

**Biographical Sketches**  
**Recipients of the**  
**Elwyn F. Chandler Award**

**North Dakota Society of Professional Engineers**

February 2011

# History of the Elwyn F. Chandler Award

Giving of an Award for an Outstanding Achievement was first discussed at the annual meeting in March 1944, with John B. Jardine making the motion that the award should be called ELWYN F. CHANDLER AWARD.

At the annual meeting in April 1945 the following by-law was adopted: By-law No. 5 ELWYN F. CHANDLER AWARD.

- (a) The award shall be made in recognition of some outstanding engineering structure, design, research or contribution to the advancement of the engineering profession which was completed, preferably, within the past three years.
- (b) The award shall consist of a scroll and a key.
- (c) The award shall be made not oftener than once every three years.
- (d) The award may be made to a member of the North Dakota Society of Professional Engineers or to an engineer who is a legal resident of North Dakota regardless of the geographical location of the achievement.
- (e) The award may be made to any engineer for an achievement *which* has been performed in the state of North Dakota.

At the 1951 meeting paragraph (c) was amended to read: The award may be made annually.

## 1872 — ELWYN FRANCIS CHANDLER — 1946 PIONEER ENGINEER

When Elwyn Francis Chandler, Ripon College - AB, 1894; Am, 1897, joined the faculty of the University of North Dakota in June of 1899 as Instructor in Mathematics, no one foresaw the impact which he would make upon education for, and the practice of, the profession of engineering.

His formal preparation for his life work contained not a single course in engineering! His favorite subjects were Greek, Latin, and Mathematics; and for a couple of years he taught these three, as well as English Composition. For two years, 1897 - 1899, he pursued graduate work in Applied Mathematics at the University of Wisconsin; and, while he served as teaching fellow, he took no degree there.

His range of interests and activities was just as great in his formative years as in his later professional years. He worked in the college library, was a member and officer of the Choral Union, belonged to the Athenian Society, was secretary of the College Athletic Association, and worked up to editor-in-chief of the student paper.

Acting as City Engineer for Ripon, Wisconsin, in the spring and summer of 1895, he staked out several miles of the City's sewer system, supervised and inspected construction, and certified claims for payment. This brief experience seems to have shaped, at least in part, his future career.

In 1899 he was appointed Instructor of Mathematics in the University of North Dakota. He rose through the various ranks until he was Professor of Mathematics (1904) and head of the department. His versatility and interests, together with the needs of the University, led to his appointment as Professor of Civil Engineering (1914), then Chairman of the Faculty of the College of Engineering 1925 and finally as Dean of this Faculty 1926 - 1932). In this latter year he became Dean Emeritus, but continued as Professor of Civil Engineering until his health condition forced him to retire in 1944.

During the 45 years of his connection with the University of North Dakota, he challenged, bedeviled, encouraged, stimulated, and stretched the imagination of generations of students; and left an indelible mark on the minds and hearts of countless engineers. But his impact upon the profession was not limited to the class-room!

In addition to his academic responsibilities, he began the systematic study of stream flows in North Dakota. For almost 30 years he was a hydraulic engineer on the staff of the United States Geological Survey. With the passing of the years, this program has become of increasing importance to the state.

He was the first (1904) State Engineer for North Dakota, having drafted the law which established the office, organized the program of work and personally selected several of his successors.

Chandler was a charter member of the North Dakota Society of Engineers, was Secretary of this group from 1912 until 1922, published several papers in its Proceedings, and was most active in raising the standards of the engineering profession. At a later date (1940) he was a charter member of the successor society, The North Dakota Society of Professional Engineers, and gave freely of his time and wisdom in its formative years.

He was also one of the small group which organized and guided the North Dakota Water and Sewage Works Conference; and he is listed first on its roll of charter members. While never holding an office in the organization, he was most faithful in his attendance upon the meetings of the Conference, and published several papers in their "Official Bulletin."

His record of technical publications contains some 25 titles. He was honored by election to Sigma XI and Sigma Tau. To him was presented the pen with which Governor Moses signed into law the legislative act establishing the registration of Professional Engineers. And he was elected the first "honorary life member" of this Society.

A unique personality, a loyal friend, and a keen critic, he labored unceasingly to enhance the public picture of the engineer. His record of service to the University of North Dakota, the State of his adoption, and his chosen profession is matched by few and exceeded by none.

Such was the man whom this Society commemorates, and by whom it is honored, through our highest award — The Chandler Metal.

ALEX C. BURR



**Elwyn F. Chandler**  
1872 - 1946

# Elwyn Francis Chandler

May, 1939 - *North Dakota Engineer*  
University of North Dakota

ON AUGUST 29, 1872, Charles Henry Chandler, professor of natural sciences at Antioch college of Ohio, became the proud father of a son who was to take a very active part in the development of the University of North Dakota. This son was named Elwyn Francis Chandler.

Elwyn Francis Chandler's early education consisted of private instruction followed by preparatory work at Ripon College, Wisconsin. Here he studied ancient classical courses, receiving his B. A. in 1894. In 1895 he became principal of the academy at Endeavor, Wisconsin. The following year was spent as instructor of mathematics at the high school of Ripon, Wis. After graduate work taken in attendance and by correspondence, he received his M. A. in 1897. The two following years were spent in the graduate department of the University of Wisconsin with a teaching fellowship for one year.

By this time he had already become active in construction work, being city engineer of Ripon Wisconsin in 1895 and acting city engineer from time to time in later years. In 1899 he came to the University of North Dakota to superintend the construction of Budge hall and parts of Chandler hall.

Dean Chandler has received wide recognition through his work in construction engineering and surveying. His many activities in this line include city engineer of Grand Forks from 1918 to 1919, and assistant engineer in water resources branch of the U. S. Geological Survey from 1903 to 1938. His work with the geological survey consisted of maintenance or supervision of daily records of river flow on the more important rivers of North Dakota and also those of Minnesota and South Dakota. He was also the first state engineer of North Dakota, establishing and beginning the work of that office in July, 1904. Since that time he has done considerable work for that office at various times.

As a state representative of the United States Coast and Geodetic survey he directed the C.W.A. local control surveys run through this state during the years from 1933 to 1935. In 1936 he became associate water consultant of the natural resources committee for this region. From 1911 to 1913 he served as chairman of the committee of twelve appointed by different Commercial clubs of the Red river valley cities to attempt to secure complete improvement of the Red River of the North for navigation. His remarkably keen memory has made his services invaluable as an expert witness in numerous court cases, the most outstanding being the North Dakota vs. Minnesota drainage case in the U. S. Supreme Court, 1916 to 1923.

He has also served as a member of committees on water utilization of Greater North Dakota Association. From 1933 to 1938 he was a member of the North Dakota State Planning Board.

Dean Chandler's teaching experiences at the University of North Dakota began as an instructor of mathematics in 1899. In 1902 he became assistant professor in charge of the mathematics department, and from 1905 to 1914 he served as professor of mathematics. In 1910 he was placed in charge of civil engineering, becoming professor of civil engineering in 1914. Later he became chairman of engineering faculty and from 1926 to 1932, was dean of the college of engineering.

In his active career he has also found time to assume many business responsibilities of which include: Director of Grand Forks Street Car company, which is now the Grand Forks Transportation company—1914 to date; Director of Grand Forks Building and Loan Association—1914 to date; Director of Red River National Bank, Grand Forks—1929 to date; and director of University of North Dakota Cooperative Bookstore, 1914 to date, having been president from 1928 to date.

Dean Chandler has also been a member of numerous technical societies. Among them are: American Society of Civil Engineers of which he was an associate member from 1910 to 1927, and a member since that time; Society for Promotion of Engineering Education from 1907 up to the present time; American Association of Engineers from 1920 to the present time; North Dakota Society of Engineers from 1910 until it disbanded, acting as secretary of it from 1912 until 1922; North Dakota Water Works Conference, 1929 to date (in 1935 he became the first honorary life member of this society); North Dakota Academy of Science, 1915 to date; Sigma XI from 1920 until the present time. He is also a member of the American Association of Advance Science and many other societies.

Dean Chandler was married to Anna Levina MacCumber September 7, 1900. They have lived at 3012 University Avenue since 1902.

## List of Chandler Award Recipients

1945	Elwyn F. Chandler	Anderson, Allan J.	1973
1951	E. K. Lium	Anderson, Richard (Dick)	1984
1953	R.M.Dolve	Apanian, Ronald	2005
1955	J.W.Bliss	Arman, Gary	2007
1958	L. W. Burdick	Bavone, A. L.	1967
1959	J. R. Kirby	Bliss, J.W.	1955
1960	R. E. Bradley	Booth, E.J.	1961
1961	E.J.Booth	Bradley, R. E.	1960
1962	C.J.Johnston	Burdick, L. W.	1958
1963	John B. Jardine	Chandler, Elwyn F.	1945
1964	Cliff Johnson	Coleman, J. F.	1966
1965	L.W.Veigel	Collins, Charles (Cap)	1981
1966	J. F. Coleman	Dolve, R.M.	1953
1967	A. L. Bavone	Drevecky, Lon	2006
1968	George Toman	Fletcher, Alan	1980
1969	Willis Van Heuvelan	Fossum, Gil	1992
1970	Milo Hoisveen	Gunsch, Michae	2010
1971	Adrian C. Taylor	Hoisveen, Milo	1970
1972	Frank C. Mirgain	Isaacson, Maurice G.	1983
1973	Allan J. Anderson	Jardine, John B.	1963
1974	Theodore E. Mann	Johnson, Cliff	1964
1975	Lloyde Richmond	Johnston, C.J.	1962
1976	Reuben Reich	Jorgenson, James	2001
1977	George Seaworth	Kirby, J. R.	1959
1978	Palmer Reiten	Lium, E. K.	1951
1979	James McLaughlin	Mann, Theodore E.	1974
1980	Alan Fletcher	Manz, Oscar	1986
1981	Charles (Cap) Collins	McLaughlin, James	1979
1983	Maurice G. Isaacson	Meyer, Dennis	1988
1984	Richard (Dick) Anderson	Mirgain, Frank C.	1972
1986	Oscar Manz	Moore, Clifford (Kip)	1999
1988	Dennis Meyer	Moore, Marshall	2000
1991	Frank B. Orthmeyer	Muscha, Robert F.	1995
1992	Gil Fossum	Orthmeyer, Frank B.	1991
1993	Monte Phillips	Phillips, Monte	1993
1994	Raymond Rolshoven	Reich, Reuben	1976
1995	Robert F. Muscha	Reiten, Palmer	1978
1996	VernZink	Richmond, Lloyde	1975
1999	Clifford (Kip) Moore	Rolshoven, Raymond	1994
2000	Marshall Moore	Seaworth, George	1977
2001	James Jorgenson	Taylor, Adrian C.	1971
2004	Lawrence Woodbury	Toman, George	1968
2005	Ronald Apanian	Van Heuvelan, Willis	1969
2006	Lon Drevecky	Veigel, L.W.	1965
2007	Gary Arman	Wieland, Dean	2008
2008	Dean Wieland	Woodbury, Lawrence	2004
2010	Michael Gunsch	Zink, Vern	1996

# 1951



**E. L. Lium**

**1896-1968**

Elder L. Lium began teaching full time at the University of North Dakota in 1935. He was named acting dean in 1951, and was promoted to dean in 1952. He retired in 1963 as professor and dean emeritus of engineering.

Dean Lium, who had served as Grand Forks city engineer from 1928 until 1935, received a Bachelor of Science degree in civil engineering from UND in 1921. Upon his graduation from UND, Dean Lium practiced engineering in the Wahpeton - Breckenridge area until 1923, when he went into general contracting work at Grant's Pass, Ore. He did construction engineering in Florida, returning to Oregon in 1927 as a highway department engineer.

Dean Lium received an honorary doctorate degree from the University in 1934. He served six years on the North Dakota State Board of Registration for Engineers and was past president of the State Society of Professional Engineers. Dean Lium served in the U.S. Air Corps during World War I, enlisting in January of 1918. He was discharged in January the following year with the rank of second lieutenant.

He was a member of the Grand Forks Country Club, Elks, Disabled American Veterans Chapter 2, Alpha Tau Omega social fraternity, Sigma Tau and Sigma XI honorary engineering societies, and of local, state and national chapters of the Society of Professional Engineers. He was also a member of the Federated Church of Grand Forks.

He and his wife Mary had a son and a daughter.

# 1953



**R. M. Dolve**

**1883-1961**

Robert M. Dolve served as Dean of the College of Engineering at NDSU from 1928 until his retirement in 1954. In that year a new engineering building was named for him and he was presented with an honorary doctor of science degree.

Dolve was a 1905 graduate of the NDAC with a Bachelor of Science degree in engineering. In 1906, Dolve worked with the United States Geological Survey before returning to NDAC. From 1906 to 1926, he was an instructor in engineering until becoming head of mechanical engineering in 1915 and dean in 1926. He received his master's degree from Cornell University in 1919.

He was a member of several engineering societies, the North Dakota Academy of Science, the Fargo Engineers Club, the National and North Dakota Education Association. He was recognized by Who's Who in Engineering, Who's Who in the Central States and American Men of Science. He served on many faculty committees and published several articles in extension and farm magazines.

In his 55 years at NDSU, the engineering school grew from a small department to an accredited unit, enrolling about a third of NDSU students.

He married Blanche Moyer and they had two sons and a daughter.

# 1955



**J. W. Bliss**  
1885 - 1966

Jay W. Bliss served as city manager in Minot, ND, from 1933 until his retirement in 1952, when the couple retired to Crescent Hill Farm.

Mr. Bliss grew up in Nelson County, N.D., on his parents' homestead Crescent Hill Farm. He graduated from the University of North Dakota, in 1908, with a degree in mining engineering. He played on UND's football team. At well over 6 feet tall and with bright red hair, he cut a recognizable figure throughout his life.

After graduation from college he was employed as a highway engineer with the North Dakota Department of Transportation, Bismarck. During WWI, Bliss served as a first lieutenant in the Army Engineers, and after the war, he operated an engineering firm at Valley City, N.D. The family moved to Minot, N.D., in 1933.

He was a 50-year member of the Masonic Lodge and a life member of the International City/County Management Association (ICMA).

He married Elsie Nysten, in 1912, and they had a daughter and two sons. The Bliss' daughter, Barbara (Bliss) Adam, received her MS degree in English at NDSU; their sons followed in his footsteps becoming engineers--John W. Bliss, in civil engineering, and T.J. Bliss, in electrical engineering.

# 1958



**L. W. Burdick**  
1888 - 1977

Leroy W. (Roy) Burdick was a pioneer waste water treatment engineer in North Dakota. He owned and operated the L.W. Burdick Company until 1964 but continued to work as a consulting engineer into his 80's.

Mr. Burdick received a degree in civil engineering from the University of North Dakota in 1915 and was employed as a Benson County surveyor from 1914 - 1922. From 1922 - 1934 he was a general contractor at Wahpeton and Williston, and from 1935 - 1937 he was employed at the Public Works Administration, Bismarck.

In 1937 he became a partner in the consulting firm of Lium and Burdick, Grand Forks. After the departure of Lium in 1955, Burdick took over the firm which also had branch offices in Williston and Bismarck.

He pioneered the lagoon method of sewage disposal in the 1940's building the first sewage lagoon in North Dakota in 1948 at Maddock and the first lagoon in Minnesota in 1955 at Albany.

A veteran of the U.S. Navy, he served from 1942 - 1945 receiving a Naval award of excellence in engineering. He held life memberships in NDSPE, the North Dakota Water and Sewage Association and the American Waterworks Association. He was also a member of the American Public Works Association and Consulting Engineers Council.

He married Sarah E. Schoeneman in 1915 and they had two daughters, Rosemary and Alta.



# 1959



**J. R. Kirby**

1904 - 1991

Joseph R. Kirby started his career with the North Dakota State Highway Department in 1926 after receiving a civil engineering degree from the University of North Dakota. He served as the state bridge engineer for 14 years before his retirement in 1969. His career with the highway department was interrupted by World War II when he was lieutenant commander in the Navy SeaBees.

Mr. Kirby was the Secretary/Treasurer and Executive Secretary of the North Dakota Society of Professional Engineers for a number of years. He was president of the society in 1957-1958. He helped to create and implement the first certification for professional engineers, and served on the State Board of Registration for Professional Engineers from 1955 through 1967.

As a pioneer in bridge design, he brought the Bridge Division into the Interstate era. He created the nation's first computerized box culvert design program, was an early user of precast, pre-stressed concrete beams, and was responsible for the design and construction of many notable and large North Dakota bridges. In 1999 he was inducted into the North Dakota Highway Hall of Honor.

He was active in the Boy Scouts for more than 50 years, and was a member of Masonic Bodies, Order of Eastern Star, White Shrine of Jerusalem, and Bismarck Lions and Elks Clubs.

He married Goldie Dobson and they had two daughters.

# 1960



**R. E. Bradley**

1909 - 2003

Robert E. Bradley became chief engineer of the North Dakota State Highway Department in October 1957 and held that position until his retirement in 1982.

Mr. Bradley attended Highland Park Junior College for one year and then went to Michigan State University for three years. He moved to Sikeston, Mo., and worked for the Missouri State Highway Department. In 1934 he moved to Bismarck and worked at the North Dakota Highway Department as a draftsman and road designer. His career was interrupted by World War II, when he joined the Army Specialist Corps and was commissioned a second lieutenant. He later became a combat engineer, building advanced airfields with the 866th Aviation Battalion. He served in the Army Reserves for 16 years and retired as a lieutenant colonel. He returned to his position with the North Dakota Highway Department on Jan. 1, 1946.

Robert served as vice-president of the American Association of State Highway Engineers in 1959. He received an honorary doctorate in engineering from the University of North Dakota in 1966, and was inducted into the North Dakota Highway Hall of Honor. He was a member of McCabe United Methodist Church for 68 years, served as superintendent of the Sunday school for many years and was chairman of the Administrative Board at McCabe.

He married Mary Cornelia "Connie" Randol and they had one daughter. He later married Gwen Tucker.

## 1961



**E. J. Booth**  
1910-1981

E.J. "Eddie" Booth served Bismarck as city engineer for nearly 30 years until he retired in 1975. He then became the local representative of Toltz King DuVall Anderson and Associates Inc., St. Paul and worked for that company at the time of his death.

Mr. Booth earned an engineering degree from North Dakota State University in 1933 and came to Bismarck as an employee of the North Dakota State Geological Survey in 1934. He joined the federal Works Progress Administration in 1936, the State Water Commission in 1943 and the city of Bismarck as assistant city engineer in 1945. He was named city engineer in 1946.

Mr. Booth helped to found the North Dakota chapter of the American Public Works Association and held several state and national offices with that organization, including state and national presidencies. He served as president of the North Dakota Society of Professional Engineers and also served as a director of the National Society of Professional Engineers, president of the North Dakota Water and Sewage Conference and director of the American Road Builders' Association's Municipal and Airport Division.

He served as a Masonic officer and as senior warden and chairman of the priorities planning committee of his church. He married Helen L. Robison and they had two daughters.

## 1962



**C. J. Johnston**  
1905-1986

Clinton J. Johnston became Chief Engineer for Northwestern Bell Company in 1948. He spent his career in the telephone industry with Northwestern Bell in Minneapolis and Duluth, MN; Des Moines, IA and Fargo with a tour at Bell Laboratories in New Jersey during WW II. He retired after 47 years of service with the Bell System.

Mr. Johnston attended the University of Minnesota where he received a degree in Electrical Engineering in 1929 and later a degree in Business Administration.

He held memberships in Kappa Eta Kappa, Eta Kappa Nu, Tau Beta Pi and Beta Gamma Sigma (business). He was president of Fargo-Moorhead Engineers Club in 1951.

He was also a member of the Fargo Executive Club, National Exchange Club, The Elks Lodge, the Fargo Chamber of Commerce and the Fargo Board of Education serving as president in 1963.

He belonged to the First Methodist Church and the Masonic Lodge.

He married Marjorie Holbrook and they had two daughters and a son. He and his wife retired to Las Cruces, NM.

# 1963



**John B. Jardine**

1914-1963

John B. Jardine was vice president and a professional engineer with the Jardine Bridge Co. Inc. He was also president of Concrete Sectional Culvert Co. Mr. Jardine was the son of John A. Jardine and his grandfather founded the bridge company in 1882. He was with the Jardine companies from 1938 until the time of his death.

Mr. Jardine graduated from the University of North Dakota in 1937 and did post graduate work at Cornell University. He served in ROTC while at UND. A member of First Methodist Church, he was a member of Shiloh Masonic Lodge, Scottish Rite bodies and El Zagal Temple of the Shrine.

He was a member of the Fargo Engineers Club and the state and national society of professional engineers, Sigma Chi fraternity and Rotary Club and had served on the board of registration for professional engineers. He was a past president of Associated General Contractors of N. D. and of the North Dakota Society of Professional Engineers.

Active in tennis, hunting and bowling, he was also interested in the promotion of the professional welfare of engineers to improve the quality of their work and to protect the public.

Mr. Jardine married Jane Lontz in 1938 and they had three daughters and a son.

# 1964



**Cliff Johnson**

1899-1987

Cliff Johnson is said to be the first of the big bridge builders in North Dakota. He was the State Bridge Engineer with the North Dakota State Highway Department from 1924 -1945. He left the Bridge Division in 1945 and established a successful consulting firm located at Denver.

Mr. Johnson graduated from the University of North Dakota in 1922. He was instrumental in opening to routine traffic that portion of the state bounded by the Missouri, Yellowstone, and Little Missouri Rivers. He designed the major Missouri River crossings at Williston, Sanish, and Elbowoods.

Later he returned in a consulting role and designed the I-94 crossing -Grant Marsh Bridge in Bismarck. He was an early user of high strength steels and an innovative designer of structures which provided for soil movements and adjustment in the structure for major Red River crossings at Halstad, Shelley, Nielsville, Grand Forks, Drayton, Climax, and two at Fargo.

He was a member of Trinity Lutheran Church in Bismarck and served on the original building committee.

He married Olga Steen in 1930 and they had a daughter and two sons.

# 1965



**L. W. Veigel**  
1909-1995

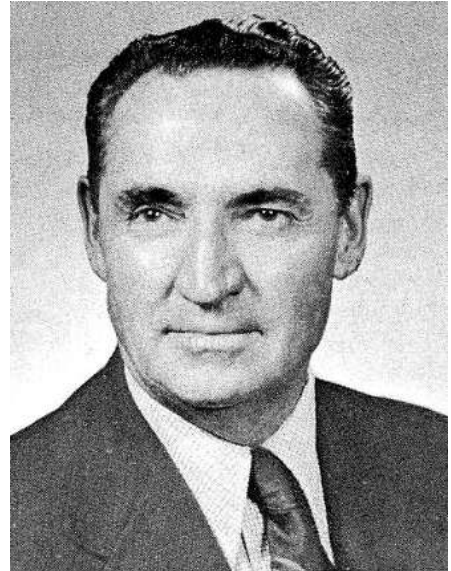
Louis W. Veigel opened a consulting engineering firm in 1938 and he was the consulting engineer for a wide variety of projects for cities and counties across the state. He developed many of the communities' water plants and sewer systems in the 30's and 40's when towns went from individual water wells to city systems. The Veigel engineering firm was sold in 1973 and became Kadmas, Lee and Jackson PC.

Mr. Veigel enrolled at the University of North Dakota and graduated in 1930 with a B.S. degree in Architectural Engineering. After graduation, he worked for several years as a structural engineer for Western Electric at their Hawthorne Plant in Chicago. He returned to Dickinson in 1932 to be appointed City Engineer in 1933 and to work as a surveyor for Stark County. During WWII, Mr. Veigel worked briefly for the Army at Camp Joseph T. Robinson in Little Rock, Arkansas before joining the Navy in 1944 to work on ship repair in Los Angeles.

He served as president of the ND Water and Sewage Works Conference, the ND Society of Professional Engineers, the Consulting Engineers Council, and was also a member and president of the ND Board of Registration for Professional Engineers and Land Surveyors.

Mr. Veigel married Mary Ellen Kelly and together they raised a family of four children. Louie and Mary Ellen worked together professionally as Mary Ellen was responsible for architectural work in connection with engineering projects.

# 1966



**J. F. Coleman**  
1912-1978

James F. Coleman was the first manager of Nodal Rural Electric Cooperative and served in that position for nearly 36 years. He graduated from North Dakota State University in 1934 with a Bachelor of Science degree in electrical engineering.

He was a past president of the North Dakota Society of Professional Engineers and served as director for the National Society of Professional Engineers. He also was a member of the American Institute of Electrical Engineers.

Mr. Coleman was a past president of the board of directors of the North Dakota Water Users Association and chairman of the state's Rural Electric Managers' Association. He also served on the board of directors of Garrison Diversion Conservancy District. He was a member of numerous other rural electrification and regional development organizations.

Lion of the Year in 1973, Mr. Coleman served as district governor and past president of the Grand Forks club. He also was active in the Elks Club, Knights of Columbus, and in Community Chest and United Fund campaigns.

He served on the Chamber of Commerce board of directors and on the governing board of United Hospital.

He married Alyce Connolly and they had four sons and two daughters.

## 1967



**A. L. Bavone**  
1906-1988

Anthony L. "Tony" Bavone worked with the First Health District in North Dakota for nearly forty years. He was born in Rome, Italy, and received his engineering education in public health engineering from Penn State University.

He was appointed to the State Board of Registration in 1953 when the Board only regulated engineers. He remained a member of the Board until 1976 at which time he became Executive Secretary of the State Board, a position he held until 1983. Mr. Bavone (PE-0065) became registered as a PE in 1944 and was continuously registered until 1983 when he retired from active practice, a period of thirty-nine years. He served as chairman of the State Board for several years and was Secretary of the board for many years before being appointed to be the executive secretary.

He was a member of the North Dakota Society of Professional Engineers serving as president in 1955 - 56. He then served as NSPE national director for two years.

He served as national president of the National Council of Examiners for Engineering (NCEE) in 1971 - 1972. He received the National Leadership Award of Excellence from Governor William Guy in 1968.

He and his wife, Marcia, had one daughter.

## 1968



**George Toman**  
1912-2000

George J. Toman joined his brothers in a conglomerate partnership composed of Sanitary Plumbing and Heating, Toman Cleaners and Toman Engineering Company. George established and operated the engineering and surveying branch, which provided engineering services for many communities in the Western Hemisphere with Mandan serving as the headquarters office. Offices and staff were maintained at Asuncion, Paraguay; Washington, D.C. and Boissevain, Manitoba.

He attended NDSU, where he received a Bachelor of Science degree in civil engineering. He also participated in graduate work at the Universities of Minnesota and Wisconsin. After graduating from college, he worked for T.R. Atkinson, Consulting Engineer in Bismarck. He also served as the associate sanitary engineer for the North Dakota State Department of Health for five years, before entering the service with the 188th Field Artillery Regiment. He spent five years in the service, sustaining an injury at the St Lo breakthrough where he was commanding the 183rd Field Artillery Battalion. After spending 17 months in the U.S. Army Hospital System, Lt. Col. Toman retired from the service. He was awarded the Purple Heart and the Bronze Star Medal.

George was a member of NDSPE and the first president of the North Dakota Consulting Engineers Council. He was a member of the Masons, Mandan Rotary Club, American Legion and Veterans of Foreign Wars.

George married Helen Emily Dill and they had two daughters. He later married Margaret (Pierce) Huddleson.

# 1969



**Willis Van Heuvelen**

1914-1992

Willis Van Heuvelen of Bismarck served the people of North Dakota as a professional engineer for 33 years through the North Dakota Department of Health. After teaching chemistry for five years at Bismarck State College, he joined the North Dakota Department of Health in 1946 as Director of the Chemistry and Bacteriology Division. In 1949, he was named Director of Water Supply and Pollution Control, and in 1957 he became the Environmental Control Chief and Executive Officer where he served until retiring in 1979.

Van Heuvelen's leadership and knowledge helped North Dakota become the first state in the nation to comply with EPA air and water pollution standards. He had a special interest and expertise in helping small North Dakota communities design and build economical wastewater treatment systems that were effective in all extremes of North Dakota seasons.

As a professional engineer, Mr. Van Heuvelen was active in numerous engineering associations and was appointed to several national commissions on water pollution and wastewater treatment. In addition to his professional activities, Mr. Van Heuvelen served on the Bismarck City Commission for twelve years. He was active in various leadership roles at Trinity Lutheran Church over four decades and he was a long term member of Rotary.

Mr. Van Heuvelen and his wife, Ragna, had a daughter and two sons.

# 1970



**Milo Hoisveen**

1905-1990

Milo W. Hoisveen was named chief Engineer and State Engineer for North Dakota in 1954. He retired from the North Dakota State Water Commission in 1973.

Mr. Hoisveen received a civil engineering degree from North Dakota State University and his initial work in hydrology started with the North Dakota State Engineer in 1931. In 1934 he was placed in charge of the Burlington Irrigation Project. Later he was in charge of the design and construction of the Sioux Irrigation Project on the Yellowstone River. He then took a position with the Federal Government and was placed in charge of the Mirage Flats project in western Nebraska.

Shortly after the outbreak of World War II, he became irrigation advisor to the Emergency River Project in Salinas, California. He also worked on water and irrigation projects in Utah, New Mexico and Washington before returning to North Dakota in 1953.

He served on a number of national committees dealing with sprinkler irrigation systems, concrete irrigation pipe, as well as large dams and reservoirs.

He was a life member of the North Dakota Water Users Association and National Society of Professional Engineers, and was a member of Elks, Sons of Norway, Masons and Scottish Rite. He married Hollis Carrell and they had one daughter.

# 1971



**Adrian C. Taylor**

1909-1975

Adrian C. Taylor served the Bismarck area and the state in various civil engineering capacities for nearly 40 years. His most recent employment was with North Dakota Concrete Products Company, retiring in 1974.

A graduate of Auburn Polytechnic Institute, Auburn, AL., he came to North Dakota in 1931. He worked for the State Highway Department for nearly seven years before moving to Minneapolis, Minn., where he worked for the Soo Line Railroad. Later he was employed by a railroad division of U.S. Steel in Birmingham, Ala., leaving that position to serve with the Army Corps of Engineers during World War II. He returned to Bismarck as city engineer and in 1946 went to work for the Bureau of Public Roads for 11 years as bridge engineer, design engineer and district engineer, resigning in 1957 to join the concrete products firm.

Mr. Taylor was a member of the FHWA Unit of the National Defense Executive Reserve, a commandant of the Corps of Engineers state reserve school, a former regional vice-president of NDSPE Engineers and served as president of the local and state NDSPE organizations.

He was a member of the Bismarck Planning Commission for 23 years; a past national director of the American Society of Planning Officials and a past president of the Bismarck Rotary Club.

He married Ardeth Gussner in 1935. They had a son and two daughters.

# 1972



**Frank C. Mirgain**

1909-1977

Frank C. Mirgain retired in 1975 after 20 years as Dean of Engineering and Architecture at NDSU. Before coming to NDSU in 1954, Mirgain was head of the Civil Engineering Department at the Cooper Union School of Engineering, New York.

A native of Chicago, he received a B.S. in civil engineering from Purdue in 1931 and an M.S. in environmental engineering from Rutgers in 1933. A registered professional engineer and land surveyor, he was a member of Tau Beta Pi, Chi Epsilon and Sigma Xi, honorary societies.

Mirgain's professional activities included the National Society of Professional Engineers, North Dakota Society of Professional Engineers and Engineering College council; chairman of the National Committee on Engineering Registration and; past president of the North Dakota Society of Professional Engineers.

His civic activities included director of the Fargo Cass County Industrial Development Corporation; director, Fargo Chamber of Commerce; president, Red River Research Associates and chairman, N. D. Comprehensive Health Plan Council.

Mirgain served as Exalted Ruler of the Fargo Elks and a trustee of the ND Elks. He was president of the Fargo Lions Club and Deputy Governor of Lions International.

He and his wife, Velma, had a son and two daughters.

# 1973



## **Allan J. Anderson**

1908-1997

Allen J. Anderson retired from the highway department in 1974 after 40 years of service and rising to the level of chief bridge engineer for the state. While serving as chief engineer, the bridge division received three national awards for excellence in steel design.

After receiving a Bachelor of Science degree in civil engineering in 1933 from the University of North Dakota, Allen joined the North Dakota State Highway Department in 1934. In July 1942 Allen took a leave of absence from the highway department and joined the U.S. Navy as an officer in the civil engineering corps. He served for 30 months in the War Plans Division of the Bureau of Yards and Docks in Washington D.C., working on the N.L. Pontoon used by the invasion forces in Sicily and Normandy. For 14 months, Allen was attached to the Third Brigade of the seventh fleet in the South Pacific, ending up in Manila on V-J Day. He retired from the Navy with the rank of commander.

He served as president of the Capital Employees Credit Union for three years and was state president of North Dakota State Highway Employees Association and North Dakota Society of Professional Engineers.

Allen was a member of the Golden "K" Kiwanis and a devout member of Trinity Lutheran Church for more than 60 years. He was a member of the board of directors of Missouri Slope Lutheran Care Center for eight years.

Allen married Mildred I. Hoff and they had two sons.

# 1974

## **Theodore E. Mann**

Theodore E. Mann was Project Manager with the Bureau of Reclamation Office in Bismarck until he retired in the mid-1970's. He had previously worked on the construction of the Grand Coulee Dam.



# 1975



**Lloyd Richmond**

1910 - 2001

William Lloyd “Boots” Richmond, Sr. attended the University of North Dakota where he played basketball and football. He was a member of the NCC Conference championship team for football in 1929, 1930, and 1931, earning All-Conference honors for three seasons. In 1931, he was named the MVP in the NCC and led the nation in scoring. He earned the nickname “Boots” after kicking the winning point against the unbeatable Army team in 1931. Boots was named as an All-American football player in 1933. He graduated with a BS in Civil Engineering from UND in 1933.

While attending UND, Boots met Wilhelmina “Billie” Ogden and in 1933 they were married in Oakes, North Dakota. They had three children and five grandchildren.

Boots began his career in engineering working for the highway department and Butler Construction in North Dakota. In 1948, he started his own consulting firm, and was involved with the survey, design, and first phase of construction for the Grand Forks Air Force Base. In 1964, Boots, along with his three sons, established Richmond Engineering, Inc. They specialized in sewage lagoons, airport construction, and grading and paving for counties. He was awarded the Elwyn F. Chandler Award in 1975. Boots retired in 1985.

Other achievements in life include: his induction into the UND Athletic Hall of Fame, the “Golden Graduate of Engineering Award” by the UND School of Engineering and Mines, and the “Raymond L. Gardner Award” for Outstanding National Alumni presented by his beloved fraternity Phi Delta Theta.

# 1976



**Reuben Reich**

1911 - 1989

Reuben Reich worked 33 years for the North Dakota State Highway Department as a materials engineer retiring in 1977. He then worked part time for Kadrmas, Lee and Jackson.

He graduated from North Dakota State University with a degree in Civil Engineering and worked for a time with Rue Construction, a bridge contractor.

He was inducted into the North Dakota Highway Hall of Honor in 1976. He was recognized for his efforts leading to the use of native material that greatly influenced cost reduction in road building. Reich's record of proficiency provided for unparalleled highway transportation in North Dakota. He was instrumental in doing research with fly ash to determine its suitability as a construction material. As a result, fly ash was used by the NDDOT as a mineral filler in asphalt mixes, as a partial replacement for Portland Cement in concrete pavement and as a soil stabilizer

Reuben was instrumental in the creation of the Committee on Research and Engineering within the NDDOT and served as the chairman until his retirement.

Mr. Reich was a life member of the Elks. He was a member of the North Dakota Society of Professional Engineers and the American Society of Civil Engineers.

Mr. Reich was never married.

# 1977



## George Seaworth

George Seaworth of Bismarck contributed nearly 45 years of engineering service to the people of North Dakota. He worked as a structural designer for the Highway Department in the 1930s. After World War II service, he did engineering work for the Bureau of Reclamation and then joined the Federal Highway Administration as bridge engineer in 1957. Ten years later he was promoted to division administrator, a position he held for nearly 13 years. Seaworth retired from his position as North Dakota division administrator with FHWA in 1980. His leadership in the FHWA division office helped North Dakota become the first state to complete its portion of the interstate system.

A professional engineer, he was a member of the National Society of Professional Engineers, past president of the North Dakota Society of Professional Engineers, and past president of Chapter 3 of the State Society.

In addition to his professional activities, Mr. Seaworth served as the first president of the Bismarck-Mandan Federal Executive Association and was active in Boy Scouts. He was a member of the Reserve Officers' Association, the Benevolent Protective Order of the Elks, the American Legion, and the Bismarck Lions Club.

Mr. Seaworth and his wife, Margaret, had five sons and a daughter.

# 1978



## Palmer Reiten

1917-1979

Palmer J. Reiten was a University of North Dakota faculty member for more than 30 years. A professor of mechanical engineering at UND since 1948, Mr. Reiten was a 1975 recipient of the UND Alumni Association Distinguished Service Award. From 1961 until 1967 he served as chairman of the mechanical engineering department at UND.

Mr. Reiten was born in Petersburg, N.D. where he completed high school. He obtained a B.S. in mechanical engineering from UND and a master's degree from Texas Agricultural and Mechanical College where he was also an instructor. He served in the U.S. Army as an aviation cadet during World War II.

Mr. Reiten was active in numerous professional organizations including Sigma Tau engineering honorary fraternity, the American Society of Engineering Education, the National Society of Professional Engineers and the North Dakota Academy of Science. He was president of the North Dakota Society of Professional Engineers in 1969 and was a national director of NSPE at the time of his death.

He was listed in Who's Who in American Education, American Men of Science and, Who's Who in North Dakota. He belonged to United Lutheran Church in Grand Forks.

He married Beulah C. Jenson of Grand Forks on June 6, 1946 and the couple had one son.

# 1979



**James McLaughlin**

James R. (Jim) McLaughlin of Bismarck and later Fargo, ND contributed 51 years of engineering to the upper Midwest. After graduating from the University of North Dakota in 1948 with a BS Degree in Civil Engineering, he worked for Ulteig Engineers until retirement in 1987, serving as President from 1975 to 1987. From 1988 until 2000 Jim served as chairman of the SE Cass and Cass County Water Boards and was deeply involved with the 1997 flood.

A professional engineer and land surveyor, he was registered in eight states and had a national certificate. He was a member of NSPE, fellow in ASCE, and a member of ACI, IEEE, Past Vice President of ACEC, Past President of NDCEC and a former chair of the North Dakota board of registration of PE and LS.

Civic activities include Past President of the Northern Lights Council of the Boy Scouts — having received the Silver Beaver and Silver Antelope. He was also President of the Fargo Chamber of Commerce, on the Board of Regents for Mary College, United Way Fund Chairman in 1984, MCOG Water Resource Chairman from 1979 - 1985.

In addition, he was active in hockey and American Legion Baseball activities. He also chaired the steering committee for the FARGODOME and developed the Roger Maris Museum.

Mr. McLaughlin and his wife, Dorothy, had five sons and three daughters.

# 1980



**Alan Fletcher**

**1925-1999**

Alan Gordon Fletcher was named Dean of UND's School of Engineering and Mines in 1969. With engineering and research interests principally in hydraulic engineering and water resource development, he published extensively. Dr. Fletcher was instrumental in forming Project Lignite, the foundation for much of UND's research with low-rank coal. He was active in integrating the Energy and Environmental Research Center, formerly a federal facility under the U.S. Bureau of Mines, into the University.

He also helped oversee the completion of the Upson engineering complex. During his 20 years at the helm, the School of Engineering and Mines increased enrollment, added master's degree programs, increased research, and added the Women in Engineering Program. Dr. Fletcher was very instrumental in encouraging and recruiting women students into engineering. Dr. Fletcher retired in 1989.

Alan Fletcher received the B.A.Sc. degree in Civil Engineering from the University of British Columbia in 1948. He earned an M.S. from the California Institute of Technology in 1952 and the Ph.D. in Civil Engineering from Northwestern University in 1965.

From 1958 to 1959 he worked for the British Columbia Electric Co. Ltd. He joined the faculty of the University of Idaho in 1959. From 1964 to 1969 he was a member of the Civil Engineering faculty at the University of Utah.

He and his wife Irene had one son and three daughters.

# 1981



**Charles (Cap) Collins**

1910 – 2008

Charles C. Collins joined the staff of the Electrical and Electronics Engineering Department at North Dakota State University in 1958. He specialized in the power and energy field, doing consulting work along with his teaching. He retired from the department in 1976.

Cap became interested in the electrical power field as a very young man. He worked in the power plant of the Jardine Gold Mining Company of Judine, Montana. Later he joined the Day Mining Company of Wallace, Idaho where he worked in the accounting department.

Cap served in the U.S. Army during World War II. He took his basic training in the Medical Corps in Texas and later transferred to the Infantry where he ended up in a regimental headquarters unit of the 106th Division in Europe. He earned a B.S. degree in 1952 and an M.S. degree in 1958, both at Montana State. During this period he also worked as a consulting engineer and taught at Northern Montana College.

Professor Collins served for many years as a faculty adviser to Tau Beta Pi. He was very active in Circle K, a campus service club and in Kiwanis. He chaired the Energy Committee of the Fargo Chamber of Commerce and served in a number of capacities in the North Dakota Society of Professional Engineers including president in 1971. He held all offices of the Red River Sub-section of the Minnesota section of the Institute of Electrical and Electronics Engineers. He was active for many years in Boy Scout activities. Cap married Enola Seely and they had a son and a daughter.

# 1983



**Maurice G. Isaacson**

1922 - 1996

Maurice G. Isaacson was a longtime Minot Air Force Base engineer retiring from that position in 1977.

Maurice was born in Cando, ND and graduated from Cando High School in 1940. He served in the U.S. Army from May 21, 1943, to Dec. 5, 1945 during the Pacific Theatre of World War II. He received the Bronze Arrowhead and three Bronze Service Stars. He received his Bachelor of Science degree in mechanical engineering from North Dakota State University in 1950.

After graduation he worked as the assistant city engineer in Minot. He began work for the Minot AFB in 1957 where he served as the first Minot AFB deputy civil engineer.

He was a member of the North Dakota Society of Professional Engineers. He was also a member of the Society of American Military Engineers and a former member and past president of the Greater Minot Kiwanis Club.

He was a charter member of the St. Mark's Lutheran Church in Minot, where he served two terms as the chairman of the building committee and was past president of the congregation.

He married Yvonne Kling and they have a daughter and four sons (one deceased).

# 1984



## **Richard (Dick) Anderson**

R. D. (Dick) Anderson was involved in service to the Engineering profession in North Dakota for 36 years. After graduating with a Civil Engineering degree in 1966, he became a member of the staff at NDSU, teaching and working on his Master's degree. The degree was achieved in 1969 and he continued on staff until June 1, 1974. Dick joined Ulteig Engineers, Inc. in the Fargo office and in 1976 moved to Bismarck to open an office for Ulteig. He managed the Bismarck office until August 1991, providing consulting services to western North Dakota. In 1991 he returned to the Fargo office and served as Project Manager for the new 30 MGD Fargo water treatment plant. He was elected President of Ulteig Engineers, Inc in April 1993 and served in that capacity until April 2000. He remained a member of the Board of Directors until his retirement in April 2002.

A professional engineer and registered land surveyor, he is a member of the National Society of Professional Engineers, past president of the North Dakota Society of Professional Engineers, past president of Chapter 4 of the State Society, and general chairman of the 1981 summer directors meeting of the National Society of Professional Engineers. He also is a member of the American Society of Civil Engineers and was a member of North Dakota Society of Professional Land Surveyors, the American Water Works Association, and the Water Environment Federation.

In addition to his professional activities, Dick served as president of the Capitol City Lions Club in Bismarck and is Past Exalted Ruler of the Bismarck Elks Lodge #1199. Mr. Anderson and his wife Marylyn, have two daughters.

# 1986



## **Oscar Manz**

Oscar E. Manz received his B.S. in Ceramic Engineering from the University of Saskatchewan in 1951. In 1952 he was hired by the University of North Dakota to work with the clays of North Dakota.

Over a four-year period he took the remaining classes needed for a B.S. in Civil Engineering and in 1959 received his degree. In 1962 he obtained an M.S. in Civil Engineering from the University of Minnesota. In addition to teaching, he spent more than twenty five years in testing and research on the use of fly ash as a mineral admixture in Portland cement concrete, as well as soil stabilization and ceramic products.

While on the Civil Engineering faculty he was very active in recruiting high school students, as well as promoting the MathCounts and Junior Engineering Technical Society programs.

He is an honorary member of ASTM Committees C1 and C9, as well as the American Coal Ash Association. He has received many awards and honors, such as the Edward A. Abdum-Nur Fly Ash award at the 4<sup>th</sup> CANMET-ACI conference in Istanbul, Turkey in 1992. He has authored or co-authored over 100 publications and professional presentations.

He was presented professor emeritus status upon retirement from UND in 1989.

Oscar and his wife, Dorothy, have one daughter and five sons, four of whom are UND Engineering graduates.

# 1988



## Dennis Meyer

Dennis F. Meyer retired from the Soil Conservation Service, US Department of Agriculture, after 31 years holding various positions such as area engineer, watershed project engineer, staff engineer and engineer in charge of special projects.

Mr. Meyer received a B.S. in Agricultural Engineering from North Dakota State University. He has been credited with designing the "Dakota System" and the "Mini-Dakota System" for handling agricultural waste in a safe and cost efficient manner. He also developed a Hydraulic Irrigation Intake Structure to provide a simple, economical and low-maintenance intake structure for irrigation systems.

Dennis is active in civic, social, business/ financial and church organizations and holds two invention patents. His professional involvement includes holding chapter and state offices within NDSPE and a past member of the ND State Board of Registration for Professional Engineers and Land Surveyors. He was president of the National Council of Engineering Examiners from 1987 to 1988.

His professional activity has brought honors and recognition including Who's Who in North Dakota 1984; Outstanding Alumnus, Bismarck Junior College National Alumni Association 1985, the North Dakota National Leadership Award of Excellence 1988 and the Distinguished Service Award from the Council of Examiners for Engineering and Surveying in 1996.

Dennis and his wife, Bernice, have two daughters and two stepsons.

# 1991



## Frank B. Orthmeyer

Frank Orthmeyer of Sioux Falls, SD contributed 41 years of engineering service to the people of ND and SD. He worked as a Project Engineer for the City of Bismarck 1949-1966, as the City Engineer for the City of Mitchell 1966-1970 and as the City Engineer & Director of Public Works for the City of Grand Forks 1970-1991.

A professional engineer, he was a member of the National Society of Professional Engineers, a member of the North Dakota Society of Professional Engineers, served on the North Dakota State Board of Registration, and was elected Secretary of the ND State Board of Registration.

In addition to his professional activities, Mr. Orthmeyer was a member and served on the board of the Water Pollution Control Federation, from which he received the Arthur Sidney Bell Award, a member of the American Water Works Association, a life member of the American Public Works Association, was elected to the North Dakota Garrison Conservancy Board from which he received the North Dakota Water Wheel Award.

Mr. Orthmeyer graduated from North Dakota State University in 1949 with a BS degree in Civil Engineering.

He and his wife, Inez, live in Sioux Falls, South Dakota. They have four sons and a daughter.

Mr. Orthmeyer's retirement activities include traveling, wood carving, teaching wood carving, wood working, oil and water color painting, and playing bridge.

# 1992



## **Gil Fossum**

**1918-2001**

Guilford (Gil) Fossum began his 38 year teaching career in civil engineering at the University of North Dakota in 1946. He was granted professor emeritus status upon retirement in 1984.

Gil attended Concordia College and graduated from the University of North Dakota in 1942 with a degree in civil engineering. He enlisted in the US Navy, and served in the South Pacific during World War II. He attended officer's training school and was discharged as an ensign first class. In 1951, he earned a master's degree in civil engineering from Iowa State University, Ames, Iowa.

He married Agnes (Peggy) Myers on August 25, 1945, in Grand Forks. In 1992, he was awarded the Elwyn F. Chandler Award by the North Dakota Society of Professional Engineers for outstanding contribution to the advancement of the engineering profession. He served as NDSPE secretary/treasurer and executive secretary from 1985 to 1991.

He served as the official scorer for the UND Sioux men's basketball team and was a long-time Sioux Booster. He was a lifetime member of United Lutheran Church where he taught Sunday school and served on numerous committees.

He and his wife Agnes (Peggy) had two sons and two daughters.

# 1993



## **Monte Phillips**

Monte L. Phillips is a UND Emeritus Professor of Civil Engineering. He received a Ph.D. with an emphasis in Geotechnical Engineering from the University of Illinois, and a BS and MS degree in Civil Engineering from UND. During a thirty-nine year career as an educator, he served on the faculties of the University of Illinois, Ohio Northern University, and the UND.

Professor Phillips was active in several technical and professional engineering societies including: National President 1994-95 and Fellow of the NSPE; President 2000 and Fellow of the National Academy of Forensic Engineers; North Dakota Section of the American Society of Civil Engineers past two-term president and Fellow; National Institute of Building Science Board of Directors; Chair of the National Board of Governors of the Order of the Engineer.

He is the recipient of the North Dakota National Leadership Award of Excellence presented by Governor Schafer in recognition of his national leadership as president of NSPE. He served a five-year term, including chair, on the North Dakota Board of Registration for Professional Engineers and Land Surveyors.

In retirement he has chaired and served on numerous task forces and committees of the National Council of Examiners for Engineering and Surveying and was awarded the Council's 2005 Distinguished Service Award. He currently serves as the NCEES representative on the ABET Board of Directors.

He and his wife Niomi are parents of three daughters and eight grandchildren.

## 1994



### Raymond Rolshoven

Raymond Rolshoven joined Ulteig Engineers in 1981 in their Bismarck office and provided consulting services for communities in North Dakota. He retired in 1994.

Ray served in the U.S. Army during 1951 and 1952. After graduating from North Dakota State University in 1959, he was employed with Toman Engineering in Mandan. From 1966 to 1978, he was engaged as a sanitary engineer with the Division of Water Supply and Pollution Control with the North Dakota State Department of Health. During this time, he advanced to become the Assistant Director of the Division and after 1972 his major responsibility was the supervision and management of the Environmental Protection Agency's Construction Grant program for the construction of waste water interceptor and treatment facilities for municipalities in North Dakota. From 1978 to 1981, he joined a local development firm involved in land development for residential and industrial uses.

During his career he has been a member of the American Public Works Association and the American Water Works Association. He is a Life Member of the Water Environment Federation and the North Dakota Water Environment Association. He has served as the NDWEA President and as its National Director for a three-year term. He has been active in NDSPE and NSPE for many years and has served as NDSPE President and also a three-year term as its National Director. In 2002, after recommendation by the Board of Directors of NDSPE and approval by NSPE, Raymond was honored to be Fellow Member of NSPE.

Raymond and his wife, Bernice have had five children, two daughters, and three sons [one deceased].

## 1995



### Robert F. Muscha

Robert Muscha joined Houston Engineering in Fargo in 1970 and became a partner in May of 1972. He was with Houston Engineering on a full-time basis until 1997 when he sold his interest in the business. He continues to work there on a part-time basis. While at Houston Engineering he worked on general civil engineering projects mostly in the area of surface water.

Mr. Muscha volunteered to be drafted into the army and was later selected to attend OCS. After he left the Active Army he joined the North Dakota National Guard and served 30 years retiring in 1986 as a full colonel. He worked for Red River Engineers, owned by John Oakey and R. J Roberts, while in college and graduated in 1963 from NDSU with a Bachelor of Science in Civil Engineering.

He has served in various offices of a number of organizations including State President of North Dakota Society of Professional Engineers, Catholic Order of Foresters and the Reserve Officers Association. He is a member of the Veterans of Foreign Wars, American Legion, Elks Lodge, Catholic Order of Foresters, National Society of Professional Engineers and the Fargo-Moorhead Engineers Club. In 2002 he was named a Fellow by NSPE upon the recommendation of the Board of Directors of the North Dakota Society of Professional Engineers. He also served on several boards and Committee's at Holy Spirit Church.

He married Carol Bowen and they had a son and a daughter.



# 1996



**Vern Zink**

Laverne (Vern) Zink served as Executive Secretary and legal counsel for the North Dakota State Board of Registration concurrently with his law practice from 1982 until retiring in 1995. He served as Special Assistant Attorney General and wrote the Soil Classifiers registration law.

Mr. Zink, a registered Professional Engineer and a licensed Lawyer, served as an engineer with the Bureau of Reclamation after graduating from North Dakota State University in 1956. He was admitted to the practice of law in North Dakota and federal courts in 1963. He then served as chief of Planning with the North Dakota Department of Transportation for 18 years.

From 1974 to 1982 he formed his own consulting firm (TPI Inc.). The North Dakota power plant and transmission facilities siting rules and regulations were developed for the North Dakota Public Service Commission. He was an exchange student to Costa Rica in 1952 and 1953.

He received a Meritorious Service award from the National Council of Engineering Examiners. He has served on numerous committees for the National Academy of Sciences and on the Advisory Board for the Texas Transportation Institute.

He is member of the Cathedral of the Holy Spirit and has served in many capacities in church service; is a life member of the Elks; served on the Bismarck Planning Commission; the St. Alexius Hospital Board; president of the Kiwanis Club; many years active in the Bismarck Chapter of the NDSPE. He and his wife Beverly have three daughters.

# 1999

**Clifford (Kip) Moore**

## 2000



### **Marshall Moore**

For more than seven years, Marshall W. Moore served as director of the North Dakota Department of Transportation. His position was a capstone for years of service serving North Dakota and the region.

Moore distinguished himself as an engineer, legislator, fighter pilot and entrepreneur, earning the respect of lawmakers from North Dakota to Washington, DC. He has been one of few DOT directors who was also an engineer.

At the NDDOT he addressed transportation needs throughout the state and furthered the growth of information technology. His comprehensive business plan reflected his 30 years in the private sector where he co-founded Moore Engineering, Midwest Technical Laboratory, and the architectural and engineering planning firm of Halvorson, Moore, Strague and Moore.

While his government service included four terms in the North Dakota legislature from 1981 to 1987, he also directed the North Dakota Farmers Home Administration from 1989 to 1992.

From 1994 through 1996 Marshall was active in the Western Association of State Highway and Transportation Officials, serving as president in 1996.

In 2000, Marshall received the Agrey Award which recognizes and honors an individual who has made significant contributions to the State of North Dakota, its citizens and its business community through involvement in transportation.

Marshall and his wife, Rosemary, had two sons and three daughters.

## 2001



### **James L. Jorgenson**

James L. Jorgenson is founder and Chairman of the Board of Metal Building Software, Inc. in Fargo, ND. Metal Building Software is a software program that does the complete design, detailing, costing and drafting of steel framed metal buildings. Previous to this he was on the civil engineering faculty for 33 years serving as chair of the department from 1970 - 1981. He was employed by a structural engineering firm in Minneapolis and by Kaiser Engineers in California.

Dr. Jorgenson received his bachelors degree from the University of North Dakota, his masters degree from Northwestern University and his PhD from Purdue all in the area of civil engineering.

He is an active member of NDSPE, NSPE and ASCE. In 1996 he was appointed to the North Dakota Board of Registration for Professional Engineers and Land Surveyors. His current term will end in 2006.

Dr. Jorgenson has been active in different community organizations including President of the Hope Lutheran Church Council and President of Lutheran Students Council at NDSU.

His work with Metal Building Software has permitted him to work closely with engineers from throughout the world. Dr. Jorgenson states that as engineers it is interesting how much we have in common even though we have marked differences in forms of government and in culture.

Dr. Jorgenson and his wife, Jean, have two sons and a daughter. Their son Dean, a professional engineer, is president of Metal Building Software.

## 2004



### **Lawrence H. Woodbury**

Lawrence Woodbury began his engineering career in 1968 after receiving his BSCE from NDSU. He started graduate school and working as a consulting engineer for Intertec, Inc. in Minneapolis. In 1970 he was called to active duty in the US Air Force as a base civil engineering officer at RAF Mildenhall, England. While on active duty he completed an MBA through the University of Utah. He left the Air Force in 1974 and joined Houston Engineering, Inc. in Fargo as a civil engineer. He transferred his military commission to the ND Air National Guard retiring in the rank of Brigadier General in 2006. He completed a Masters degree in Civil Engineering and a PhD in Engineering, both from NDSU, while working full time for Houston Engineering. His engineering career has focused primarily on water resources engineering project development. In the fall of 1988 Dr. Woodbury joined the Civil and Construction Engineering Department at NDSU as an associate professor. He returned to Houston Engineering, Inc. in 1994 and in 1997 he was elected President and subsequently Chairman of the Board in 2002.

Dr. Woodbury is a licensed Professional Engineer in North Dakota and seven other states, and is certified as a Professional Hydrologist. He served as a member of the ND State Board of Registration for Professional Engineers and Land Surveyors from 1995 to 2005. He is an active member of NDSPE, serving as past president of both Chapter 4 and the state NDSPE. He is a Fellow Grade Member of ASCE and numerous other professional societies.

Dr. Woodbury is active in Fargo Lions, and plays clarinet and saxophone in several area bands. Dr. Woodbury and his wife Annette (BS in Landscape Architecture from NDSU), have a daughter and a son.

## 2005



### **Ronald Apanian**

Ronald Apanian had a most rewarding and fulfilling career in engineering education. He started teaching in the Civil Engineering program at the University of North Dakota at the rank of Instructor in 1957 and retired as Professor and Chairman in 1999. He is currently a UND Emeritus Professor and Chairman of Civil Engineering. Ron earned the BS and MS degrees in Civil Engineering from UND in 1956 and 1958. In 1965 he was awarded a National Science Foundation Faculty Fellowship so he and his wife, Dorine whom he married in 1956, packed themselves and their four children off to Stillwater, Oklahoma. He earned the Ph D degree in structural engineering from Oklahoma State University in 1967.

Ron Apanian was active at the local and state levels in NSPE and ASCE. He served on many committees and as president of Chapter One of NDSPE and as state president of NDSPE. He served two five-year terms on the North Dakota Board of Registration for Professional Engineers and Land Surveyors and served one year as chairman of the Board. While a member of the Board he served on several sub-committees of the National Council in the area of professional examination preparation.

In addition to his career in education Ron stayed current in engineering practice by consulting with firms of L. W. Burdick and Webster, Foster and Weston.

Ron and Dorine continue to live in Grand Forks although they spend a fair amount of their time at their cabin in Minnesota. Their four children are all graduates of UND and have given them fourteen grandchildren.

## 2006



### Lon Drevecky

Lon Drevecky founded Prairie Engineering, P.C. in 1979 and currently serves as a Senior Partner and President. Prairie Engineering, P.C. has offices in Minot and Bismarck and is a consulting firm specializing in Mechanical and Electrical design for the building industry.

Mr. Drevecky graduated Valedictorian from Adams HS in 1966 and received his BSME from NDSU in 1970. While at NDSU he participated in Air Force ROTC, Served as Arnold Air Society Commander and was called to active duty in 1970. Lieutenant Drevecky served as Mechanical Design Engineer at Lackland AFB Tx., and Chief of Program Development in the 341<sup>st</sup> Civil Engineering Squadron at Malmstrom AFB Mt.

Captain Drevecky completed his military obligation in 1974 and accepted a position as mechanical design engineer with Schmit, Smith and Rush in Minot.

Mr. Drevecky was first licensed as a Professional Engineer in 1975 and is currently licensed in six states.

Mr. Drevecky has served as President of Bread of Life Lutheran Church Council and the Minot Exchange Club.

Mr. Drevecky has served as NDSPE Chapter II President, NDSPE State President, NDSPE National Director, ACEC/ND President, ASHRAE Member, Board Member and Past Chairman of the ND State Board of Registration for Engineers and Land Surveyors and has been a member of the ND State Plumbing Board for 17 years, currently serving as President.

Mr. Drevecky talks to high school students about careers in engineering and works at the Minot area NDSPE sponsored MATHCOUNTS competition annually.

Lon and his wife Sandy have one daughter, one son and two grandchildren.

## 2007



### Gary Arman

Gary Arman graduated with a Bachelor Science Degree in Civil Engineering from NDSU in 1967. Following graduation he was employed by the Kansas Highway Commission before he accepted a manager's position with Twin City Testing/Soil Exploration in Eau Claire, Wisconsin.

Upon his return to North Dakota in 1978 he became involved with NDSPE Chapter 3. He was instrumental in fund raising for the 1981 NSPE National Summer Meeting which was held in Bismarck. After all the meeting bills were paid, the remaining funds were used to create the NDSPE Education Foundation Scholarship Fund.

He later served as vice-president, president-elect and president of Chapter 3. He also held similar offices with NDSPE.

Mr. Arman served two terms on the North Dakota State Board of Registration for Professional Engineers and Land Surveyor being appointed by both Governors Schafer and Hoeven

At the time of receiving this reward Mr. Arman was self-employed working as a special consultant to Braun Intertec Corporation.

Gary is currently involved with the Bismarck-Mandan Development Association and is a member of the Bismarck-Mandan Chamber's Transportation committee which he has chaired several times.

He is actively involved with the Capital City Lions Club and the United Way. Over the years he has coached little league soccer and has been involved with scouting.

He and his wife Inez have a son and a daughter.

## 2008



**Dean Wieland**

Dean Wieland was a founder of CPS, Ltd in Grand Forks in 1979. He served as president of CPS, Ltd until 2002. Immediately prior to that he joined his friend and college classmate, Gary Sanders, in the Floan Sanders Engineering firm in East Grand Forks, MN. Dean's contributions to the consulting engineering profession are marked by assisting communities in improvements to the quality of life, including water distribution, wastewater collection and treatment, streets, parks and sites for new buildings and developments.

Mr. Wieland graduated in civil engineering from the University of North Dakota in 1967. Following that he was employed by the Kansas State Highway Commission before returning to North Dakota in 1973 to accept a position with the City of Grand Forks Engineering Department.

Mr. Wieland has been active in the American Society of Civil Engineers, American Water Works Association and the water Environment Federation. He served in all the offices of NDSPE Chapter 01 and served as NDSPE state president in 2002-2003.

Governor John Hoeven appointed Mr. Wieland to a five-year term on the North Dakota Board of Registration for Professional Engineers in Land Surveyors beginning July 1, 2007.

Dean has been a leader in St. Mark's Lutheran Church and has volunteered at Valley Memorial Homes. In 2004 he was inducted into the UND School of Engineering and mines Alumni Academy.

Dean and his wife Mae have traveled extensively as ambassadors for North Dakota. Their most recent trip was to the Three Gorges Dam in China.

Both their son and daughter are UND engineering graduates and registered professional engineers.

## 2010

**Michael Gunsch**

## References

The following individuals and groups provided information regarding Chandler Award recipients. Their assistance is greatly appreciated.

- Anderson, Allan J.** - *Bismarck Tribune*, December 19, 1997 and North Dakota Department of Transportation.
- Anderson, Richard (Dick)** - information provided by award recipient.
- Apanian, Ronald** - information provided by award recipient.
- Arman, Gary** – Nomination form for Chandler award.
- Bavone, A. L.** - Cliff Keller, Executive Secretary, N D Board of Registration for Professional Engineers and Land Surveyors.
- Bliss, J.W.** - Jan Tellman (grand-daughter), Wade Kritsky, City of Minot and *Grand Forks Herald*, September 12, 1966.
- Booth, E.J.** - Mel Bullinger, City of Bismarck and *Bismarck Tribune*, December 1, 1981.
- Bradley, R. E.** - Kathy McCarthy, Upper Great Plains Transportation Institute, NDSU.
- Burdick, L. W.** - Rosemary Leidholdt (daughter).
- Chandler, Elwyn F.** - Dean John Watson and Cadence Youngberg, School of Engineering and Mines, Univ. of North Dakota.
- Coleman, J. F.** - Kim Soper, Dakota Electric Cooperative and *Grand Forks Herald*, February 12, 1978.
- Collins, Charles (Cap)** - Priscilla Schlenker and Pam Gahner, Electrical and Computer Engineering Dept., NDSU.
- Dolve, R.M.** - Donna Alby, Mechanical Engineering, NDSU and *Fargo Forum*, October 29, 1961.
- Drevecky, Lon.** - information provided by award recipient.
- Fletcher, Alan** - Cadence Youngberg, School of Engineering and Mines, University of North Dakota.
- Fossum, Gil** - Cadence Youngberg and Mary Jo Sturman, School of Engineering and Mines, University of North Dakota.
- Hoisveen Milo,** - Sharon Locken, North Dakota State Water Commission.
- Isaacson, Maurice G.** - Mrs. Yvonne Isaacson (wife) and *Minot Daily News*, October 6, 1996.
- Jardine, John B.** - Donna Demars (daughter) and Cadence Youngberg, School of Engineering and Mines, UND.
- Johnson, Cliff** - Lois Jouette (daughter) and Vern Monger, North Dakota DOT, ret.
- Johnston, C. J.** - Robert H. Johnston (son) and Evan Hass, Northwestern Bell Company (retired).
- Jorgenson, James** - information provided by award recipient.
- Kirby, J. R.** - Hazel Bless (daughter) and *Bismarck Tribune*, June 19, 1991.
- Lium, E. K.** - Cadence Youngberg, School of Engineering and Mines, University of North Dakota.
- Mann Theodore E.** - Bob Dorothy, Merle McMorro, Diane Powell and Brit Story, Bureau of Reclamation.
- Manz, Oscar** - information provided by award recipient.
- McLaughlin, James** - information provided by award recipient.
- Meyer, Dennis** - information provided by award recipient.
- Mirgain, Frank C.** - Sheri Tomaszewski, College of Engineering and Architecture, North Dakota State University.
- Moore, Clifford (Kip)**
- Moore, Marshall** - Upper Great Plains Transportation Institute, North Dakota State University.
- Muscha, Robert F.** - information provided by award recipient.
- Orthmeyer, Frank B.** - information provided by award recipient.
- Phillips, Monte** - information provided by award recipient.
- Reich, Reuben** - David Leer, NDDOT and *Bismarck Tribune*, January 9, 1989.
- Reiten, Palmer** - Cadence Youngberg, School of Engineering and Mines, University of North Dakota.
- Richmond, Lloyd** - W. Lloyd Richmond III, (grandson).

**Rolshoven, Raymond** - information provided by award recipient.

**Seaworth, George** - Steve Busek and Linda Lueneburg, Federal Highway Administration, Bismarck, ND.

**Taylor, Adrian C.** - Kathleen Dobrovsky (daughter) and *Bismarck Tribune*, April 22, 1975.

**Toman, George** - Ronald W. Manchester, Toman Engineering Company and the *Bismarck Tribune*, November 10, 2000.

**Van Heuvelan, Willis** - Gary Van Heuvelan, M.D. (son), Spokane, Washington

**Veigel, L.W.** - Mike Schneider & Jill Neva, KLJ, Inc. and *The Dickinson Press*, December 28, 1995.

**Wieland, Dean** – Mark Lambrecht, NDSPE Chapter 01 Awards Committee.

**Woodbury, Lawrence** - information provided by award recipient.

**Zink, Vern** - information provided by award recipient.

NOTE: Every effort was made to make this listing of Chandler Award Recipients as accurate as possible. Any corrections, additions or comments will be gladly accepted by:

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