0	0	Jeopardy
Member	617 M	John A. Tylawsky	0	0	0	0	0	0	Jeopardy
Member	410 M	Leonard C. Quick	0	0	0	0	0	0	Jeopardy
Member	759 M	Nasir M. Alam	23	0	0	0	0	23	Jeopardy
Member	600 M	Rene A. Castaneda	0	0	0	0	0	0	Jeopardy
Member	632 M	Richard K. Ladroga	0	0	0	0	0	0	Jeopardy
Member	499 M	Sisir K. Mukherji	50	0	0	0	0	50	Jeopardy
Senior Member	527 S	Adam Aleksander	0	0	0	0	30	30	Jeopardy
Senior Member	260 S	Bruce N. Bradley	24	32	0	0	0	56	Jeopardy
Senior Member	83 S	Frank H. Johnson	0	0	0	0	0	0	Jeopardy
Senior Member	667 S	Hans E. Naumann	45	44	0	0	0	89	Jeopardy
Senior Member	793 S	Jody F. DeMarco	0	0	0	0	0	0	Jeopardy
Senior Member	760 S	John C. Laughlin	28	0	0	0	0	28	Jeopardy
Senior Member	361 S	Leroy T. Gravatte	18	0	0	0	0	18	Jeopardy
Senior Member	701 S	Mark G. Soderlund	51	0	0	0	0	51	Jeopardy
Senior Member	271 S	Rodney G. Fuchs	40	0	0	0	0	40	Jeopardy
Senior Member	351 S	Werner Kloetzli	13	31	0	16	0	60	Jeopardy
Senior Member	107 S	William K. Kennedy	61	0	0	0	0	61	Jeopardy
Fellow	462 F	Dwight B. Pfenning	78	0	0	0	0	78	Jeopardy
Fellow	205 F	John Marcosky	32	26	0	0	0	58	Jeopardy
Member	787 M	Curtis M. Beloy	41	23	27	0	0	91	Jeopardy
Member	601 M	James A. Ruggieri	31	64	0	0	0	95	Jeopardy
Member	590 M	Lawrence E. Ita	0	69	0	0	0	69	Jeopardy
Member	771 M	Patrick Riedlinger	37	35	0	0	0	72	Jeopardy
Member	700 M	Robert F. Waite	45	0	0	0	0	45	Jeopardy
Member	668 M	S. Dale Fridley	51	0	0	0	0	51	Jeopardy
Senior Member	491 S	Andrew M. Knysh	33	41	0	0	0	74	Jeopardy
Senior Member	681 S	Barry A. Cik	23	36	14	0	0	73	Jeopardy
Senior Member	14 S	David R. Hall	35	32	0	0	0	67	Jeopardy
Senior Member	678 S	John T. Bell	60	37	0	0	0	97	Jeopardy
Assoc. Member	907AM	Michael McDowell					39	39	Watch
Assoc. Member	471 AM	Robin J. Davies							Watch
Fellow	797F F	Michael Plick	0	0	0	34	34	68	Watch
Fellow	30 F	Paul J. Halyard	20	0	40	37	0	97	Watch
Member	888 M	David Simpson					32.25	32.25	Watch
Member	889 M	Dennis Langer				49	27	76	Watch
Member	569 M	Efrain F. Camacho	21	23	18	19	4	85	Watch
Member	850 M	Frank Stephenson					0	0	Watch
Member	879 M	James McLoughlin			52		20	72	Watch
Member	587 M	Kenneth Wasson	32	19	15	16	8	90	Watch
Member	355 M	Mark E. Buchanan				16.5	31.5	48	Watch

Publications Committee



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 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
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(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

January 7, 2016

PUBLICATIONS COMMITTEE REPORT

President Armstrong:

- The NAFE Journal Volume 30 #2 (December 2013) is expected to be distributed the second week of January 2016. This Journal was the last Journal edited by Marvin Specter, and it was dedicated to him by the BOD. There will be no Volume 31 #1 produced; Volume 31 #2 was sent out in May of 2015.
- 2. The NAFE Journal Volume 32 #1 (June 2015) was distributed electronically on September 24, 2015, and mailed thereafter. This Journal was edited by Ellen Parson.
- 3. The NAFE Journal Volume 32 #2 (December 2015) is expected to be distributed in early February 2016.
- 4. A total of 50 electronic Journal papers were purchased in 2015 between July and December, bringing revenue of \$1,250.
- 5. Art Schwartz' assistant reports that no hardcopy Journals have been sold since May 2015. Two NAFE Books were sold in December 2015 for a total of \$190.
- Thanks largely to the efforts of Harold Josephs, an agreement is ready for BOD approval to publish NAFE Journal abstracts, volume data, and NAFE contact info with the indexing service Cengage Learning.
- As in the past, Michael Leshner and Ellen Parson have worked hard to facilitate electronic sales. Their efforts are invaluable and appreciated.

Regards,

John Leffler, PE

Publications Committee Chair

Technical Review Committee



Board of Directors

- [] PRESIDENT
 Jeffrey D. Armstrong, P.E.
 Armstrong Forensic Engineers, Inc.
 17844 North U.S. Highway 41
 Lutz, FL 33549
 (813) 948-8010 Phone
 jeff@armstrongforensic.com
- [x] PRESIDENT ELECT John P. Leffler, P.E. Forcon International 1730 Mt. Vernon Road, Suite H Atlanta, GA 30338 (770) 390-0980 – Phone ileffler@forcon.com
- [] SENIOR VICE PRESIDENT William C. Bracken, P.E. Bracken Engineering, Inc. 2701 W. Busch Blvd., Suite 200 Tampa, FL 33618 (813) 243-4251 – Phone wbracken@brackenengineering.com
- [] VICE PRESIDENT Michael D. Leshner, P.E. 47 N. Lockwood Road Elkton, MD 21921 (410) 964-0311 – Phone mike@leshner.com
- [] TREASURER Jerry Scott Ogden, P.E. OEC Forensics P.O. Box 621519 Littleton, CO 80162-1519 (303) 795-1515 – Phone jogden@oec4n6.com
- [] SECRETARY
 Paul G. Swanson, P.E.
 Facility Engineering Associates, P.C.
 12701 Fair Lakes Circle, Suite 101
 Fairfax, VA 22033-4910
 (703) 591-4855 Phone
 swanson@feapc.com
- [] PAST PRESIDENT E. Ross Curtis, P.E. 1123 Cannon Hill Road Hedgesville, WV 25427-5612 (304) 754-5560 – Phone curtiseng@frontier.com
- [] PAST PRESIDENT Paul R. Stephens, P.E. 862 Sunrise Boulevard Forked River, NJ 08731-3017 (609) 242-7707 – Phone stephenspe@verizon.net
- [] PAST PRESIDENT Richard M. Ziernicki, Ph.D., P.E. Knott Laboratory, LLC 7185 South Tucson Way Englewood, CO 80112-3987 (303) 925-1900 – Phone rziernicki@knottlab.com
- [] DIRECTOR AT LARGE Martin E. Gordon, P.E. Rochester Institute of Technology 144 Aspen Look Drive Henrietta, NY 14467 (716) 913-2912 – Phone megite@rit.edu
- [] DIRECTOR AT LARGE
 Marvin M. Specter, P.E.,L.S., F.NSPE,
 Honorary M. ASCE
 Executive Director Emeritus
 7 Douglas Place
 Eastchester, NY 10709
 (914) 779-6161 Phone
 specter@nafe.org

NAFE HONORS: E. Joyce Dixon, Founder and Executive Director (1982-1999)

National Academy of Forensic Engineers®

Chartered Affinity Group of the National Society of Professional Engineers (NSPE)
Charter Member of the Council of Engineering and Scientific Specialty Boards (CESB)
1420 King Street, Alexandria, VA 22314-2794

(o) 703.684.2845 (f) 703.836.4875 email: aschwartz@nafe.org website: www.nafe.org Arthur E. Schwartz, Esq., CAE, Executive Director

Please reply to: [X]

January 7, 2016

TECHNICAL REVIEW COMMITTEE "B" REPORT: July 2014 papers forward

President Armstrong:

The status of the fifteen Journal papers presented in July 2015 is as described below. These papers would nominally be slated for Volume 32 #2.

- Twelve papers are finishing revision; as of this writing, four of these are being typeset.
- 2. One paper was withdrawn by the author.
- 3. One paper awaits completion by the author and has not undergone peer review.
- 4. One paper awaits editing by the author following peer review.

Additionally, two older papers from prior conferences are in the early stages of peer review and will be published in a upcoming Journal.

The July 2016 conference has 15 presenters, with a morning General Interest session and a split afternoon session of Vehicles and General Interest.

Regards.

John Leffler, PE

Technical Review Committee Chair

John P. Leffler

NAFE1 Committee

NAFE Email Group (NAFE1) Committee Report

- 1.) <u>Background</u>. The NAFE email group (NAFE1) is a private email web-group that is open only to NAFE members, international affiliates, and outstanding correspondents. NAFE1 is hosted by Yahoo Groups at no cost to NAFE. Yahoo Groups hosts more than 1 million such discussion groups. NAFE1 was established as a private "unlisted" group in Yahoo Groups, such that only NAFE members are even reasonably likely to be aware of its existence. Even if others become aware of the existence of the group, they cannot obtain entrance to the group website. Membership is obtained by invitation only, and requires that a group Moderator initiate an invitation to the prospective member. The group website is located at http://tech.groups.yahoo.com/group/NAFE1/ and group members can communicate by sending emails to NAFE1@yahoogroups.com. Any email that is received from a group member is automatically broadcast to the entire group.
- 2.) <u>Administration</u>. The group functions under the authority and guidance of NAFE Operating Procedure # 11B. Rocky Ford and George Hall serve as the group Moderators and handle the routine operational requirements of maintaining the group. The group has been in existence long enough that it now functions with very little control needed from the Moderators.
- 3.) Membership. There are 143 members of NAFE1 as of January 13, 2009.
- 4.) <u>Activity</u>. During the 11 year history of the group, approximately 9750 emails have been transmitted.
- 5.) <u>NAFE Meetings Reminder</u>. Each email sent from NAFE1 contains information in the footer that can be changed by the Moderators. The following info is currently included at the bottom of each NAFE1 email;

Future NAFE Meetings;

Jan 22-24, 2016; Tampa, FL - June 24-26, 2016; Dallas, TX -

Visit the NAFE website at http://www.nafe.org

6.) Member Satisfaction. No polls have been conducted to assess member satisfaction. However, since members can unsubscribe from the group at any time, it stands to reason that most members are satisfied with the group and the communication ability they obtain from it. Over the 11year history of the group, 9 members have resigned from the group after joining. Most of these resignations occurred during the 1st year, and are thought to be from members who didn't understand that they would receive a significant amount of email as a group member. Members may unsubscribe simply by clicking a link at the bottom of any NAFE1 email.

Submitted by Committee Chairs;

George Hall, P.E.

Rocky Ford, P.E.

Legislative Committee

E. ROSS CURTIS, P.E., D.F.E., F.ASCE, F.NSPE

1123 CANNON HILL ROAD • HEDGESVILLE, WV 25/427

(304) 754-5560 • Fax: (304) 754-5561 curtiseng@frontier.com

MEMORANDUM

January 5, 2016

From: Ross Curtis, NAFE Legislative Committee Chair

To: Jeff Armstrong, 2015 NAFE President

Subject: January 2016 Legislative Committee Report

As requested, I respectfully submit the following report for our committee and Board of Directors meetings, January 22, 2016 in Tampa, FL:

- 1. Just before the expiration of FY 2015 appropriations bill, with strong bipartisan support, Congress passed the FY 2016 Omnibus Bill that provides funding for the Federal Government through October 31, 2016. It is my understanding that most programs were funded at only slightly less than FY 2015 levels.
- 2. On December 5, President Obama signed the Fixing America's Surface Transportation (FAST) Act into law. The conference report was approved overwhelmingly in the House of Representatives by a vote of 359-65 and an equally impressive tally of 83-16 in the Senate. A comprehensive five-year/\$305 billion surface transportation authorization, this law is the culmination of a decade of 36 short-term extensions. The passage of the FAST Act will enable PEs to properly plan, design, implement, construct, operate and maintain our nation's infrastructure systems without lurching from one-short-term extension to another. (NSPE Issues and Advocacy, Latest News)
- 3. In light of Capitol Hill's preoccupation with the repeal of the Affordable Care Act (Obama Care), countering President Obama's executive actions with respect to gun control, and the 2016 elections, my sources and I believe that there will not be much, if any, national legislative action that will affect professional engineers or the practice of forensic engineering in 2016.

Contract Documents Committee

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use.

Guide to Assist in Production of Either Long or Short Forms of Letters of Agreement Between Clients and Engineers for Forensic Engineering Services

Prepared By

CONTRACT DOCUMENTS COMMITTEE OF THE



NATIONAL ACADEMY OF FORENSIC ENGINEERS

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Guide to Assist in Production of Either Long or Short Forms of Letters of Agreement Between Clients and Engineers for Forensic Engineering Services

INTRODUCTION

These forms for letters of agreement are intended for use with the relatively routine type of forensic engineering assignments. For more complex cases, such as those requiring significant staff assistance; outside employees; special equipment use; or sub-experts, an attorney should be consulted to draft a more comprehensive agreement.

A typical contract package consists of a cover letter, either a short form or long form "Letter of Agreement" (the contract document itself), and an addendum which is a fee schedule (billing policy). These documents are for use by National Academy of Forensic Engineers (NAFE) members more as examples than as documents necessarily suited to any individual engineer's forensic practice. No suggestion is made as to which clauses or that all clauses should be used. Each member is encouraged to retain independent counsel to review his draft of what he feels is necessary for him and his clients needs. NAFE and its members specifically disclaim any representation that these forms are necessarily legally sufficient or that they contain all conditions necessary to protect the user in all situations. For example, the great majority of NAFE members have a clause in their document that restricts the interruption of the contract or letter of agreement to the laws of the resident state of the NAFE member. We strongly recommend that all NAFE members follow this practice.

The difference between the SHORT FORM (single-page letter of agreement) and LONG FORM (more than one page of conditions and restrictions) is a matter of preference. Many forensic engineering firms use a single-page "Letter of Agreement" covering the same basic conditions with a cover letter and attached STANDARD BILLING POLICY. The term "Letter of Agreement" is every bit a contract document but sounds less threatening even if a retainer is demanded. On the other hand, you may need a longer and more complete contract document. The choice is up to you and your lawyer, based on your or your client's history and your success in timely receipt of payments due.

Clauses in the **ADDITIONAL CONDITIONS** section are ones which the committee found were less frequently used by the members. With the exception of the copyright clause, no inference should be drawn from the placement of clauses or that the committee recommends any particular clause be used or nor used in any particular case. When using all or any part of these contract documents, NAFE considers the copyright clause mandatory.

Four different cover letters are offered. All cover letters should provide an introduction to what is attached [e.g., letter of agreement, standard billing policy (fee schedule), curriculum vitae, firm's brochure, etc.]. The cover letter should also state what actions the addressee is expected to take (e.g., sign, date, and return a copy of the contract, submit the quoted retainer, etc.). Form Letter One serves as an actual fee agreement which the client executes and returns. Cover Letter Two serves as an acknowledgment of the engagement but does not require execution. Cover Letter Three requires execution but is intended as a file document to cover future engagements with the party and to permit use of the other acknowledgment form letter in future cases. Cover Letter Four serves as estoppel and acknowledgment when Cover Letter Three is on file. The choice among the forms is, in part, a legal question which ought to be answered by counsel, depending on local law. It may also be a question of client relations depending on the practice within a particular community or in an ongoing relationship where the more informal acknowledgment letter may be the more appropriate. All cover letters should be personalized to some extent and should be brief and to the point.

SHORT FORM CONTRACT GUIDELINES

The following is an explanation of the typical Short-Form Contract found on page 5.

Paragraph 1. This is distinguished from the practices of some other professionals.

Paragraph 2. This paragraph would only be used if the retainer is held as security for payment.

Paragraph 3. A paragraph such as this is used to cover any later effort to shift responsibility for payment of the engineers' fees and costs. It permits the engineer to rely upon the integrity of the contact person and places the burden on that person to solve the problem of his or her principal's responsibility or of changing personnel.

Paragraph 4. This has a similar function to paragraph 3, but it also treats the fact that public employees are generally known not to be acting on their own account. A warrant of authority may attach liability for breach even without direct responsibility for payment.

Paragraph 5. This type of paragraph avoids the problem of attempting to collect from the other side for responding to discovery. Since the engineer has no contract with the other side, this provision makes the client responsible for all time spent by the engineer and, if need be, leaves the ultimate responsibility of recovering from the other side up to the client.

Paragraph 6. This is just one of many ways to handle this. As drafted, this clause simply assures the engineer of receiving at least the same compensation as he or she would have received if working in the office. Some firms charge a per diem rate for work performed outside their resident county or state.

Paragraph 7. This deals with the problem of wasted time, by whatever it is caused. Also in common use is the requirement of an advance payment from the other side, but this is not the sort of thing for which one's own client needs to be made responsible. Also, such a practice depends heavily upon local rules and practices.

Paragraph 8. In some specialties, engineers bill only at the end of a case. Local and specialty practice should determine the use of this paragraph. Even in areas of single billing, the permissive form shown here at least gives the engineer the option.

Paragraph 9. This is typically handled in one of two ways. Some engineers guarantee a constant rate throughout. Others choose to reserve the option to escalate to cover inflation or significant improvements in productivity where the case lasts a number of years.

Paragraph 10. The late fee is stated as a permissive right on account of those many corporate clients who simply can't process a bill within 30 days. The provision shown here for the collection of costs is an example of a particularly strong provision.

Paragraph 11. This avoids the problem where wishful thinking turns an estimate into a quote.

Paragraph 12. A clause stating the legal jurisdiction and the law that will be used to interpret the contract is STRONGLY RECOMMENDED. This may reduce the costs to the engineer if litigation is required for collection of fees and expenses. A lawyer should be consulted to provide this clause which may have legal ramifications as to precise wording and type of font.

Paragraph 13. This paragraph has two functions. For the Academy, it limits the use of the contract documents to members in good standing. For members, it serves to convey the NAFE imprimatur.

There are thirty-one (31) additional sample clauses that follow. No guides are provided for the use of these clauses. If you prefer greater detail and restrictions in your contract/letter of agreement, these additional sample clauses should be considered. The only difference between a short form (single-page letter of agreement) and a long form (multi-page contract) is basically personal preference, the needs of your practice, and the law of your residence jurisdictions.

NOTE: Since many engineering firms are professional corporations, and where the context does not demand otherwise, the pronoun "it" is generally used to refer to the engineer. Each user should revise as may be appropriate.

GUIDELINES FOR FEES

Particular aspects of the fee schedule (standard billing policies) and conditions are discussed in the following paragraphs.

HOURLY RATES. The various hourly rates and retainer arrangements shown are merely examples and are not suggestions that these different arrangements should be used. It is strictly a matter of one's individual practice and preference. A premium hourly rate or minimum number of hours charged is fairly common for trial or deposition testimony, presumably on the basis that such work is unusual and highly demanding. Relatively few give a lower rate for lengthy travel time or other less productive time, although it would seem that if a premium charge is added for demanding time, a break might be considered for necessary but relatively non-productive time. For some members, the question involves determining the extent to which forensic engineering competes with one's regular work.

Overtime hours are only very rarely charged and then only when short notice in the particular case makes overtime necessary.

Retainer policies are not ordinarily a part of standard fee conditions, mainly because retainers may need to be completely individualized from case to case. Retainers may be used for a number of purposes. They may serve as security for payment of the bill, in which case the security is applied to the final bill. They may serve as a down payment, in which case the retainer should take into consideration the amount of work initially contemplated, including travel. A supplementary retainer may be useful to cover costs for work not originally anticipated. They may also serve as a means of guaranteeing a minimum income for having agreed to handle the case. You may have several billing policies, (e.g., one with a retainer and the terms of the retainer, and one which does not require a retainer). In this computer age, creating such variations is a simple matter.

The engineer should consider that any work or expense incurred without having a retainer on hand to pay for such work, may experience difficulty in collecting payment. To preclude such difficulty, consideration should be given to requiring payment by cashier's check or money order, along with the signed contract being sent by overnight delivery. Alternately, the signed contract can be sent by facimile and the money deposited to the engineer's account by bank wire transfer.

COST AND EXPENSES. Listing of standard costs and expenses is fairly common, particularly for those elements which are not specifically "out of pocket" for the particular case. These commonly involve photocopies, specialized computer use, photographs, and in-house secretarial or clerical help, if billed at all. Except for "out of pocket" costs, these types of expenses probably do not differ from one's individual engineering practice and the same policy may be followed.

The policy of charging costs "plus" for miscellaneous "out of pocket" expenses is very individualized. It may be not be justified if a major accounting effort is required to keep track of costs and expenses.

(The remainder of this page is left blank intentionally.)

Page 1 of 3 — Typical Document Package for Short-Form Contracts

Form Letter One

Use where client to return signed copy.

RALPH A. EXPERT, P.E. Consulting Engineer 123 Main Street Anytown, IA 60606
July 20, 1999
Able Advocate, Esquire 456 Elm Street Somewhere, IL 50505
Re: Cain v. Able
Dear Mr. Advocate:
This letter will confirm my agreement with you concerning my services on the above referenced case as a consulting forensic engineer on the above referenced case.
(A Scope of Services statement may be included here. Refer to Paragraph 26 on page 13.)
Please review the Conditions of Professional Engagement and Fee Schedule which are attached. Unless there is some problem or question about them, please date and sign the attached copy of this letter and its attachments and return them to this office. If there are any questions, please don't hesitate to contact me.
I welcome the opportunity to work with you on this matter.
Very truly yours,
Ralph A. Expert, P. E.
Ralph A. Expert, P.E.
RAE/abc Attachments
Terms and conditions accepted by:

Date

Signature

Page 2 of 3 — Typical Document Package for Short-Form Contracts Form Letter One

Use where client to return signed copy.

- 1. All time is measured portal to portal.
- Retainer will be held until the conclusion of this agreement and at the client's discretion may be credited against final bill. Unused funds will be returned.
- 3. The individual signing this letter of work authorization/contract/letter of agreement warrants his or her authority to bind the firm. In the event responsibility for the case changes hands, no entity is relieved of responsibility without written approval of the engineer.
- 4. In the event the individual addressee is employed by a public agency and the public agency is to be responsible, the individual addressee warrants his or her authority to bind the public agency unless otherwise stated in writing or unless the agreement is executed by the appropriate authority.
- 5. The client is responsible for paying all fees and expenses of the engineer related to the engagement. This shall include activities in response to discovery efforts by other parties. As a courtesy, if the client wishes, the engineer will bill opposing parties for time and expenses involved in responding to discovery. Credit will be given for payments received pursuant to this billing.
- 6. Trips requiring overnight stays will be billed for time spent on the case between 8:00 AM and 5:00 PM or such greater time as is actually worked and traveled.
- 7. Engineer reserves the right to bill lost or wasted time in the event of a cancellation, whether the cancellation is caused by the client or the opposing side.
- 8. Fees and expenses may be billed monthly or as time and expenses accrue unless other arrangements are made with the engineer.
- 9. Rates are subject to change on a calendar year basis without other notice.
- 10. Payment is due from the client within thirty (30) days of the invoice unless different arrangements are made with the engineer. The engineer reserves the right to charge a late fee of 1 1/2% per month, or fraction thereof, on all invoices not paid within thirty (30) days of receipt by the client. The client shall pay any and all collection costs, including any legal fees and costs, plus appellate fees, incurred by the engineer in connection with the collection of its account.
- 11. Unless expressly agreed by the engineer in writing, any cost estimates for services stated are for the client's budgeting purposes only and are not quotes which are binding on the engineer.

12	hese Conditions of Professional Engagement (Contract) shall be interpreted according to the laws of the Star	te
	f	

13. These terms and conditions, including the form of the fee schedule, were derived from material copyrighted by the National Academy of Forensic Engineers. The academy reserves all rights to its copyrighted forms, except that members and affiliates in good standing, are automatically licensed by the Academy to use its forms in part or in whole for their own professional practice.

For: WEREXPERTS &	& ASSOCIATES, INC.	Work Authorized f	or:
Ву:	Date:	By:	Date:

Page 3 of 3 — Typical Document Package for Short-Form Contracts

Form Letter One

Use where client is to return a signed copy.

FEE SCHEDULE

HOURLY RATES

Regular hourly rate	\$	/hr.
Trial or deposition testimony	\$	/hr.
Travel time rate (if over hour)	\$	/hr.
Overtime hourly rate (Holiday, weekend, or non 8AM to 5 PM)	\$	/hr.
Minimum fee	\$	
Retainer - established client	\$	
Retainer - new client, if scene inspection is not required. (If scene inspection is required, retainer will depend upon		
estimated additional travel time and costs.)	\$	
Secretarial, clerical, staff	\$	/hr.
COSTS AND EXPENSES		
Photocopies	\$	
Auto mileage	\$	/mi.
Computer use	\$	
Photographs (3.5 x 5) or (4 x 6)	\$	
Enlargements (8×10)	\$	
Other: travel, long distance calls, exhibit materials, shipping, FAX, subcontracted services, etc.	Our cost + X%	

Cover Letter Two

Use where letter is to serve as an estoppel and acknowledgment.

RALPH A. EXPERT, P.E. Consulting Engineer 123 Main Street Anytown, IA 60606

July 20, 1999

Able Advocate, Esquire 456 Elm Street Somewhere, IL 50505

Re: Cain v. Able

Dear Mr. Advocate:

This letter will confirm my agreement with you concerning my services on the above referenced case as a consulting forensic engineer.

(A Scope of Services statement may be included here. Refer to Paragraph 26 on page 13.)

Your attention is respectfully invited to the Fee Schedule and Conditions of professional engagement which are attached. I consider these conditions to be a binding part of our agreement unless I hear from you promptly. If there is a problem or question, please contact me before I do further work on the project.

I welcome the opportunity to work with you on this case.

Very truly yours,

Ralph A. Expert. P. E.

Ralph A. Expert, P.E.

RAE/abc attachments

Cover Letter Three

Use where client to sign and return copy to serve in present and future cases.

RALPH A. EXPERT, P.E. Consulting Engineer 123 Main Street	
Anytown, IA 60606	
May 30, 1997	
Able Advocate, Esquire 456 Elm Street Somewhere, IL 50505	
Re: Cain v. Able	
Dear Mr. Advocate:	
Thank you very much for retaining me as a consulting forensic	engineer on this case.
(A Scope of Services statement may be included here. Refer to	Paragraph 26 on page 13.)
Since our records indicate that we have not worked together be my fee schedule.	before, I am enclosing my standard terms and conditions, including
A second copy of this letter and the attachments are enclosed enclosure to me at this office, together with any retainers which	ed. Please sign and date where indicated and return the complete h have not yet been paid.
Thank you again. I welcome the opportunity to work with you	on this matter.
	Very truly yours,
	Ralph A. Expert, P.E.
	RALPH A. EXPERT, P.E.
RAE/abc attachments	
Terms and conditions accepted.	
Name	Date

Cover Letter Four

Use where letter is to serve as estoppel and Acknowledgment when Cover Letter Three is on file.

RALPH A. EXPERT, P.E. Consulting Engineer 123 Main Street Anytown, IA 60606

July 20, 1999

Able Advocate, Esquire 456 Elm Street Somewhere, IL 50505

Re: Cain v. Able

Dear Mr. Advocate:

Thank you very much for retaining me as a consulting forensic engineer on the above referenced case.

(A Scope of Services statement may be included here. Refer to Paragraph 26 on page 13.)

Since you have used my services in the past, you understand my fee schedule and the standard terms and conditions. A copy of the current materials are enclosed (with any changes noted where appropriate). I consider these terms to be a binding part of our agreement unless I hear from you promptly. If there is any problem or question, please contact me before I do any more work on the project.

I welcome the opportunity to work with you on this case.

Very truly yours,

Ralph A. Expert, P..E.

Ralph A. Expert. P. E.

RAE/abc enclosures

ADDITIONAL CONDITIONS

NOTE: The contract clauses which follow are included in this appendix primarily because of their perceived limited usefulness in the ordinary forensic engineering engagement agreement. The user should not infer from this placement that these clauses are in any way unimportant. Depending on the engineer's particular practice and upon the particular types of cases routinely undertaken, many of these clauses may be appropriate for regular inclusion in an engineer's form contract. Others may be useful only when special circumstances arise in a case.

- 1. The client agrees to inform the engineer of all history, facts, relationships and circumstances relevant to this agreement or to the engineer's assignment which are available to the client. The client further agrees to advise the engineer of the disposition of the case on a timely basis and to advise whether or not there will be future need for the engineer's services in the matter.
- 2. The client agrees to be responsible for and to make all necessary provisions for the engineer to have access upon such public or private land as is necessary for the engineer to perform its investigation and services.
- 3. In the event the engineer is a professional service corporation, however denominated, the engineer shall select one professional engineer from its staff as the prime engineer-in-charge of the project, which engineer shall have the necessary qualifications to serve as an expert witness in cases of this type, and which engineer shall be specifically approved by the client.
- 4. Confidentiality. The engineer agrees that client's identification and all information obtained from the client is and shall remain confidential and that the engineer shall not release any information to any third party without the express permission of the client or a specific court order or subpoena. The engineer shall not respond to any subpoena, court order or request therefor without first giving the client reasonable notice of the request, subpoena or court order.
- 5. The client agrees that the engineer's name and identity may not be used in connection with this or any other case, in negotiations or otherwise, without payment of the engineer's minimum fees.
- 6. The engineer shall keep detailed records of the investigation undertaken with respect to the incident in question which records shall include notes, sketches, drawings as may be made necessary, and photographs which will illustrate the findings of the engineer. The engineer shall consult with the client at an early date to determine whether photographs should be standard print photographs or slides or a combination of both.
- 7. Throughout its investigation, the engineer shall keep the client apprised of the status and results of the investigation. Status reports may be oral or written, as may be appropriate under the circumstances; provided, however, that no written reports shall be provided unless required by the client.
- 8. To the extent possible or permissible, the engineer will take custody of and maintain safe and secure any physical objects or articles requested by the client which the engineer determines may be useful in describing the findings of the engineer to others, or which the engineer determines ought to be subjected to special testing. The engineer will use reasonable care to safeguard such objects or articles; however, the engineer will not be liable for the loss or destruction of such objects or articles if such loss or destruction was beyond the control of the engineer.
- 9. Research, reports, drawings and other documents prepared by the engineer are instruments of service and shall, unless otherwise agreed, remain the property of the engineer. The client may retain copies, but the information contained therein may not be used on any other case or project without the express written consent of the engineer. The engineer reserves the right to copyright documents prepared by the engineer as instruments of service, subject, of course, to the license of the client thereunder, for its own purposes. This provision is designed for the protection of the engineer's interests in the event the requirements of discovery suggest a widespread dissemination of the engineer's prepared documents unconnected with litigation arising from this case.
- 10. The engineer shall have a possessory lien on all physical objects, papers or articles in its possession to the extent of the amount of any unpaid or overdue invoices.

- 11. The client agrees to be responsible for and to make all necessary provisions for legal counsel appropriate to the pursuance of this agreement and for compliance with the requirements of pertinent laws, ordinances and regulations.
- 12. The engineer agrees and warrants that it will provide the client with its best professional thought and judgment in performing the agreed services. The client agrees that no other warranty, responsibility or liability shall pertain and any liability which the engineer may incur herefrom shall not exceed the amount of its professional fee.
- 13. The engineer is retained and employed by the client only for the limited extent of serving as a forensic consulting engineer, and the engineer's relation to the client shall, during the periods of rendering the services hereunder, be that of an independent contractor. The engineer shall be free to dispose of such portion of its time, energy and skill during regular business hours as is not required for service to the client in such a manner as it may see fit and for such persons, firms or corporations as it may deem advisable. The engineer shall not be considered eligible under the provisions of this agreement or otherwise in any of the client's group insurance plans or worker's compensation benefits, nor shall the engineer be entitled to participate in any other plans, arrangements or distributions by the client pertaining to or in connection with a pension, stock bonus, profit sharing or similar benefits for their regular employees.
- 14. Any opinions which may be given by the forensic engineer are given only in the context of being potentially useful as testimony in court. Because standards of proof for admissibility may differ from the standards of certainty in the engineer's practice area, caution and inquiry may be appropriate before utilizing the engineer's opinion in any specific application.
- 15. The engineer shall not be held liable for any delay or failure to perform the assignment which is the subject of this agreement if such delay or failure is caused directly or indirectly by fire, flood, explosion or other casualty, strike, labor disturbance, state of war, insurrection, riot, government regulations, either existent or future restrictions, appropriations, or any other cause beyond the control of the engineer.
- 16. The client shall indemnify, defend and hold harmless the engineer, its agents, employees and subconsultants from and against any and all liability, including but not limited to defense costs, resulting from injury to or death of any person or damage to any property including but not limited to, loss of use thereof, or any other damage or loss, arising out of or alleged to arise out of or in any way connected with the activities carried out pursuant to this contract excepting only such claims or losses arising out of the sole negligence or willful misconduct of the party seeking indemnification hereunder. The client shall, upon engineer's request, defend any action, claim, suit, arbitration or other proceeding asserting a claim covered by this indemnity. Client shall pay all costs that may be incurred by the engineer, its agent, employees and subconsultants in enforcing this indemnity including reasonable attorney's fees.
- 17. The engineer shall be responsible for its activities and that of its employees and consultants on the job site. This shall not be construed to relieve the client or his general contractor and subcontractors of their obligation to maintain a safe job site. Neither the professional activities nor the presence of the engineer or its employees or consultants shall be understood as control of the operations of others nor shall it be construed to be an acceptance of the responsibility of job site safety. Neither the engineer nor its field representatives will direct, supervise or lay out the work for the client, contractor or subcontractor. The engineering services will not include a review or evaluation of the adequacy of the contractor's safety measures on or near the project site unless such measures are issues in the case being investigated.
- 18. The engineer represents and warrants that it and its agent, staff and consultants employed by it is and are protected by worker's compensation insurance and the engineer has such coverage under public liability and property damage insurance policies which it deems to be adequate. The engineer shall not be responsible for any loss, damage or liability beyond the amounts, limits and conditions of such insurance.
- 19. The engineer has instituted policies of hiring which are in accordance with the federal Civil Rights Act of 1964, the Fair Employment Practices laws of the states in which the engineer hires and in compliance with Presidential Order 11246. The engineer attempts to maintain a staff of capable, loyal, conscientious individuals, without regard to race, creed, color, age, origin or sex.
- 20. The engineer reserves the right to use certain proprietary computer programs to which it has access. These computer programs may be owned by the engineer or leased or otherwise available to the engineer. The engineer may charge

separately for the use of such programs and such charges shall not entitle the client to any disclosure of the computer instruction format in part or in whole.

- 21. This agreement is to be covered by the law of the principal place of business of the engineer.
- 22. All disputes for collection of monies due under this agreement, except as otherwise herein provided, shall be submitted to binding arbitration in accordance with the construction industry arbitration rules of the American Arbitration Association. Arbitrable issues under this paragraph shall be limited to the engineer's enforcement of the charge by the engineer under this agreement, exclusive of any counter, cross or offsetting claims with other clients. The following claims shall not be arbitrable: cross claims or offsetting claims for losses or damages, regardless of whether such claim arises out of or relates to services performed by the engineer under this agreement. Enforcement and execution of any arbitrational award in favor of the engineer entered pursuant hereto shall not be stayed pending resolution of any such cross claims or offsetting claims by a court of law.
- 23. **Depositions**. The parties who requested or served notice upon the expert for a deposition are usually the ones responsible for payment of the expert's normal deposition fees and expenses. An advance payment for the first (H hours) should be paid to the expert on or before the date of the scheduled Deposition. Fees and expenses in excess of that covered by the advance payment will be billed to the client and/or the counsel requesting the deposition, and are due and payable upon receipt of the invoice. The expert's fees for a deposition include the time for reading and signing the transcript, since the expert will not waive his rights to read and sign the deposition.
- 24. The client shall be responsible for providing complete and accurate information regarding the nature, extent and objectives of the assignment to the consultant.
- 25. Release and Hold Harmless Agreement. The Client or signatory of the retainer agreement or requestor of services or receiver of services and any other person, firm, or corporation having an ownership or management interest in said firm, their heirs, clients, executors and assigns hereby agrees to release and hold harmless <u>Consultant's Name</u> and any and all personnel associated with or employed by said firm including any and all heirs, assigns, or successors from any and all claims and demands of any kind including all claims and demands for personal injury, property damage and death, whether said injuries be known or unknown, including the known and unknown consequences of said injury which may be suffered or sustained in connection with or associated with said services or relationship.
- 26. **Scope of Services Statement.** Briefly state the purpose and nature of the investigative services to be performed, or the nature of the services to be provided, for example:

Accidents:

Accident reconstruction.

Assessment of factors leading to cause of accident.

Development of opinions regarding responsibility.

Construction:

Investigation of defects and/or damage.

Assessment of construction standards related to defects and damage.

Develope opinions regarding responsibility.

The statement may be as detailed or as brief as you shall consider appropriate for your situation. The statement should be related to the specific site, subject and/or incident whenever possible. You should indicate your availability to serve as an expert, and any limitations on your services which may be relevant to the project under consideration.

ADDITIONAL CONDITIONS

NOTE:

The contract clauses which follow are included primarily because of their usefulness in certain states, e.g. California, which have mandated that a written contract for professional services must be signed prior to commencing work by Professional Engineers and Professional Land Surveyors, effective January 1, 2001. New paragraphs 27 through 31 are items which must be included in the written contract. There may be exemptions or exceptions to these requirements in California and other states; therefore you should check with your local attorney or counselor to assure that you are in compliance with the laws of the state or jurisdiction where you are offering your consulting services.

- 27. A description of the services to be provided by the Professional Engineer or Professional Land Surveyor. (See paragraphs 24 and 26 above.)
- 28, A description of any basis of compensation applicable to the contract, and method of payment agreed upon by the parties. (See also the information contained on page 5, Terms and Conditions, and page 6, Fee Schedule.)
- 29. The name, address, and state license or certificate number of the Professional Engineer or Professional Land Surveyor, and the name and address of the client.
- 30. A description of the procedure that the Professional Engineer or Professional Land Surveyor and the client will use to accommodate additional services.
- 31. A description of the procedure to be used by any party to terminate the contract.

Items 27 through 31 above are mandatory in California, and are worthwhile additions to any contract document used by NAFE members.

(The remainder of this page is left blank intentionally. This is the end of the NAFE Contract Document.)

Revised Page 6, Item No.13, July, 2008

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use.

Guide for Preparation of Letters of Agreement Between Consultants and Sub-consultants to Provide Forensic Engineering Services to Consultant's Clients

 $\begin{array}{c} \textit{Prepared By} \\ \textit{CONTRACT DOCUMENTS COMMITTEE OF THE} \end{array}$



NATIONAL ACADEMY OF FORENSIC ENGINEERS

Revised Page 5, Item No. 10, July, 2008 ©National Academy of Forensic Engineers, 2001

Guide for Preparation of Letters of Agreement Between Consultants and Sub-consultants to Provide Forensic Engineering Services to Consultant's Clients

INTRODUCTION

This form for letters of agreement is intended for use between two forensic engineering consultants, where one (hereinafter called "consultant") is providing forensic services to a client, and requires either special expertise, or additional expertise in order to meet the needs of the client. The client may be the one requesting the additional assistance, or the consultant may recognize the need for additional assistance. Approval for the additional expert(s) must be obtained from the client prior to performing work.

The client should be provided with the identity of the sub-consultant(s) and a statement describing the sub-consultant's scope of services, if different than that of the consultant, or a statement confirming that sub-consultant's services will be in support of the consultant's scope of services. If the sub-consultant has expertise different than that of the consultant or may otherwise be called upon to serve as an expert witness, the client should be provided with a copy of the sub-consultant's Curriculum Vitae. The client should further be advised whether the sub-consultant's fee and charges are covered by the consultant's rate schedule or in what manner the sub-consultant's charges may be incurred by the client.

These documents are for use by members of the National Academy of Forensic Engineers (NAFE) and are intended as examples rather than documents suited to any particular engineer's practice. No recommendations are made as to whether some or all clauses should be used. Each member is encouraged to retain independent counsel to review his draft of what he feels is necessary for his particular practice.

NAFE and its members specifically disclaim any representation that these forms are necessarily legally sufficient or that they contain all conditions necessary to protect the user in all situations. When using all or any part of these contract documents, NAFE considers the copyright clause to be mandatory.

GUIDELINES

A brief explanation of the purpose for each paragraph in the Example Agreement is given below.

Paragraph 1. This paragraph identifies the consultant and his business, so that the prospective sub-consultant will know who he represents during the course of providing services to the consultant's clients.

Paragraph 2. This paragraph requires that the identity of the consultant is to be used only when duly engaged by the consultant for a specific project or case.

Paragraph 3. This paragraph is to make clear that engagements by the consultant are optional, and may be accepted or rejected by the sub-consultant.

Paragraph 4. This paragraph specifies the rates to be paid for the sub-consultant's services, and the reimbursement rates for expenses.

Paragraph 5. This paragraph specifies the time period for payment of fees and reimbursement of expenses, so that both parties know when payment is expected and has been agreed upon. The consultant should probably require his client to maintain an adequate retainer on hand so that sub-consultant's payment of fees and expenses can be made in a timely manner and without the problem of collection of fees from the client. Alternately, the consultant may want to change the number of days for payment to 60 or 90 days, or insert a statement that fees will be paid to the sub-consultant within 30 days of receipt of payment from the client.

Paragraph 6. This paragraph is to establish the conditions under which the sub-consultant operates. He will be considered a self-employed independent contractor, who is responsible for paying his own taxes, Social Security, and other overhead associated with operating a business. The Internal Revenue Service has guidelines and typical characteristics which define the term "independent contractor", and the conditions which must be met by anyone claiming to be an independent contractor. Both the consultant and the sub-consultant should refer to Federal Publication No. 15, Employer's Tax Guide, to make sure that they meet the required guidelines.

Paragraph 7. This paragraph specifies the ownership of all documents provided to and/or produced by the sub-consultant during the course of the assignment.

Paragraphs 8 & 9. These paragraphs specify the length or ending date of the contract. Alternately, a specified or expected advance notice is to be given in writing to terminate the agreement.

Paragraph 10. This paragraph identifies the source of the contract document as being copyrighted material of the NAFE, which member consultant's are licensed to use in their forensic business.

EXAMPLE AGREEMENT

FORENSIC CONSULTANTS, INC. 54321 Somewhere Drive Sioux Town, ND 77777 Phone No. & Fax No.

Date 12, 2001

Mr. Sam A. Subcontractor Consulting Expert 1234 Second Street Anytown SD 75599

Re: Sub-consultant Agreement

Dear Mr. Subcontractor:

FORENSIC CONSULTANTS, INC. is pleased to confirm in writing our intention to engage your services as a Sub-consultant, if you are in agreement with the following terms and conditions:

- 1. You agree to cooperate with and operate under the style and name of FORENSIC CONSULTANTS, INC. in the providing of technical and/or professional services to our clients in industry, government, insurance, and legal professions.
- 2. In your fields of technical and/or professional competence, you will operate under the style of FORENSIC CONSULTANTS, INC. **only** on assignments provided or referred through this office.
- 3. FORENSIC CONSULTANTS, INC. will offer you assignments in your fields of competence, which you may accept or decline.
- 4. Your compensation for time spent on assignments and chargeable to clients, will be done at the rates specified below, plus expenses at cost plus ten (10) percent. Automobile travel will be reimbursed to you at the current rate allowed by the Federal Government for tax deductible business purposes.
- 5. You will receive payment for your time and expenses within 30 days after your itemized billing information is received for the services rendered.
- 6. A Federal Form 1099-Misc, will be filed covering all compensation paid to you each year, in accordance with regulations of the Internal Revenue Service. You are responsible for paying all of your own taxes, since you are an independent contractor, and are in charge of your own work. Refer to Federal Publication No. 15, Employer's Tax Guide.

- 7. All file materials generated and/or provided to you on project assignments are the property of FORENSIC CONSULTANTS, INC., and must be returned upon project completion.
- 8. This agreement will continue in effect until 30 days after a written notice of termination by either party. All open projects, if any, shall be completed as soon as possible within the 30 days following the termination notice.
- 9. Alternately, if indicated below, this agreement is for: (a) the duration of the specified project only, and will terminate upon completion of the project assignment, or (b) for a specified period of time.
- 10. These terms and conditions, including the form of the fee schedule, were derived from material copyrighted by the National Academy of Forensic Engineers (NAFE), who reserves all rights to its copyrighted forms. All NAFE members and affiliates in good standing are automatically licensed by NAFE to use its forms in part or in whole for their own professional practice.

For FORENSIC C	CONSULTANTS, INC.		
Richard A. Ma	inman, P.E., Pres.		
Agreement Da	te:	-	
(a) Project Iden	ntification:		_ and Termination Date:
(b) Unspecified	d Project Terminatio	n Date:	
Accepted by:	Sam A. Subcontract		Date:
Soc Sec No.			
Fee Schedule:	Regular services	\$	/hr
	Travel time	\$	/hr
	Depositions	\$	/hr, minimum 2 Hours
	Courtroom/Trials	\$	/day, minimum 1 Day

EXAMPLE COVER LETTER

FORENSIC CONSULTANTS, INC. 54321 Somewhere Drive Sioux Town ND 77777 Phone No. & Fax No.

Date 12, 2001

Mr. Sam A. Subcontractor Consulting Expert 1234 Second Street Anytown SD 75599

Re: Sub-consultant Agreement

Dear Mr. Subcontractor:

In accordance with our previous discussion, we submit herewith our proposed agreement wherein you will provide sub-consultant forensic engineering services to the firm of FORENSIC CONSULTANTS, INC. until our agreement is terminated by either party.

(Alternately, this introduction may read as follows:)

In accordance with our previous discussion, we submit herewith our proposed agreement wherein you will provide sub-consultant forensic engineering services to the firm of FORENSIC CONSULTANTS, INC. in the matter of Injured Party v. Any Widget Corp. until the matter is completed or resolved. Your duties are as follows: (Outline here the scope of work to be accomplished by Mr. Subcontractor, and to whom he is to report his findings.)

We look forward to working with you.

Very truly yours,

Richard A. Mainman, P.E., Pres.

BYLAWS, ARTICLES OF INCORPORATION, AND APPENDICES

NAFE

ARTICLES of INCORPORATION

and BYLAWS

ARTICLES OF INCORPORATION

The National Academy of Forensic Engineers, having been founded in 1982 by Marvin M. Specter, P.E., L.S., Paul E. Pritzker, P.E., and William A. Cox, Jr., P.E., having associated in 1982 to form a non-stock corporation with members, and having been granted a Certificate of Incorporation in the District of Columbia on May 25, 1982, now hereby apply for incorporation as a non-stock corporation under the provisions of Chapter 2 of Title 13.1 of the Code of Virginia, and upon approval of this application shall relinquish and surrender the prior corporation to the District of Columbia, and to that end set forth the following:

- (a) The name of the Corporation is NATIONAL ACADEMY OF FORENSIC ENGINEERS.
- (b) The duration of the Corporation is perpetual.
- (c) The purpose or purposes for which the corporation is organized are to be exclusively educational and charitable within the meaning of the Internal Revenue Code of 1954, as amended, and the laws of the Commonwealth of Virginia include:
 - 1. To improve the practice, elevate the standards and advance the cause of forensic engineering, as the term "forensic engineering" is defined in the Bylaws.
- (d) The corporation shall have individual members who shall be selected by an Admissions Committee as provided in the Bylaws.
- (e) The corporation is to be divided into three or more classes of members as provided in the Bylaws. These classes shall have the right to elect the officers and directors. All voting members are required to be licensed professional engineers pursuant to the registration laws within the United States Canada, be a member in the National Society of Professional Engineers and posess an acceptable grade of membership in a national or international recognized engineering technical society as further provided in the Bylaws. The qualifications and rights of each class of membership shall be as provided in the Bylaws.
- (f) The directors of the corporation shall be composed of these officers: President, President Elect, Senior Vice-President, Vice-President, Treasurer, Secretary, as many as the three most recent and available Past-Presidents, and as many as two Directors-at-Large who hold no elected office. Directors-at-large and officers shall be elected by vote of the members in the manner prescribed in the Bylaws and shall be elected for terms of one year. Officers shall serve until their successors are duly elected and qualified except that the President-Elect shall automatically succeed to the office of President and the Past-Presidents shall serve ex officio.
- (g) The affairs of the corporation shall be determined and governed by the directors in accordance with the Bylaws, which shall include, without limitation:
 - 1. To purchase, rent, hire or otherwise acquire, and to provide, erect, make, maintain, establish and operate offices, and other facilities, and all necessary or convenient equipment for, and accessories to any or all thereof, to engage and employ such assistance as may be deemed necessary or desirable in connection with any of such purposes and object.

- 2. Except as specifically prohibited by law, to accept any gift, grant, endowment, devise or bequest made to the corporation at any time to further its general purposes.
- 3. To have final authority in the discipline of members, which may include, but is not limited to revocation of membership, as provided in the Bylaws.
- 4. To keep and maintain a register of valid holders of membership and certificates granted by the corporation.
- 5. To do all such acts as are necessary or convenient to the attainment of the activities and purposes herein set forth.
- 6. To do any act not prohibited for corporations under the laws of the Commonwealth of Virginia unless otherwise prohibited herein.
- (h) If the corporation should be dissolved, no member will receive any portion of its remaining assets or property; upon dissolution, the balance of any assets or property of the Corporation which remains after all debts or obligations are paid will be distributed to any other nonprofit corporation which has been determined by the IRS to be exempt from federal income taxes under section 501(c) (3) of the internal Revenue Code.
- (i) The post office address of the initial registered office is 2433 North Landing Road, Princess Anne Courthouse, Virginia Beach, Virginia 23456. The name of the City in which the initial registered office is located is Virginia Beach, Virginia. The name of the initial registered agent is William A. Cox, III, Esq., who is a resident of Virginia and who is a member of the Virginia State Bar, and whose business office is the same as the registered office of the corporation.
- (j) The number of directors constituting the initial board of directors for this Virginia Corporation is eight (8) and the names, addresses, and offices of the persons who are to serve as these directors, each of whom has consented to serve, are:

NAME	OFFICE	ADDRESS	
Herbert Egerer, P.E.	President	P.O. Box 37980	Omaha, NE 68137
Joseph S. Ward, P.E., L.S	President-Elect	P.O. Box 1234	Montclair, NJ 07042
Loyal W. Murphy, III, P.E.	Senior Vice-President	5050 Poplar, Suite 1214	Memphis, TN 38157
Lindley Manning, P.E	Vice-President	P.O. Box 13392	Reno, NV 89507
Theodore D. Dziurman, P.E	Treasurer	34400 Glendale	Livonia, MI 48150
Marvin M. Specter, P.E., L.S	Secretary	174 Brady Avenue	Hawthorne, NY 10532
William A. Cox, Jr., P.E	Past-President	2309 Broad Bay Road	Virginia Beach, VA 23451
Paul E. Pritzker, P.E	Past-President	35 Hanna Street	Quincy, MA 02169

Administrative Note to the **Articles of Incorporation** (not a part of the **AoI**): Chronology of Registered Agents of NAFE:

Registered agent from 1982 – 1998:

The name and address of the original District of Columbia incorporator is: William A. Cox, Jr., P.E., Past President, 2309 Broad Bay Road, Virginia Beach, Virginia 23451.

Registered Agent from 1998 to 2014:

Incorporated in the Commonwealth of Virginia January 13, 1998.

William A. Cox, III, Esq., 2433 North Landing Road, Princess Anne Courthouse, Virginia Beach, Virginia 23456.

Registered Agent from 2014 to present:

Arthur E. Schwartz, Esq., 1420 King Street, Alexandria, VA 22314-2794.

Revised July 18, 2015: Expanding NAFE membership engineering licensure requirements to include professional engineering licenses issued within the United States or Canada

BYLAWS

ARTICLE I NAME AND OFFICE AND DEFINITION

Section 1. Name and Office

The name of this corporation shall be the NATIONAL ACADEMY OF FORENSIC ENGINEERS (hereinafter referred to as the "Academy"). The principal office shall be located at 1420 King Street, Alexandria, Virginia 22314-2794. The Academy is a chartered affinity group of the National Society of Professional Engineers and is classified as a not-for-profit organization by the Internal Revenue Service.

Section 2. Definition

Forensic Engineering is the application of the art and science of engineering in matters that are in, or may possibly relate to, the jurisprudence system, inclusive of alternative dispute resolution.

The terms "Board Certified" and "Board Certified Diplomate Forensic Engineer" as used within the Academy are NAFE credentials accredited by the CESB and afforded to NAFE Fellows, Senior Members and Members only. These credentials are not applicable to Associate Members, Correspondent Affiliates, International Affiliates or Student Affiliates.

ARTICLE II OBJECTIVES

The purposes of the corporation are set forth in its Articles of Incorporation. The related objectives shall be:

- (a) To serve the public by advancing the skill and art of engineering analysis, investigation, consultation, and expert testimony in judicial and administrative proceedings which involve the use of engineering evidence, or the rendering of opinions based on engineering knowledge or judgment.
- (b) To establish criteria for and further the education of forensic engineers through formal studies, seminars, and publication of literature on the subject.
- (c) To engage in research and the publication of papers, books, and articles on the art and science of forensic engineering.
- (d) To elevate standards and the ethical concepts governing the practice of forensic engineering.
- (e) To cooperate with and assist other professions and organizations engaged in the administration of justice and resolution of disputes.
- (f) To certify individuals having acceptable experience in Forensic Engineering.

ARTICLE III MEMBERSHIP

Section 1. Admission to Membership

Candidates for admission to the Academy shall be reviewed by the Admissions Committee, and if found to meet the minimum qualifications, shall be admitted as a Member or Senior Member of the Academy (both of these membership grades being Board Certified Diplomate Forensic Engineers), or as an Associate Member (not Board Certified).

Upon attainment of the minimum qualifications, Associate Members may be elevated to Member, Members may be elevated to Senior Member, and Senior Members may be elevated to Fellow (see Article X. Section 2). The minimum qualifications to be met by new candidates and renewing members shall be set by the Board of Directors (hereinafter referred to as the "Board") and shall include at least the following:

(a) Members and Senior Members (Board Certified Diplomates)

- (1) Current Professional Engineering registration. Candidates shall provide validation satisfactory to the Admissions Committee. After acceptance into membership, a validation shall be supplied each year to the Treasurer incidental to membership renewal which demonstrates continuance of registration.
- (2) Current membership in the National Society of Professional Engineers and also in a national or international engineering technical society satisfactory to and in a grade acceptable to the Admissions Committee.
- (3) Total experience in engineering practice for Members of five years, and for Senior Members of twelve years.
- (4) Total experience in the practice of forensic engineering for Members of two years, and for Senior Members of five years.
- (5) Total experience in case preparation as a forensic engineer for Members of two cases, and for Senior Members of ten cases.
- (6) Total experience in court actually testifying and being cross examined as an engineering expert for Members of at least two cases, and for Senior Members of at least five cases. The Admissions Committee may at its discretion consider testimony under oath in arbitration, deposition, or administrative proceedings for credit toward fulfillment of this qualification requirement.
- (7) Recommendations indicating experience and qualifications satisfactory to the Admissions Committee for Members from two forensic professionals, and for Senior Members from three forensic professionals. Such forensic professionals may include lawyers, certified general adjusters, judges, claims managers, and members of the Academy in the same or a higher grade than that being applied for by the candidate. References must have firsthand knowledge of the forensic engineering practice and qualifications of the candidates.

(8) Members and Senior Members shall maintain Continuing Professional Development (CPD) credits commensurate with the current CPD Policy, which is attached to these Bylaws as Appendix 2.

(b) Fellows (Board Certified Diplomates)

- (1) Current Professional Engineering registration. Candidates shall provide validation satisfactory to the Admissions Committee. After election to the grade of Fellow, a validation shall be supplied each year to the Treasurer incidental to membership renewal which demonstrates continuance of registration.
- (2) Current membership in the National Society of Professional Engineers and also in a national or international engineering technical society, both of which being satisfactory and acceptable to the Admissions Committee.
- (3) A minimum of four years of membership in NAFE as a Member or Senior Member in good standing and with prior participation in NAFE to include; active committee participation and having published a minimum of two papers in the NAFE Journal.
- (4) Total experience in engineering practice of twenty years.
- (5) Total experience in the practice of forensic engineering of fifteen years.
- (6) Total experience in case preparation as a forensic engineer of fifty cases.
- (7) Possess experience in court actually testifying as an engineering expert subject to cross examination for at least ten cases,
- (8) Recommendations indicating experience and qualifications satisfactory to the Admissions Committee from three current NAFE Fellows and one forensic professional. Such forensic professional may include lawyers, certified general adjusters, judges and claims managers. References must have firsthand knowledge of the forensic engineering practice and qualifications of the candidates.

(c) Associate Members (not Board-Certified Diplomate Members)

- (1) Candidates shall provide validation satisfactory to the Admissions Committee showing either certification as an Engineer in Training / Engineering Intern (E.I.T. / E.I.), a PhD in engineering (or in a related science), or licensure (or equivalent) as a professional engineer. After acceptance into membership, for Associate Members licensed as a professional engineer or holding certification as an E.I.T. / E.I., validation shall be supplied each year to the Treasurer incidental to membership renewal which demonstrates continuance of registration.
- (2) Candidates shall have had experience in engineering practice of four years, including two years of forensic engineering practice.
- (3) Candidates shall have prepared at least two forensic engineering cases.
- (4) Candidates shall hold membership in the National Society of Professional Engineers and also in a national or international engineering technical society satisfactory to and in a grade acceptable to the Admissions Committee.

- (5) Candidates shall have received recommendations indicating experience and qualifications satisfactory to the Admissions Committee from two forensic professionals. Such forensic professionals may include lawyers, certified general adjusters, judges, claims managers, and Members, Senior Members or Fellows of the Academy. References must have firsthand knowledge of the engineering practice and qualifications of the candidate.
- (6) Associate Members shall maintain Continuing Professional Development (CPD) credits commensurate with the current CPD Policy, which is attached to these Bylaws as Appendix 2.

Section 2. Fees and Dues

(a) Application fees and annual dues and assessments shall be established by the Board. Annual dues for Academy members who are elected to membership during the year may be prorated in a manner as determined by the Board.

Dues Summary

Application Fee (nonrefundable)	\$125.00	
Upgrade Fee	125.00	
Annual Dues Grade	Standard	Life Status
Fellow	\$300.00	\$100.00
Senior Member	250.00	100.00
Member	200.00	100.00
Associate Member	200.00	100.00
International Affiliate	300.00	100.00
Correspondent Affiliate	100.00	N/A
Student Affiliate	25.00	N/A

Prorated dues apply to all grades: 1/1 to 3/31 Full Dues, 4/1 to 9/30 Half Dues, 10/1 to 12/31 Full Dues include following year.

- (b) For matters involving dues and CPD reporting, the President and Secretary may, at their joint discretion:
 - (1) Grant a petition to waive or reduce the CPD reporting and/or the dues of a member who is disabled or who has other hardship for a specified period and designate the time that full CPD reporting and/or dues will be resumed.
 - (2) Drop a member from the Academy rolls if payment of dues or a petition for waiver is not received by the summer meeting.
 - (3) Grant a request for Life status dues.

Section 3. Life Status Members

- (a) Associate Members, Members, Senior Members, and Fellows of the Academy shall become eligible for Life Membership status if the person 1) has been a member of the Academy for a period of 10 years or is a charter member, 2) does not receive in fees or wages as a forensic engineer in any calendar year more than fifty (50) times the annual dues of NAFE payable by the member in accord with his grade of membership, and 3) is at least 70 years of age.
- (b) Life status Members shall receive all publications of the Academy and shall be invited to attend the Academy's seminars.

ARTICLE IV CORRESPONDENT AFFILIATES

Lawyers, claims personnel, and other persons having an interest in forensic engineering, including engineers who do not meet the qualifications for Academy membership may submit to be admitted to the Academy as a Correspondent Affiliate. Such candidates are required to complete an application as approved by the Board of Directors and are required to pay application fees similar to those paid by candidates for membership. Once accepted, Correspondent Affiliates may receive the Journals of the National Academy of Forensic Engineers (by electronic means), appropriate member notices and literature, and shall be invited to attend the Academy's seminars. Correspondent Affiliates may also be listed in the Academy's Directory. At the discretion of the Academy, their commentaries and other communications may be published by the Academy when appropriate and of interest. The Board shall establish the fees for Correspondent Affiliates. Correspondent Affiliates are not members and may not represent themselves as holding membership in the Academy.

ARTICLE V INTERNATIONAL AFFILIATES

Applicants who are nationals of countries other than the United States, who hold membership in engineering societies of their country, who reside and/or practice forensic engineering outside of the United States, and whose credentials are acceptable to the Admissions Committee, may be admitted to the Academy as International Affiliates. Such individuals may receive publications of the Academy and, at the discretion of the Academy, their commentaries and other communications may be published by the Academy when appropriate and of interest. The fees for International Affiliates shall be established by the Board. International Affiliates are not members and may not represent themselves as holding membership in the Academy.

ARTICLE VI STUDENT AFFILIATES

Applicants who are engineering undergraduate or graduate students and are current student members of the National Society of Professional Engineers may submit to be admitted to the Academy as a Student Affiliate. Such candidates are required to complete an application as approved by the Board of Directors and are required to pay application-associated fees similar to those paid by candidates for membership. Once accepted, Student Affiliates may receive the Journals of the National Academy of Forensic Engineers (in electronic format only), receive appropriate member notices and literature, and shall be invited to attend the Academy's seminars. The fees for Student Affiliates shall be established by the Board. Student Affiliates are not members and may not represent themselves as holding membership in the Academy.

ARTICLE VII MANAGEMENT AND OFFICERS

Section 1. Management

The management of the Academy, the control of its property and affairs, and the selection of the recipients who will benefit from the purposes and objectives of the Academy shall be vested in its Board. The Board Certified membership of the Academy shall constitute the voting membership and shall select the Officers.

Section 2. Election of Officers

The Board Certified members of the Academy shall elect from among its Senior Members and Fellows a President-Elect, a Senior Vice President, a Vice President, a Secretary, and a Treasurer. The President-Elect shall automatically succeed to the office of President the following year.

All voting for officers for contested positions shall be by written or electronic ballot on a form forwarded to the members of the Academy by the Secretary following the midyear semiannual meeting of the Board. The completed ballots, having proper means of identification, shall be returned to the Secretary within two months from the original date of mailing. The President will appoint Inspectors of Elections whose duties it shall be to inspect and pass upon all ballots. The announcement of the results of such elections shall be made at the annual meeting of the Academy, or at an earlier date by a mailing from the President.

Section 3. Term of Office

Each elected officer shall serve for one year and until his or her successor is elected and installed, except the President-Elect who shall subsequently serve as President.

Section 4. Honorary Members

The Board may, from time to time, appoint as honorary members, with such titles and designations as it shall select, persons who need not be members of the Academy. Their duties shall be as assigned by the Board but shall not be in conflict with the duties of regular officers of the Academy. Persons appointed as honorary members shall continue at the pleasure of the Board.

ARTICLE VIII BOARD OF DIRECTORS

Section 1. Membership of the Board

The Board shall consist of the President, the President-Elect, the Senior Vice President, the Vice President, the Secretary, the Treasurer, the three most recent Past Presidents who are available, and as many as two Directors-at-Large. A President who elects not to serve out his or her complete term shall not be deemed to be a Past President.

A Director-at-Large shall be a voting member of the Academy, and shall be nominated annually by petition only. A Director-at-Large may continue to serve for any number of one-year terms by annual petition and reelection by the membership. The nominating and voting procedure for Directors-at-Large shall be as established for officers under Articles VII and XI, except that the Nominating Committee may not include a candidate for Director-at-Large with its slate.

Section 2. Duties and Powers

The Board shall have the control and management of the affairs of the Academy and, in addition to the powers and authorities expressly conferred upon them through these Bylaws, may exercise all such powers and do all such acts and things as are by law provided and as are usually done by the Board of a membership corporation, including the right to establish committees and approve committee appointments, to allot to those committees such duties and powers as the Board may deem proper, to select the recipients who will benefit from the purposes and objectives of the Academy, and to set fees for application and admission, and to determine dues and assessments. The Board shall have final responsibility and authority for member discipline. The Board is vested with the authority to appoint an Executive Director or Executive Secretary and other officials.

ARTICLE IX

MEETINGS OF THE BOARD OF DIRECTORS AND THE GENERAL MEMBERSHIP

Section 1. Annual and Semiannual Meetings

There shall be two regular meetings of the Board of Directors and of the General Membership, one annual and one semiannual, each at a time and place determined by the Board.

Section 2. Special Meetings

Special meetings may be called at any time by the President. Special meetings may also be called by the Board upon filing with the Secretary of the Board a written request by at least three Directors. Such written request shall specify the purposes for which the meeting is requested, and no business other than that specified in such purposes may be transacted at such special meeting.

Section 3. Notice of Meeting

Notice of any meeting of the Board of Directors shall be mailed, emailed, , electronically transmitted or telephoned to all Directors at least seven days before the date of such meeting. The notice shall set forth the place, date, time, and purposes of such meeting. The seven days notice may be waived by unanimous vote of those present when no less than three-quarters of the Directors are present in person. The general membership shall also be notified in a timely manner about such meetings via email and NAFE website posting, with instructions provided for observing the meeting.

Section 4. Quorum

At all regular and special meetings of the Board, the presence in person of not less than one-half of the Directors shall constitute a quorum.

Section 5. Voting at Board Meetings

At all meetings, votes shall be by voice vote unless the presiding officer, or at least one-half of the Directors present, request voting by written ballot.

Section 6. Vacancies

Vacancies on the Board, including elected Directors-at-Large, shall be filled for the balance of the unexpired term by vote of the majority of the Directors at any regular or special meeting. Voting to fill vacancies may also be by signed ballot mailed by Directors to the Secretary of the Academy.

Section 7. Expense Reimbursement

- (a) Subject to budget limitations, reimbursement to Directors to compensate for travel expenses incurred at regular or special meetings of the Board shall be paid by the Treasurer upon receipt of invoices from such Directors indicating:
 - (1) The least cost airfare with attached receipt.
 - (2) In lieu of travel by air, the cost of travel by private transportation at the IRS established rate for highway travel. The mileage cost shall not exceed the least-cost airfare.
- (b) Other expenses by Directors on behalf of the Academy may be reimbursed when properly documented and approved by the President, subject to budget limitations.

ARTICLE X COMMITTEES

Section 1. General

- (a) The committees shall be:
 - (1) The Admissions Committee
 - (2) The Nominating Committee
 - (3) Standing Committees
 - (4) Special Committees
- (b) With exception of the Nominating and Admissions Committees, the President shall have the prerogative to establish committee sizes.
- (c) With exception of the Nominating and Admissions Committees, the President shall have the prerogative to appoint non-Academy individuals to committees. Such non-Academy individuals may serve on such committees, but without committee vote.
- (d) Members, Senior Members and Fellows, when eligible and properly appointed, may serve on committees and vote. Associate Members and Correspondent Affiliates, when eligible and properly appointed may serve on committees without vote.

Section 2. Admissions Committee

(a) The Admissions Committee shall be composed of the President-Elect who shall serve as Chairman and two Past-Presidents appointed by the President.

(b) The Admissions Committee shall carefully evaluate each application for membership or for change in membership grade against the standards established in the Bylaws, render decisions as to the candidate's acceptance, non-acceptance, or, in the case of Fellow, eligibility.

(c) Members, Senior Members and Associate Members

- (1) Approval as a Senior Member shall require concurrence of two (2) members; and as Member or Associate Member, concurrence of one (1) member of the Committee.
- (2) The Admissions Committee shall assign appropriate membership grades to those accepted or elevated and report their actions to the Secretary and the Treasurer. Applications for Member, Senior Member, and Associate Member can be acted upon or voted on throughout the calendar year.

(d) Fellows

- (1) The Admissions Committee evaluates applications for eligibility for elevation to the grade of Fellow only during the month of April. Approval shall require concurrence of three (3) Committee members.
- (2) The Admissions Committee can only determine eligibility and does not assign or confer the grade of Fellow. The Admissions Committee shall report its actions to the Secretary and the Treasurer. The grade of Fellow can be conferred only during the July meeting of NAFE following the Admissions Committee's approval of eligibility.

Section 3. Nominating Committee

Each Nominating Committee shall serve for one year and shall consist of three members of the Academy appointed by the President. No officer of the Academy may serve on the Nominating Committee while holding office. The two most recent Past-Presidents who are available shall be members of the Committee with the most recent Past-President serving as Chairman of the Committee. In addition, an Academy member appointed by the President shall be a member of the Committee and serve as its Secretary. The Secretary shall keep regular minutes of the meeting proceedings and a copy of such minutes shall be filed with the Secretary of the Academy within at least ninety days prior to the semiannual meeting of the Academy.

Section 4. Standing Committees

Standing committees may be established by the Board which will define their functions, powers, and tenure. Members thereof shall be appointed by the President. A description of these Standing Committees is attached to these Bylaws as Appendix 1.

Section 5. Special Committees

Special Committees may be appointed by the President of the Academy to handle special matters, which come up from time to time.

Section 6. Expense Reimbursement

- (a) Under special circumstances, committee Chairmen and individual members of the Academy who are specifically invited by the President, in writing, to attend a meeting with travel costs reimbursed, shall also be reimbursed as outlined in Section 7 (a) of Article IX. A copy of the written authorization shall be submitted to the treasurer.
- (b) Other expenses by committee members on behalf of the Academy may be reimbursed when properly documented and approved by the President, subject to budget limitations.

ARTICLE XI NOMINATING PROCEDURE

Section 1. Normal Procedure

The Nominating Committee shall nominate a slate of persons recommended for election as officers of the Academy. The report of the Nominating Committee shall be made to the members at least sixty days prior to the midyear semiannual meeting of the Board. Additional nominations to be added to the slate submitted for vote of the members may be made by petition of at least ten voting members of the Academy. Such petition should be submitted to the Secretary of the Academy at least ten days prior to the semiannual meeting of the Academy. The Secretary shall certify to that meeting the election to office of the unopposed nominees.

Section 2. Special Conditions

The Board of Directors shall assure that there is at least one candidate for each elective office at the end of its midyear, semiannual meeting. If a candidate proposed by the Nominating Committee is unable to serve, and there is no nomination by petition, the Board shall nominate a willing candidate.

ARTICLE XII DUTIES OF OFFICERS, MEMBERS, AGENTS, AND APPOINTEES

Section 1. President

The President shall be Chief Executive Officer and the Chairman of the Board of the Academy and perform the duties usual to a president of a membership corporation. The President shall preside at meetings of the Board and at the meeting of the members of the Academy and shall be ex-officio a member of all committees except the Nominating Committee. He shall appoint the members of all committees. The President shall have power to sign all documents, contracts, and negotiable instruments as the designated agent of the Academy. He shall, however, obtain advanced approval from the Board of Directors for any expenditures exceeding \$3,000.00.

Section 2. President-Elect

The President-Elect shall automatically succeed the President, and act when necessary in the absence of the President.

Section 3. Vice Presidents

The Vice Presidents shall perform such duties and have such powers as may be delegated to them from time to time by the President or the Board. In the absence of the President and President-Elect, the Vice Presidents in order of seniority shall have the power and perform the duties of the President.

Section 4. Secretary

The Secretary shall keep a record of all proceedings of all meetings of the Board and the meetings of the members of the Academy, have the custody of all records and papers relating to the business of the Academy, prepare and issue all notices required to be given to the members, and shall otherwise exercise all duties incident to the office of Secretary.

Section 5. Treasurer

The Treasurer shall keep the accounts of the Academy and shall have the care and custody of all moneys belonging to the Academy, collect and receive all moneys payable to the Academy, keep proper books and records showing all receipts and expenditures, render semiannual reports in writing as to the financial condition of the Academy, and from time to time as may be requested by the Board, furnish such surety bond at the expense of the Academy, and otherwise exercise all duties incident to the office of Treasurer. The Board at any time may appoint an Assistant Treasurer to perform duties as assigned by the Treasurer.

Section 6. Executive Director or Executive Secretary

The Executive Director or Executive Secretary, if either one is appointed by the Board, may be given one or more of the duties and powers enumerated above as being the duties and powers of the Secretary, but the records of these individuals shall, at all times, be available to the Secretary. The Board is empowered to make a contract with the Executive Director or Executive Secretary for a period not exceeding three years for payment for services and for full travel and other authorized expenses subject to conditions the Board may deem fit and proper.

Section 7. Public Statements

No public statements stated or implied as representing the Academy shall be made without specific authority first obtained from the Board, except that the President may make appropriate public statements which are in accordance with existing Academy policy or which, in urgent situations not permitting contact with all Directors, have received the prior approval of a majority of the other Directors.

ARTICLE XIII HOLDING MORE THAN ONE POST

Directors may serve on any number of committees.

Directors-at-Large may not simultaneously hold or be appointed to elective office.

ARTICLE XIV TERMS OF SERVICE FOR OFFICERS

The Secretary and Treasurer may be reelected for any number of terms. Other officers may not serve again in their same office except as may be extended by the Board. A member of any committee may be reappointed for any number of terms.

ARTICLE XV REMOVALS

Any Academy member may be reprimanded, suspended, or expelled and any member of any committee may be removed from office by the affirmative vote of two-thirds of the Directors at a special meeting of the Board called for the purpose of considering such action.

ARTICLE XVI MEMBER DISCIPLINE

- (a) Charges of unethical conduct may be filed with the Ethics Committee by anyone. Such charges must be written, specific, detailed, and include reasonable supporting evidence.
- (b) The person charged shall be notified of the substance of the charges and shall be given opportunity to present a defense, including personal appearance with legal counsel, if desired, at his or her own expense, and to present pertinent witnesses and/or documents. The hearing shall be closed unless the person charged requests otherwise.
- (c) Resignation by a member or affiliate under charge shall not cause these proceedings to be terminated.
- (d) The Ethics Committee may dismiss the charges when it finds them unwarranted and shall notify the Board, the person charged, and the person who filed the charge of such action.
- (e) If the Ethics Committee finds that the member or affiliate violated ethics of forensic engineering practice, membership requirements, or otherwise acted so as to reflect discredit upon the Academy, the Committee shall recommend to the Board such penalty as it considers appropriate which may

be expulsion from the Academy, suspension of membership for a stated period of time, or reprimand.

(f) Upon final disposition of a case, the Academy may, with approval of the Board, publish a summary report of the case in a publication of the Academy.

ARTICLE XVII LIABILITY

The Academy will defend any suits or claims asserted against its officers, directors, committeemen, or staff, past or present, in connection with their authorized activities on behalf of the Academy, and will indemnify and hold harmless individuals so involved.

ARTICLE XVIII MINUTES

Minutes of the meetings of the Board, minutes of meetings of the members of the Academy, and meetings of all other committees shall be prepared by the respective Secretary and filed with the Secretary of the Academy.

ARTICLE XIX FUNDS AND EXPENDITURES

Section 1. Income and Expenditures

Funds for meeting the expenses of the Academy shall be raised by annual dues, assessments, voluntary contributions, and such income as may come to the Academy through the collective efforts of its members in accordance with IRS regulations. No financial obligations of the Academy may be incurred by anyone or any group of members, except upon the prior authorization of or allocation of funds by the Board. All disbursements shall be made by the Treasurer.

Section 2. Fiscal Year

The fiscal year of the Academy shall be from the first day of January to the thirty-first day of December of each and every year.

ARTICLE XX

SEAL

The seal of the Academy shall consist of the words NATIONAL ACADEMY OF FORENSIC ENGINEERS inscribed in a circle with the words "Corporate Seal, Commonwealth of Virginia" inscribed in the center of said circle. The design of the seal may be changed at any time by formal action of the Board.

ARTICLE XXI AMENDMENTS

Section 1. General

- (a) These Bylaws and the Articles of Incorporation may be amended in the following manner: any proposal for amendment shall be in writing, subscribed to by not less than two Directors, and filed with the Secretary of the Academy. Consideration of such proposal shall be made at the next meeting of the Board.
- (b) A copy of the proposed amendment shall then be mailed, email or electronically transmitted to each Director by the Secretary of the Academy not less than twenty days and not more than forty days prior to the next Board meeting.

Section 2. Adoption of Amendments

- (a) A proposed amendment of the Bylaws shall be adopted by affirmative vote of at least two-thirds of the Directors:
 - 1. present at the meeting called to consider the adoption of the proposed amendment, or
 - 2. who have filed with the Secretary of the Academy signed affirmative consents.
- (b) A proposed amendment of the Articles of Incorporation, once adopted by the Board, shall be forwarded to the voting members of the Academy. Voting members at the next meeting of the general membership shall be polled. An affirmative vote of two-thirds of the voting members at a meeting is required to finally adopt a proposed amendment. For the purposes of amendment of the Articles of Incorporation of NAFE, or such other action as shall be binding on the Academy requiring voting by voting members, a quorum for such purposes at any meeting shall be thirty (30) voting members.

Section 3. Distribution to Members

A copy of any adopted amendment shall be mailed or emailed or electronically transmitted to each member. At his discretion, the Secretary may forward to each member a complete revised set of Bylaws.

Revised July 25, 2008 (Increase Fees and Dues)

Revised January 10, 2015: (General up-dating, including incorporating changes to membership

structure)

Revised July 17, 2015: (Changes to <u>Bylaws</u>: Restructuring of Article III and Article X relating to

membership structure)

Revised July 18, 2015: (Change to <u>Articles of Incorporation</u>: Expanding NAFE membership

engineering licensure requirements to include professional engineering

licenses issued within the United States or Canada)