The 11th Annual
Civil Engineering
Alumni Achievement Awards

North Ballroom • Purdue Memorial Union
February 19, 2004

Welcome
Robert B. Jacko
Professor of Civil Engineering

Dinner
Entertainment provided by West Lafayette High School String Quartet

Dean’s Welcome
Linda P. B. Katehi
John A. Edwardson, Dean of Engineering

Presentation of Awards
Fred L. Mannering
Professor and Head, School of Civil Engineering

Robert B. Jacko
Professor of Civil Engineering

Reading of the Citations
C. Douglas Sutton
Professor of Civil Engineering

Remarks
Fred L. Mannering
Professor and Head, School of Civil Engineering
Purdue University will always be special to me. The civil engineering program gave me the fundamental tools and approaches to start and build my career. I thank Dr. Etzel, Dr. Bloodgood, and all the other professors and fellow graduate students who taught me so much in my time at Purdue University. With Purdue’s strong academic foundation, I was able to learn to deal with the complexities of the real world and become a successful professional.

Hugh was one of nine children in the Hugh and Eva Campbell family. He grew-up in the small town of Farmington Falls, Maine and attended Farmington High School where he took college prep courses and played basketball and baseball. Through his mother’s encouragement, he entered the University of Maine and majored in civil engineering. There he received both a Bachelor of Science degree and a Master of Science degree and was deeply influenced by professors Otis Sproul, Millard (Wayne) Hall, and Purdue Alumnus, Franklin Woodard. Dr. Woodard served as his advisor for his master’s program that was successfully completed in 1970. The culmination of the master’s thesis “Electrically Induced Removal of Lignin from Kraft Mill Wastewaters,” was presented at the 25th Annual Purdue Industrial Waste Conference in May of 1970. Attendance at this prestigious international conference and the interactions with the participants made a lasting impression on him. While at The University of Maine, Hugh also participated in the basketball and track programs and was named Outstanding Student Athlete his senior year.

Based on the strong recommendation of Dr. Woodward, Hugh entered Purdue University in the fall of 1970 to start his doctoral work in the School of Civil Engineering. While at Purdue, Hugh developed a close working relationship with two legends in the field of environmental engineering, Dr. James Etzel and Professor Donald Bloodgood. Dr. Etzel served as his major professor for a Ph.D. thesis entitled “Minimizing Solids Losses in Regeneration of Sodium Cation Exchangers” (Dec. 1972). Dr. Etzel also provided opportunities for environmental testing/consulting that enabled Hugh to supplement his graduate stipend in support of his growing family – three adorable little girls. There were many difficult periods during graduate school but his experiences at Purdue with the professors and other graduate students was
truly a rewarding experience. He is forever grateful for the practical nature of curriculum at Purdue that proved to be a strong base to launch his professional career at DuPont.

Again, thanks to Dr. Etzel, Hugh got the opportunity to obtain a position with DuPont in December, 1972. In the DuPont Engineering Department, Hugh was a wastewater consultant for many DuPont sites around the world. He traveled widely in the United States and Europe during his 16 years as a DuPont consultant. In 1988 he was promoted to management of environmental professionals and technical programs. He has managed water, wastewater, solid/hazardous waste, geological engineering, underground injection, and remediation programs focusing on: 1) legislative/regulatory advocacy at federal and state levels, 2) innovative technology programs for cost-effective remedies, and 3) prioritization of corporate remediation needs. He is one of four managers responsible for remediation programs at 130 manufacturing sites around the world and 100 Superfund sites in the United States with annual budgets of $70-90 million and a corporate group of 50 professionals assisted by 120 alliance contractors. He leads the corporate Underground Injection Control (UIC) program for DuPont that includes training, advocacy, and technical operations and compliance assistance.

Hugh also serves on several corporate committees working on continuous improvement of DuPont Product Stewardship Program. He is a member of DuPont Government Affairs Advisory Committee, is president of the Alliance for Chemical Awareness and serves on the American Chemistry Council (ACC) Science and Policy Committee. He has authored over 20 technical publications (receiving the Water Pollution Control Federation (WPCF) Willem Rudolf’s Industrial Award in 1977) and has organized and led many technical/regulatory seminars and workshops. Further, he has participated in or led numerous boards/committees for the Chemical Manufacturers Association (CMA), the American Industrial Health Council (AIHC), the Synthetic Organic Chemical Manufacturers Association (SOCMA), the WPCF, the American Society of Civil Engineers (ASCE), the American Academy of Environmental Engineers (AAEE), and the US Environmental Protection Agency (EPA). He is a Diplomat of the AAEE, a member of the Water Environment Federation (WEF), and a professional engineer in the state of Delaware.

Hugh currently resides in Elkton, Maryland with his wife, Jane of 35 years. Their four children are Teri, county administrator, Shelly, state HR manager, Alicia, teacher, and Tyson, consulting environmental engineer. All four are college graduates, married, and live within a two-hour driving distance that allows Hugh and Jane to spend quality time with them and five beautiful grandchildren.
Robert K. Law

BSIDE 1973, MSCE 1974
Chief Estimator,
Charles Pankow Builders, Ltd.

Bob Law has been a “builder” for as long as he can remember. While growing up in Cherry Hill, New Jersey, he would construct tree houses, forts, and other accessory buildings out of whatever material he could find. So intent was he that he once broke his arm while transporting lumber on his bicycle.

Bob’s father, a BSEE, and MSEE graduate from Purdue, encouraged him to pursue a degree in electrical engineering at Purdue, not civil, because in his father’s opinion, the only thing CE’s designed were railroad bridges. After spending one co-op session working as an electrical engineer, Bob discovered that working at a lab table and in front of an oscilloscope was not what he wanted to do. Bob switched to the new interdisciplinary engineering program at Purdue placing his emphasis on structural engineering and building construction. His civil engineering masters program was built around construction management and resembled what would later become the construction engineering and management program.

In 1974, Bob joined the late Charlie Pankow (CE’ 47, Hon Ph.D. ’83) and his company as a field engineer. He worked on several office buildings, parking structures and retail malls that incorporated innovative engineering and building techniques advanced by the Pankow organization. After three years in the field, Bob was promoted to project superintendent and managed the renovation and expansion of the South Shore Plaza Regional Mall and the new 525,000 square feet parking structure in Braintree, Massachusetts.

Bob’s years of experience provided a strong foundation in the understanding of how high-rise commercial buildings are designed and constructed, and it complemented his engineering education. The philosophy at Pankow “to stretch the envelope of
building structural solutions” was a perfect fit for Bob. To make new ideas work, it is necessary not only to know the best way to build, but also to be able to communicate with the structural engineers who help make it happen. Bob’s structural engineering understanding and constructability experience has helped move many new ideas from the testing lab to the jobsite. An example of this is the use of the architectural precast concrete seismic moment resistant frame, developed by Pankow, in a 39-story building, “The Paramount”, located at the corner of 3rd and Mission Street in San Francisco. This is the tallest precast concrete frame building in Seismic Zone 4.

In his role as chief estimator and with the use of the design build project delivery method, his design teams incorporated both new technologies, and “tried and true” construction methodologies into the design and construction of new and renovated buildings. During his 30 years at Pankow, he helped design and layout the structural framework for office buildings, hotels, parking structures, arenas, shopping centers, high-rise luxury condos, apartments and other buildings that total in the billions of dollars. With this team approach and philosophy, he was able to use the problem-solving attitude of the engineering method that he learned at Purdue to help make projects economically feasible for his owner clients. Of his many accomplishments at Pankow, he is particularly proud of developing and implementing Pankow’s cost estimating and cost history system.

His love of building keeps him active in his personal construction projects. For the last three years, Bob has been building a second home in the mountains above Los Angeles by himself, with the help of a few friends.

He served as the secretary, vice president and president of Pasadena’s chapter of Serra International. He is active in his church’s building committee, is a member of ACI, served on the Construction Engineering & Management Advisory Council from 1999 to 2002, and has served on the Civil Engineering Advisory Council since 2001. He has been a guest lecturer for CE and CEM classes, recruits Purdue students, and serves as a judge and lecturer in the CE senior capstone design course.

Bob and his wife of 30 years, Sara, also a Purdue graduate (BSIM ’73), live in Pasadena, California, and have two sons. Keith, a Purdue graduate (BSCE ’02) is a project engineer for a construction company in Los Angeles, and Dana, an electrical engineering student at the University of Southern California who has started his own web design and hosting company.
Paul F. Mlakar

Ph.D. 1975
Senior Research Scientist, U.S. Army Engineer Research and Development Center

Paul Mlakar graduated second in the class of 1966 from the United States Military Academy. Inspired by the competence of two of his engineering professors, he followed their paths to Purdue where he completed his master’s program in 1968. Under the patient guidance of the faculty he completed his Ph.D. in abstentia in 1975.

In 1968-1969 CPT Mlakar served in various engineer command and staff positions in the U.S. and Vietnam. Upon his return from overseas he supervised the construction of military and civil works projects in the Denver Area Office of the Corps of Engineers. From 1970-1973 he served on the faculty of the U.S. Military Academy as an assistant professor of mechanics.

Paul joined the U.S. Army Engineer Waterways Experiment Station (WES) in 1973 as a research engineer. He soon developed the first rational procedure to analyze the response of fortifications to direct hits from exploding rounds that is the practice today. He subsequently contributed to the development of a rational and practical procedure to estimate the response of concrete dams and other hydraulic structures to seismic loadings that has resulted in the increased safety of these critical facilities.

In 1984 Dr. Mlakar founded and led the Structures Division of JAYCOR as a vice president. This group transferred the technology the military used to design protective structures to the design of embassies and other visible targets against terrorist bombings. They also invented a patented air cargo container hardened to resist the effects of internal blasts that improves the safety of commercial aviation against explosives.

In 1995 Paul rejoined WES as the chief of the Concrete and Materials Division. In 2000 he became the technical director of the U.S. Army Engineer Research and Development Center.

“I am humbled to be honored with the Engineering Alumnus Achievement Award. The exemplary graduate education I received at Purdue emphasized the fundamental principles. I particularly recall an emphasis on deriving the right equation and not just solving the equation correctly. This experience has served me well as a civil engineer in trying to improve the way we all live.”
responsible for research in transportation engineering and off road mobility. In 2003 he was promoted to the position of senior research scientist for Weapons Effects and Structural Dynamics (WES).

Shortly after the September 11, 2001 crash at the Pentagon, Dr. Mlakar was selected by the American Society of Civil Engineers (ASCE) to lead a building performance study team. The published results of this study now guide the engineering profession in designing structures to reduce the probability of progressive collapse from unusual extreme loadings. This material also provided the basis for the impressive and insightful science-based simulation and visualization of the event completed as a joint project with Purdue's civil engineering, computer science, and computer technology departments with generous support from ITaP (Purdue) and the National Science Foundation.

Paul is a Fellow of ASCE and a past chair of the Committee on Shock and Vibratory Effects. He served as secretary of the ASCE Committee that studied the performance of the Murrah Building in the Oklahoma City terrorist bombing and chaired the Task Committee that produced the 1999 ASCE state of practice report, “Structural Design for Physical Security.” He is a member of the American Concrete Institute and currently serves on several technical committees. He also serves on the Technical Advisory Group of the Department of Defense Shock and Vibration Information Analysis Center. He is presently a vice president of the Society of American Military Engineers (SAME) and chairs the technology advancement committee.

In 1996 the Society of American Military Engineers awarded Dr. Mlakar the Toulmin Medal for the best article in The Military Engineer, “Restoring Brcko Bridge,” that was also the topic of an invited seminar for the introductory civil engineering course at Purdue. In 1998 ASCE presented him the award for the best paper in the Journal of Performance of Constructed Facilities, for “The Oklahoma City Bombing: Recommendations for Multi-hazard Mitigation.” He also received their Forensic Engineering Award in 2003.
Michael Natali grew up in Mishawaka, Indiana, the son of Italian parents. Mike’s father, Louis, a structural engineer educated in Europe, arrived in this country shortly after World War II. Mike’s mother, Rose, came to the U.S. during the Great Depression. As a young boy, Mike spent hours constructing miniature buildings with various toy building sets, always wanting to see the results of his work. With a strong interest in math and science along with his growing interest in construction, he decided to study engineering at Purdue University.

Mike studied in the School of Civil Engineering at Purdue University. Because of his strong academic record, Mike was allowed to follow his interest and concentrate in structures as an undergraduate student. He took several electives in structural analysis and design.

In 1977, after several short-term work assignments, Mike joined Fink Roberts & Petrie, Inc. (FRP), a consulting engineering firm in Indianapolis. At FRP, Mike worked on the structural design of many large-scale projects, first as a project engineer and later as a project manager. His experience included university projects, sports facilities, healthcare and research buildings, office buildings, and parking structures. Mike’s experience encompassed structural design in cast-in-place concrete (conventional and post-tensioned), precast concrete, and structural steel. His project experience includes the RCA Dome, Indiana Government Center South, the Indianapolis International Airport Parking Structure, the 101 West Ohio Street Office Tower, and many projects for Indiana University.
In 1991 Mike became the head of the Structural Engineering Department and was then named president of FRP in December, 1997. FRP has continued to provide structural engineering for many signature projects in Indianapolis including Circle Centre Mall, Conseco Fieldhouse, the Indiana State Museum, and the Indianapolis Motor Speedway Control Tower. Recently, FRP was awarded the contract to be Structural Engineer of Record for the proposed Midfield Terminal at the Indianapolis International Airport.

It has been especially satisfying for Mike to have FRP become the structural engineer for several new buildings on the Purdue University Campus including the Aquatic Center, Rawls Hall, the Visual & Performing Arts Center, the Stadium Avenue Dining Court, and the proposed Millennium Engineering Building.

For Mike, a major reward of his profession is to see the tangible contributions made to the built environment of his community. However, the unanticipated reward has been the wonderful friendships he has made with engineers, architects, owners, and contractors over the past 30 years.

Mike is a licensed professional engineer in Indiana, Michigan, Ohio, and Texas. He is a member of the American Concrete Institute and ACI's Committee 362, Parking Structures and is a past member of the Post-Tensioning Institute.

Mike and his wife, Mary, reside in Indianapolis and have four sons. Chris graduated from Indiana University in 2000 and now works in Chicago. Paul is a student at Purdue University, while Gyrid and Anders are students at Indiana University.
Louis M. Smith was born and raised in Milwaukee, Wisconsin. As a boy, he was fascinated by large structures and later was encouraged to go into civil engineering by his high school counselor. As a young man, the press of the sixties and the threat of the draft led Lou into the Navy. In 1975, after five years of military service, he was able to pursue his master’s degree in civil engineering at Purdue while stationed in West Lafayette for the Navy.

Although he had no real intention of making military service a career, his good grades and professional background led him to increasingly diverse jobs around the world as a naval civil engineer taking care of the Navy’s shore bases. From West Lafayette, he was sent to Omaha, Nebraska, for an exchange tour with the United States Air Force’s Strategic Air Command, programming maintenance for their bases. From Omaha, he was sent to his first tour in Washington, D.C., where he had a chance to work with members of the U.S. Department of Defense and Congress on military construction projects for many bases. Lou left Washington to become the public works officer in Keflavik, Iceland. Lou recalls, “It was a tough job making sure all of the facilities operated correctly in this busy, cold-war NATO hotbed.”

The tour in Iceland was followed by more time on the secretary of the Navy’s staff in Washington, D.C. This time, Lou’s love of numbers led him into the Comptroller’s Office, where he served as a budget analyst overseeing the Navy’s $3.2 billion facilities maintenance budget. All of these hours in the Pentagon and on Capitol Hill were rewarded with a promotion and an assignment in San Francisco in 1987 as the head of the Navy’s west coast construction, overseeing 31 construction offices in 26 western states. During this period, Lou’s staff awarded over $813 million in construction contracts in a single year, along with an
additional 138 A/E contracts for design of the next year’s program. Included in this work was a new dry dock in Bremerton, Washington, and a major naval hospital (Balboa) in San Diego.

Lou’s next command was that of the Navy’s Public Works Center in San Diego. This organization had 3,200 employees and annual revenue of $360 million. It provided maintenance, repair, construction, utilities and engineering support for over 425 Navy tenant activities in the bustling San Diego area.

From San Diego, Lou transferred back to Washington, D.C., in 1994 where he was selected for the rank of rear admiral. Again he served in the Pentagon, this time as the director of shore activities for the chief of naval operations. He was directly responsible for more than 360 naval bases world-wide, as well as sensitive programs like base realignment and closure.

In 1998, Lou was selected for promotion again. This time, as a two-star admiral, he took command of the Naval Facilities Engineer Command, a naval systems command with over 18,000 employees worldwide. This command was responsible for over $8.2 billion in worldwide construction projects, from nuclear carrier piers in San Diego to industrial waste incinerators in Japan. Also, during this time, the command planned and coordinated the last disposal of Vietnam-era napalm supplies for the Air Force. In this position, Lou was also the chief of civil engineers for the Navy.

Lou retired from the Navy in late 2000. Passing up more lucrative offers, he chose to continue his career in the public sector by working for the San Diego Unified School District (SDUSD) and helping it execute a $1.5 billion school bond passed in 1998. Despite the program being more than two years behind schedule at the time he was hired, with some management efforts and a lot of team building, the program will now finish under budget and three years ahead of schedule. For his efforts, Lou was recently promoted to head of all administrative operations for the SDUSD, the second-largest school district in California and the eighth-largest district in the nation, with 140,000 students and an annual budget of over $1.1 billion.

Lou is a fellow and past national president of the Society of American Military Engineers. He’s the chairman of the San Diego City Heights Joint Powers Authority, and serves on the Mayor’s Council on Smart Growth. He is also active as a Eucharistic minister for Scared Heart Parish in San Diego.

Lou and his wife, Susan, have been married for 33 years and have two sons. Brian, the oldest, graduated from Santa Clara with a degree in engineering physics. Michael graduated from the University of San Diego with a degree in computer science. Both of his sons are married and live in San Diego County with their wives.
Past Civil Engineering Alumni Achievement Awards have been presented to the following alumni:

1993

J. Edward Doyle, *BSCE* 1959
John C. Schalliol, *BSCE* 1964

1994

Robert L. Bowen, *BSCE* 1962
Michael A. Pierle, *BSCE* 1966
Clifford E. Seufert, *BSCE* 1955
Robert L. Turner, *BSCE* 1963

1995

Joseph R. Broyles, *BSCE* 1965
James R. Lambrechts, *MSCE* 1976
Michael A. Santoro, *MSCE* 1968
James A. Wurster, *BSCE* 1959

1996

Edgar B. Olson, *BSCE* 1951

1997

Alex D. Oak, *BSCE* 1968
Fanklin E. Woodard, *Ph.D.* 1965
1998
Amos Joe Alter, BSCE 1938, Professional Degree in CE 1949
James Barker, BSCE 1965
David Boyd, BSCE 1960
Albert R. Curran, MSCE 1973
Jerry Kerr, BSCE 1956

1999
David R. Bowman, BSCE 1965, MSCE 1970
Joseph C. Corradino, MSCE 1966
Rosser B. Edwards, BSCE 1960, MSCE 1962
H. Louis Gurthet, BSCE 1961
William G. Kriese, BSCE 1961, MSCE 1965
John V. Lowney, MSCE 1961
Stephen F. Weintraut, BSCE 1971

2000
Robert E. Crawley, BSCE 1960
Cristine M. Klika, BSCE 1978
Yueh Liang, Ph.D. 1982
Janet S. Skees, MSCE 1979

2001
Joseph M. Cibor, BSCE 1976, MSCE 1978
William J. Fehribach, P.E., BSCE 1961
William A. Guernsey Jr., BSCE 1974
William M. Lyles, BSCE 1955
Mamon M. Powers, Jr., BSCE 1970

2002
R. Vernon Casteel, BSCE 1957
Michael D. Kerr, BSCE 1960
Dan C. Keys, BSCE 1962
Stanley L. Kirtley, BSCE 1975
Ronald Klemencic, BSCE 1985
Martha L. Rees, BSCE 1973
Stephen P. Wanders, BSCE 1978, MSCE 1979