



ASCE, Tennessee Section, Knoxville Branch History 85th Anniversary

Daryl R. Armentrout, P.E., Fellow and Life Member of
ASCE

May 19, 2020



This year, 2020, the Knoxville Branch of ASCE is celebrating its 85th anniversary. For all these years the Branch has had outstanding monthly programs, with many of the programs reflecting the current events of the decade, as well as having good technical content. Over the years, the content of the programs and the demographics of the membership of the Knoxville Branch have changed.

This year, however, is unique to all the years of our history. Who would have thought, in 1935, that some of our Branch meetings would be conducted online with everyone watching the meeting on a computer monitor?

British Institution of Civil Engineers, (1818)

- Membership open to all civilian engineers
- George Stephenson, English inventor and founder of railroads, applied for membership and was asked to present his qualifications for membership in the British Institution of Civil Engineers, (1840),
- Founded the British Institution of Mechanical Engineers, (1847),
- Followed by the naval architects, (1860), and electrical engineers, (1872).

Dougherty, Nathan W., *Student Teacher, and Engineer*, 1972, pp.70-71.

The roots of the American Society of Civil Engineers go back to the British Institute of Civil Engineers (ICE), founded in 1818. Initially ICE was open to all civilian engineers. In the 1840s George Stephenson, an English engineer and the inventor of the first steam locomotive, applied for membership. ICE asked that he present his qualifications for membership. He refused, since he considered himself well-known. This resulted in a stalemate; he then founded the British Institute of Mechanical Engineers in 1847. The mechanicals were followed by the naval architects in 1860 and by the electricals 1872.

American Society of Civil Engineers, (1852)

- The British pattern was followed by engineers in America beginning with the civil engineers.
- A member of ASCE “shall be a civil engineer or other person similarly qualified in another branch of engineering or an allied profession.” (1)
- Mining engineers of America organized their society, (1871).
- Mechanical engineers, (1880).
- Electrical engineers, (1884).
- Chemical engineers, (1908).

(1) ASCE Constitution, Article 11, “Membership,” New York, 1970, p.114.

The American Society of Civil Engineers (ASCE), founded in 1852, followed the British pattern. Initially, a member of ASCE could be a civil engineer or other person similarly qualified in another branch of engineering or an allied profession. The mining engineers of America organized their society in 1871, followed by the mechanical engineers in 1880, the electrical engineers in 1884, and the chemical engineers in 1908.

The Knoxville Branch Is One of Five Branches
That Make Up the Tennessee Section (1988) of
ASCE

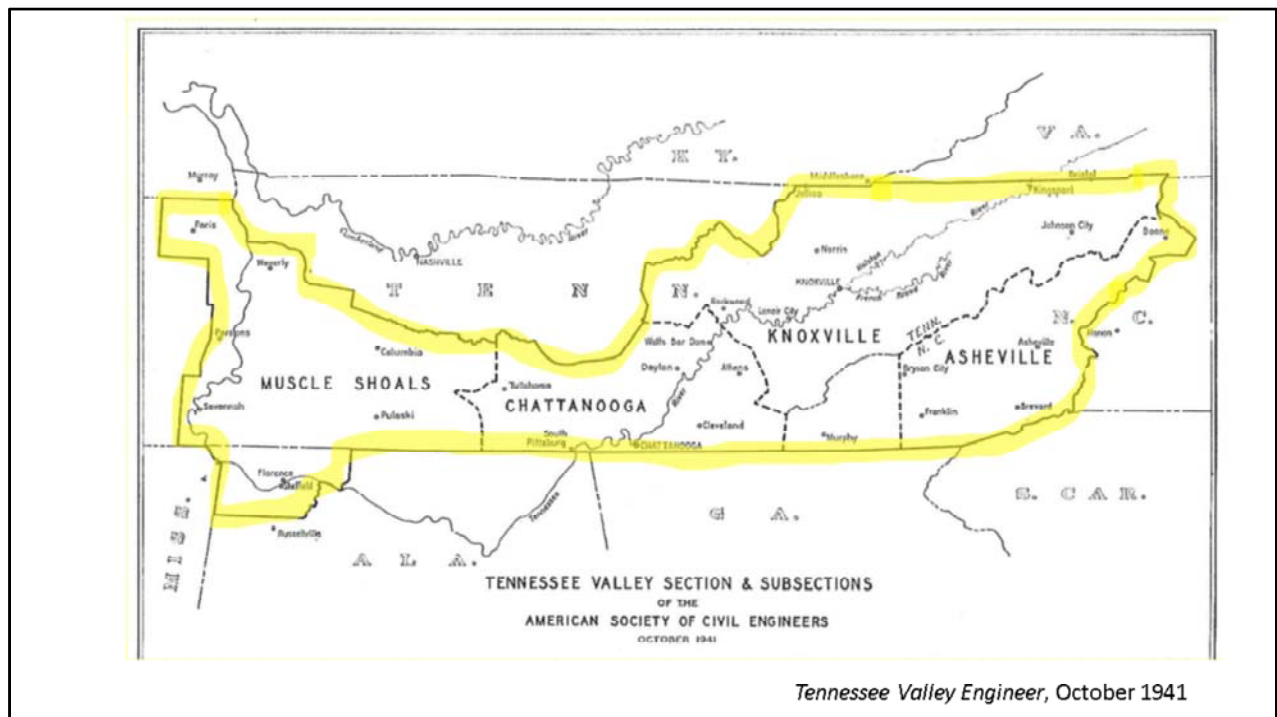
- Chattanooga Branch (1934)
- Holston Branch (1947)
- Knoxville Branch (1935)
- Nashville Branch (1921)
- West Tennessee Branch (1928)

The Tennessee Section was established in 1988. The branches of the Tennessee Section were established much earlier. More on this later.

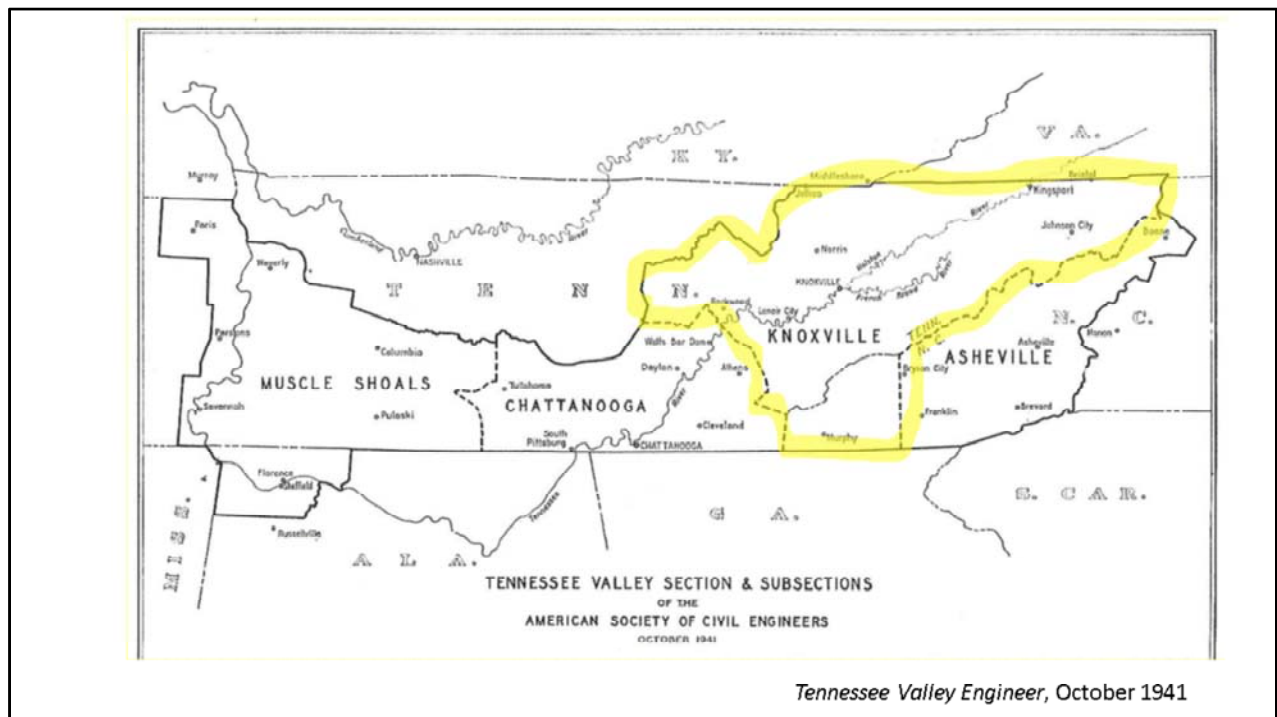
Prior to 1988, There Were Three Sections That Represented ASCE in Tennessee:

- Mid-south Section (Memphis and West Tennessee)
- Nashville Section (Nashville and Middle Tennessee)
- Tennessee Valley Section (Asheville, Chattanooga, Knoxville, and Muscle Shoals)

Prior to 1988, there were three sections that represented ASCE in Tennessee: the Mid-South Section, which included Memphis and West Tennessee, the Nashville Section, which included Nashville and Middle Tennessee, and the Tennessee Valley Section, which included Asheville, Chattanooga, Knoxville, and Muscle Shoals.



This map shows the boundary of the Tennessee Valley Section. The Tennessee Valley Section was defined by the area of the watershed of the Tennessee River. Note that it did not include the Nashville area, which is in the Cumberland River watershed. It did include a corner of Northwest Alabama (Muscle Shoals) and Asheville, North Carolina, which are within the Tennessee River Watershed.



This map shows the boundary of the Knoxville Subsection in 1941. The Knoxville Subsection extended south from Murphy, North Carolina to the Virginia State line and west from Rockwood to the Tennessee – North Carolina State line.

Originally Branches Were Called Subsections of Their Parent Section

The Tennessee Valley Section had four subsections.

- Asheville Subsection
- Chattanooga Subsection
- Knoxville Subsection
- Muscle Shoals SubSection

Originally branches were called subsections of their parent section, with the Tennessee Valley Section having four subsections.

Tennessee Valley Section President Garland Rose's Long Range Planning Goals



President's
Column

Garland M. Rose, Jr.

Last month I presented some of the goals recommended by the Long Range Planning Subcommittee chaired by Bill Greco. These goals addressed membership, involvement in Branch and Section activities, National committees and communications. The following are the remaining goals suggested by the Subcommittee:

E. Education

1. To assist the Civil Engineering Educational programs within the Section by providing active Contact members and by providing speakers for the Student Chapter meetings.
2. Encourage student participation in both Branch and Section activities.

F. Public Service

1. To provide public service where appropriate through the individual Section members or as a Branch activity.

G. Legislative Involvement

1. To continue an active participation in JEAG.
2. To keep the membership informed on pertinent legislation pertaining to the activities of the Civil Engineering profession.

H. Continuing Education

1. To sponsor workshops and specialty conferences to be held locally as either Branch, Section or National activity.

I. District Activity

1. To provide at least two viable candidates for the District 9 Director for 1987.
2. To increase active participation in District 9 Council through contributions and/or presentations of agenda items.

3. To consider the pros and cons of a Tennessee Section.

This fall the Section Board of Directors will address a plan of action to help achieve as many of these goals as possible. You are encouraged to contact the Section and Branch officers to express your interest in any or all of these goals.

3. To consider the pros and cons of a Tennessee Section.

Tennessee Valley Engineer, August 1984

In 1984, four years before the Tennessee Section was established, the Tennessee Valley Section President, Garland Rose, initiated a long-term goal to establish a Tennessee Section.

Tennessee Valley Section and Knoxville Branch member Sam Jack and Nashville Section member Dan Barge were tasked with working out the details of establishing a Tennessee Section.

Long Term Editors-in-Chief of the *Tennessee Valley Engineer*

Albert S. Fry



Francis E. Pray



The primary source for this presentation came from the work of these two Knoxville Branch members, Albert S. Fry and Francis E. Pray. In 1940, Albert Fry initiated the publication of a monthly newsletter called the *Tennessee Valley Engineer*, which was many years before the internet and social media. This newsletter was the primary means of informing the Tennessee Valley Section members of branch meetings and other local ASCE news and ran for 50 years. Fry and Pray edited the newsletter for over 40 years. Other editors, Deborah Stanberry, Sherman Garrett, David Mayfield, and John Vadnal served as editors. It was retired in 1990.

Daryl Armentrout once complimented Francis Pray for his hard work as editor. His comment was, "It's not hard work, but it is so damn constant."

Tennessee Valley Engineer, published monthly
for 50 years



This historical overview of the Knoxville Branch is through the lens of the monthly programs as noted in the *Tennessee Valley Engineer*. Each month the upcoming program titles for branch meetings would be printed in this newsletter. In the earlier issues of the newsletter, transcripts of the program presentation would also be printed in the newsletter. Copies of the *Tennessee Valley Engineer* are housed in the UTK Library.



In 1988 the name of the newsletter was changed to *TennASCE* to reflect the Tennessee Section.

Monthly meetings were held at the S&W for over 40 years.



The S&W Cafeteria on Gay Street in Knoxville was the meeting place for the Knoxville Branch for over 40 years. The S&W Cafeteria closed in 1981.

Through the lens of the *Tennessee Valley Engineer*, I will show some of the high quality programs of the Knoxville Branch of ASCE over the past 85 years.

1940s



This proud TVA worker captures the theme of the branch programs in the 1940s, building TVA dams and supporting the War effort. It reads, "We are building this dam to make the power, to roll the aluminum, to build the planes, to beat the ###s." The last word is redacted for social correctness.

- Tacoma Narrows Bridge Failure, film recently released (January 1941)
- Steam Generating Equipment at TVA Watts Bar Plant (February 1941)
- The Apalachia Dam Project (January 1942)
- Inspection Trip to TVA Douglas Dam (May 1942)
- The Fontana Project (October 1942)
- Post War Problems, Senator and TVA Director James P. Pope (January 1943)
- Hydraulic Engineering in China, Past and Future (February 1943)
- Russia As I Saw It (March 1943)
- Soil Mechanics, Karl Terzaghi (August 1943)
- Geologic Problems of TVA Dams (April 1944)
- The Effect of Atomic Bombs on Hiroshima and Nagasaki (February 1946)

This is a sample of programs in the 1940s; they were mostly about TVA dam building and support of the war effort. However, there were some other very interesting technical programs (highlighted). Two or three programs have been highlight in each decade; you might highlight others.

Three months after the Tacoma Narrows Bridge collapsed on November 7, 1940, the Knoxville Branch program, in January 1941, featured a film of the collapse. This was a very timely program.

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In the August 1943 Branch meeting, the featured speaker was Karl Terzaghi, the father of soil mechanics. Until Terzaghi developed the field of soil mechanics, geotechnical engineers relied almost exclusively on experience and guesswork.

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At the February 1946 Branch meeting, distinguished speakers from the Naval Research Laboratory and the US Army discussed the effect of the atomic bombs on Hiroshima, August 6, 1945, and Nagasaki, August 9, 1945. Again, this was a very timely program six months after these bombs were dropped.



1950s



A sample of the programs in the 1950s reflects TVA's shift toward fossil plant construction. There were, however, several programs of local interest. Pictured on this slide in the upper left is Watt Bar Fossil Plant, TVA's first steam plant. In the lower right is Johnsonville Fossil Plant, which was under construction in the 1950s.

- The Why, What, and How of the TVA Steam Plants (March 1950)
- The Knoxville Sewage Problem (June 1950)
- Traffic in the Great Smoky Mountains National Park (September 1950)
- Recent Developments in Pre-Stressed Concrete Construction (October 1950)
- Electric Power in the Tennessee Valley (January 1951)
- Engineering and Construction of TVA's High Voltage Transmission Lines (February 1952)
- Engineering Geology for Power Plants (June 1953)
- The Engineer and His Ethics (September 1953)
- Modern Sewage Treatment for the Twin Cities of Bristol (October 1953)
- Learn to Speak by Practice, The Toastmasters Club, Knoxville and Fountain City (March 1954)
- The Expansion Program of KUB (June 1954)

Two programs are highlighted.

The March 1950 Branch meeting hosted a panel discussion of TVA's chief engineers comparing the new Johnsonville Steam Plant to the Watts Bar Steam Plant which was built 10 years earlier. Johnsonville is located near Waverly in western Tennessee. TVA retired Johnsonville in December 2017 and plans to demolish the facility. Watts Bar Steam Plant was demolished several years ago.

1950's programs continued

- Johnsonville Steam Plant Construction (October 1954)
- Modern Trends in Chimney Design (October 1956)
- Construction Features of the Wilson Lock (March 1957)
- Package Nuclear Reactor (September 1957)
- Air Pollution, Nuclear Power, and Conversion of Sea Water to Fresh Water, UT Student Chapter (April 1958)
- Waste Water Disposal for Knoxville Area – Present and Future (June 1958)
- Tidal Navigation Problems Below Wilson Dam (September 1958)
- Theory and Research in Shell Design (October 1958)
- **Impact of the Loop on Downtown Knoxville (December 1958)**
- A Metric System for the United States (December 1959)

The December 1958 program dealt with the impact of a loop on downtown Knoxville. City planners discussed how a downtown loop surrounding the Knoxville business district could revitalize the central part of the city. Remember “malfunction junction?” Work on the loop started in 1977 and was completed in 1982, just before opening the 1982 World’s Fair in Knoxville. For several years the only segment completed was between Broadway and Clinton Highway. Today, it is I-640.



1960s



The 1960s was a decade of highs and lows. The picture in the upper left corner is the first man on the moon. The picture in the lower right remembers the many soldiers killed in the Vietnam War.

- Annexation, President, Knoxville Chamber of Commerce (January 1960)
- Our Own Tennessee River – Recreation Lake or Sewer? (June 1960)
- Some Highlights of My Recent European Trip, General Herbert Vogel, Chairman, TVA Board of Directors (December 1960)
- A Nuclear Journey Through Yugoslavia, Alvin Weinberg (December 1961)
- Education for Space Age Engineering (January 1962)
- Economic Impact of Interstate 40 in Knox, Loudon, and Roane Counties October 1962
- Advantages and Problems of Power Interchange with the Southwest (January 1963)
- Coal Handling at TVA's Bull Run Steam Plant (February 1963)
- Land and Water Resources Planning in the Southeast (June 1963)
- New Design Techniques for Thin Arch Dams and The Behavior of Vajont Dam (June 1964)
- Nickajack Dam (October 1964)

These are a sample of the Branch programs in the 1960s. Although there were still some programs about TVA projects, the programs were more diversified, including both local and national issues as highlighted.

In January 1962 the program title was "Education for Space Age Engineering." The Director of the UT Graduate Engineering Program at Tullahoma predicted orbital flights by man around the moon, more and better weather satellites, and communication satellites for world-wide television.

1960's programs continued

- The Architect - Engineer Relationship (March 1965)
- Tims Ford Dam (January 1966)
- The Mekong River of Southeast Asia (March 1966)
- The Total Development of the University of Tennessee, Dr. Edward J. Boling, VP for Development (June 1966)
- Stream Pollution and Fort Loudoun Lake (September 1966)
- A Look at Knoxville's Future, Leonard Rogers, Mayor (February 1967)
- Air Pollution in Knoxville and Knox County (March 1967)
- The Alaska Earthquake – 1964 (June 1967)
- **The Military Situation in Vietnam (September 1967)**
- The Role of Urban Renewal in Knoxville (March 1969)
- Do Engineers Need Liberal Education (June 1969)
- Goal, Policies, and Standards for Future Development of Knox County Area (September 1969)

At the September 1967 Branch meeting, a US Colonel discussed Ho Chi Minh's pattern of action in Vietnam: first political agitation, then local terrorism, and finally battle confrontation.



1970s



The Branch programs in the 1970s were shifting to more and more subjects related to local interests. The following is a sample of the programs during this decade. The picture in the upper left corner is Tims Ford Reservoir at sunrise. The lower right shows a bridge that was abandoned when Tims Ford Dam was built.

- Pollution Control in Knoxville (September 1970)
- How Clean is the Air We Breathe, and How Can We Improve It? (December 1970)
- Environmental Quality Protection at Large, Steam-Electric Generating Stations (January 1971)
- Testing Highway Bridges to Failure, Dr. Edwin Burdette (February 1971)
- Man's Impact on the Aquatic Ecosystem (March 1971)
- The Art of Karate, Maurice Msarsa (June 1971)
- Highway Plans and Programs in Tennessee (October 1971)
- New Terminal Complex at McGee Tyson Airport (February 1972)
- Knoxville Hyatt House and Farragut Primary School March 1972)
- Rockwood Slides (April 1973)
- The Design of Raccoon Mountain Pump-Storage Project (October 1973)

At the December 1970 Branch meeting, a chemist from Oak Ridge spoke on "How Clean is the Air We Breathe, and How Can We Improve It?" He was complimented in the *Tennessee Valley Engineer* for being "eminently sensible" and used "such simple terms" that all could understand.

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- The Design of Raccoon Mountain Pump-Storage Project (October 1973)

Dr. Edwin Burdette discussed at the February 1971 Branch meeting the testing of four bridges over the Elk River in Middle Tennessee. The Tennessee Department of Transportation and federal authorities asked UT to conduct full-scale ultimate loads tests on these bridges, which would be submerged after the Tims Ford dam was completed. At his retirement in 2016, Dr. Burdette said one special memory of his time at UT stood out; testing of these bridges was clearly his favorite project.

<https://cee.utk.edu/retiring-burdette-looks-back-on-his-50-plus-years-at-ut>



1980s

The picture in the upper left corner is the massive transport of the reactor vessel to the Phipps Bend Nuclear Plant site. The picture in the lower right is the 1982 Sunsphere.

- TVA Transport of Reactor Pressure Vessel to Phipps Bend Nuclear Plant (October 1980)
- China and the Yellow River Valley (January 1981)
- Design of the Sunsphere (June 1982)
- Professional Development and Advancement of Engineers (September 1982)
- Special program celebrating 35th anniversary of the Knoxville Branch (December 1982)
- Post-World's Fair Development of the Second Creek Valley (January 1983)
- Russia and China – Contrasting Impressions (December 1983)
- Colonel W. T. Kirpatrick: Discussion of Relationships Between the Corps of Engineers and TVA in the Tennessee Valley (June 1984)

These are sample programs from the 1980s, which included both TVA and local interest topics.

The October 1980 program discussed the transport of the reactor vessel to the Phipps Bend Nuclear Plant site in upper East Tennessee. Manufactured in Memphis Tennessee, the vessel was transported up the Mississippi River, to the Ohio River, to the Tennessee River, to the Forks of the River near Knoxville. It was off-loaded to a land transport by highway to Surgoinsville in upper East Tennessee. In preparation for the land transport, utility lines needed to be raised and roads widened in various areas. On August 6, 1981, the TVA Board voted to defer, and later cancelled, the plant.

1980's programs continued

- TVA Delegation Journey to China; International Agreement between US and China on Water Resources and Hydro Power, April 1984 (October 1984)
- Design and Building of Facilities for the 1984 Olympic Games (December 1984)
- The Superconducting Supercollider (April 1988)
- Knox County Proposed Incinerator (June 1988)
- The Tennessee Section of ASCE: Revisited (April 1989)

The October 1984 program was presented by Daryl Armentrout sharing a TVA project under a US-China International Agreement. A ten-member TVA delegation of engineers went to China in 1984 to share TVA's management philosophy of unified resources development for developing their hydro power and water resources.

Knoxville Branch 50th Anniversary, Past Presidents



Tennessee Valley Engineer, February 1986

From the left

- Mark Jones (Secretary-Treasurer 1986)
- Carl Barker (1986)
- George Palo (1943)
- Avery Phillips (1969)
- Jim Beavers (1980)
- Larry Richardson (1971)
- Don Mattern (1949)
- Neil Johnson (1985)
- Larry Barker (1982)
- Larry Coomer (1984)
- George Buchanan (1968)
- Don Garrett (1981)

The December 1985 program celebrated the 50th anniversary of the Knoxville Branch. Ten past presidents were on hand to celebrate this anniversary.

From the November 1985 *Tennessee Valley Engineer*

**KNOXVILLE BRANCH MEMBERS —
WHERE ARE YOU?**

Knoxville Branch President Neil Johnson reports that a strange disease seems to be attacking members of the Branch. This malady has been keeping members from attending Branch meetings to the extent that only 16 persons were at the October 9 meeting. Maybe a few "get well" cards or meeting reminders might help to increase attendance. Suggestions for "cures" to this disease are welcome.

In the mid-1980s, the attendance at Branch meetings was falling behind. Branch President Neil Johnson posted this announcement in the *Tennessee Valley Engineer*.



The decade of the 1990s was one of change. My all-time favorite movie, *Forrest Gump*, was released (upper left corner). This movie reflected changes occurring in our US society. Also, the Hubble satellite was launched in this decade (lower right). For the first time, we had images of space beyond our own solar system.

Demographics of Knoxville Branch Membership Changes

- TVA's large engineering organization in Knoxville is reduced in size and moved to Chattanooga.
- Increase in private AE firms locate in Knoxville
- Branch membership reflects these changes

Demographic changes also occurred in the Knoxville Branch membership during the 1990s. TVA's large engineering organization in Knoxville was reduced in size and moved to Chattanooga and there was an increase in private engineering firms located in Knoxville. The Branch membership reflects this change.

ENGINEERING COMPANIES RANKED BY LICENSED PROFESSIONAL ENGINEERS, THEN NUMBER OF EMPLOYEES

| Rank '19 | Rank '18 | Company | Phone Website Area offices | Lic. professional engineers Engineer interns Local employees | Parent company Total employees/offices | Top local executive Founded locally |
|----------|----------|--|--|--|--|--|
| 1 | 1 | Mesa Associates, Inc. 10604 Murdock Drive Knoxville, TN 37932 | 865-671-5400 mesainc.com 3 / Knoxville | 75 5 335 | Mesa Associates, Inc. Madison, AL, USA 849 / 17 | Timothy R. Cutshaw Executive VP 1988 |
| 2 | 2 | Atkins 545 Oak Ridge Turnpike Oak Ridge, TN 37830 | 865-483-8247 atkinsglobal.com/nuclear NA / Oak Ridge | 50 NA 210 | SNC-Lavalin Montreal, QC, Canada NA / NA | Tom Jovanis President 2001 |
| 3 | 7 | S&ME Inc. 1413 Topside Road Louisville, TN 37777 | 865-970-0003 smelnc.com 2 / Louisville | 27 5 85 | S&ME Inc. Raleigh, NC, USA 1,160 / 35 | Ken Barry, Leira Douthat, Randal G. Martin, Elizabeth M. Porter, Michael R. Stomer Vice presidents 1988 |
| 4 | 3 | MS Technology 137 Union Valley Road Oak Ridge, TN 37830 | 865-483-0895 mstechnology.com 1 / Oak Ridge | 26 NA 63 | NA NA NA | Doyle R. Inklebarger President, CEO 1994 |
| 5 | 4 | AMEC Foster Wheeler Environment & Infrastructure 2030 Falling Waters Road, Ste. 300 Knoxville, TN 37922 | 865-671-6774 woodplc.com NA / Knoxville | 24 3 98 | Wood, plc Aberdeen, Scotland NA / NA | Jennifer Stone Office manager 1972 |
| 6 | 5 | Strata-G, LLC 2027 Castaic Lane Knoxville, TN 37932 | 865-934-3400 stratag.org 1 / Knoxville | 21 NA 215 | NA NA NA | Dan Hurst President 2002 |
| 7 | 8 | Jacobs Engineering Group Inc.¹ 2095 Lakeside Centre Way, Ste. 200 Knoxville, TN 37922 | 865-560-2801 jacobs.com 2 / Knoxville, Oak Ridge | 20 0 315 | Jacobs Engineering Group Inc. Dallas, TX NA / 230 plus | Levitte Cox Vice president, general manager 1994 |
| 8 | 9 | Barge Design Solutions, Inc.² 520 W. Summit Hill Drive, Ste. 1202 Knoxville, TN 37902 | 865-637-2810 bargedesign.com 1 / Knoxville | 19 6 63 | Barge Design Solutions, Inc. Nashville, TN, USA 437 / 15 | Casey Tyree Sr. Engineering manager 1972 |
| 9 | 10 | Cannon & Cannon, Inc. 8550 Kingston Pike Knoxville, TN 37919 | 865-670-8555 cannon-cannon.com 3 / Knoxville | 19 ³ 4 45 | NA NA NA | Angie Cannon CEO 1996 |
| 10 | 12 | MBI Companies Inc.⁴ 299 N. Weisgarber Road Knoxville, TN 37919 | 865-584-0999 mbicompanies.com 1 / Knoxville | 15 9 86 | NA NA NA | Louis Cortina, President Eddie Jett, CEO Bill Stevenson, Vice president of Architecture Charles Grant, Senior VP 1990 |

The KNOXNEWS.COM, September 29, 2019, listed the top engineering firms in Knoxville by the number of licensed professional engineers and then by number of employees.

| | | | | | | |
|----|----|--|--|----------------|---|---|
| 11 | 13 | Civil & Environmental Consultants Inc. 2704 Cherokee Farm Way, Ste. 101 Knoxville, TN 37920 | 865-977-9997 cecinc.com 2 / Knoxville, Sevierville | 13 5 44 | Civil & Environmental Consultants Inc. Pittsburgh, PA, United States 1,015 / 25 | James C. Tomiczek, P.E. Vice president, office lead 2014 |
| 12 | NR | Innovative Design Inc. 10700 Virginia Pine Way, Suite 201 Knoxville, TN 37932 | 865-966-4402 idi-tn.com 1 / Knoxville | 13 NA 36 | NA NA NA | Cindy Hollander Owner, president 1997 |
| 13 | 11 | Gresham, Smith & Partners 2095 Lakeside Centre Way, Ste. 120 Knoxville, TN 37922 | 865-521-6777 gspnet.com 1 / Knoxville | 12 4 31 | Gresham, Smith Nashville, TN 1,000 / 27 | Jason Brady Principal, Area Transportation Leader 2005 |
| 14 | 15 | Merrick & Company 1093 Commerce Park Drive Oak Ridge, TN 37830 | 865-685-5520 merrick.com 1 / Oak Ridge | 11 NA 27 | Merrick & Company Greenwood Village, CO, U.S. 630 / 22 | David Hueiskamp Christopher Sherry Chairman CEO ⁵ 1955 |
| 15 | 14 | Process Engineering Associates 700 S. Illinois Ave., Ste. A202 Oak Ridge, TN 37830 | 865-220-8722 processengr.com NA / Oak Ridge | 8 NA 29 | NA NA NA | L.H. Boyd Jr. Managing partner 1996 |
| 16 | NR | North Wind Group 2800 Solway Road Knoxville, TN 37931 | 865-556-8014 northwindgrp.com 5 / Knoxville, Oak Ridge | 5 1 235 | Cook Inlet Region Inc. Anchorage, AK NA / NA | Chris Leichtweis CEO, president 1997 |
| 17 | NR | Carpenter Wright Engineers 111 Sherlake Lane, Ste. 200 Knoxville, TN 37922 | 865-539-8227 carpenterwright.com 1 / Knoxville | 5 0 6 | Carpenter Wright Engineers Nashville, TN, U.S. 21 / 2 | Ken L. Griffin Principal 1994 |
| 18 | NR | Performance Design Technologies, Inc. 1310 Centerpoint Blvd. Knoxville, TN 37932 | 865-531-5955 pdtek.com 1 / Knoxville | 4 3 11 | NA NA NA | Stephen Presnell President 1996 |
| 19 | NR | Land Development Solutions 310 Simmons Road, Ste. K Knoxville, TN 37922 | 865-671-2281 ldstn.com 1 / Knoxville, TN | 4 1 8 | NA NA NA | E.J. (Rusty) Baksa Breck Bowlin President, principal engineer Vice president 1992 |

¹ Source declined to participate. Information from 2018 survey; ² Formerly Barge Waggoner Sumner & Cannon; ³ Registered Land Surveyors; ⁴ Formerly Michael Brady Inc.; ⁵ David Luke, COO, Steve Betts, CFO
Source: Individual company representatives, company websites. NA=not applicable or not available. If you notice an error or omission, please contact Hayley Choy, 865-342-6494 or lists@knoxvillebiz.com.

In the 1990s and 2000s, the membership of the Knoxville Branch was primarily from these private firms.

- Asbestos, the Hidden Problem (March 1990)
- Local Solid Waste Issues (May 1990)
- Knoxville Branch's 55th Anniversary (October 1990)
- Knoxville Water Front Master Plan (November 1990)
- Current Ash Disposal Methods (January 1991)
- Moving a 7-Story Building (March 1991)
- Operation and Maintenance Program for Asbestos (May 1991)
- Excavating OSHA Style
- Timber Frame Construction (March 1993)
- Civil Engineering and New Technologies for the Next Decade (November 1992)

The Branch celebrated their 55th anniversary at the October 1990 meeting.

Knoxville Branch 55th Anniversary, Past Presidents



ASCE News, February 1991

Front Row from left

- Daryl Armentrout (1974)
- John Voorhees (1952)
- James Price (1963)
- Avery Phillips (1969)
- Paul Ivie (1988)

Back Row from left

- Garland Rose (1979)
- Don Garrett (1981)
- Larry Barker (1982)
- Neil Johnson (1985)
- Harry Johnson (1987)
- Cal Knoke (1989)
- Nancy Roberts (1990)

Eleven past presidents attended to celebrate the event.

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At the January 1991 Branch meeting, co-author Barry Thacker discussed the results of a three-year EPA study of current coal ash waste disposal practices at coal-fired generating plants. After the Kingston ash spill, he spoke again in 2009 on the cause of the failure.



2000s



The programs in the 2000s are focused primarily on local projects. The picture in the upper left is both Perkins Hall and the Tickle Building at The University of Tennessee. The picture in the lower right is a map showing the proposed improvements to Alcoa Highway. Perkins Hall for many years represented civil engineering at the University of Tennessee.

- Directional Drilling under Fort Loudon Lake and Alcoa Highway (February 2014)
- Six Decades of Civil Engineering at the University of Tennessee (January 2015)
- Nashville Waterfront Development (March 2015)
- Quality of Life and a New Regional Development Framework for East Tennessee (March 2015)
- Copyright Protection of Engineering Drawing and Document Retention (March 2015)
- Demolition of Former Lakeshore Mental Health institute to Make Way for Lakeshore Park (May 2015)
- Wolf Creek Bridge over the French Broad River and Norfolk Southern Railroad – Design and Rehabilitation (August 2015)
- (TVA) Managing the Tennessee River and Its Tributaries (October 2015)

At the January 2015 Branch meeting, Dr. Burdette gave a presentation on the past six decades of Civil Engineering at the University of Tennessee. Also, at a later Branch meeting, Dr. Burdette gave a presentation on the evolution of the ACI Code. I cannot think of a topic more boring; however, he attracted a packed-out crowd for this presentation; because it was Dr. Burdette giving the presentation.

2000's programs continued

- The Foothills Parkway: The Missing Link (November 2015)
- Risk and Financial Management for A&E Projects (January 2016)
- Engineering Ethics and Social Ethics (March 2016)
- **TDOT Alcoa Highway Improvement Project (May 2016)**
- Current State of the NPDES Draft Permit (June 2016)
- Decoupling of the Professional Engineer's License in the State of Tennessee (January 2018)
- The 3D Revolution Laser Scanning & Drones in the AEC Industry (March 2018)
- Knoxville Utility Board Presentation Discussing The Century II Programs Infrastructure Upgrades for Electric, Water, and Gas (October 2018)

TDOT gave a presentation at the May 2016 Branch meeting of improvements being made to Alcoa Highway.

ASCE Knoxville Branch Presidents

1935 N. W. Dougherty

1936 H. A. Wiersema

1937 H. L. Fruend

1938 C. W. Okey

1939 A. S. Fry

These are the first five presidents of the Knoxville Branch. Note, Professor Dougherty was the first president. He became Dean of Engineering at the University of Tennessee in 1940. The next four presidents were TVA employees.

Branch Presidents, continued

| | |
|---------------------------|-----------------------|
| 1940 C. E. Nichols | 1950 Henry Aiken |
| 1941 W. F. Moehlman | 1951 H. B. Henry |
| 1942 E. S. Fabian | 1952 John Voorhees |
| 1943 George P. Palo | 1953 O. L. King |
| 1944 A. T. Granger | 1954 K. E. Way |
| 1945 C. E. Blee | 1955 J. E. Griffith |
| 1946 Reuben Hayes | 1956 Reed Elliott |
| 1947 William Calvert, Jr. | 1957 John Neeley, Jr. |
| 1948 Leonard Bailey | 1958 R. H. Leech |
| 1949 Donald Mattern | 1959 Louis Shobe |

The Branch leadership comprised of presidents from TVA and UT during the 1940s and 1950s reflects the demographics of the membership.

Branch Presidents, continued

| | |
|------------------------------|-------------------------------|
| 1960 Alfred Cooper | 1970 J. H. Hendrix |
| 1961 E. C. Shreve | 1971 Larry Richardson |
| 1962 William English | 1972 Sanford Jack |
| 1963 James Price | 1973 Henry Markham |
| 1964 Franklin Pitcher | 1974 Daryl Armentrout |
| 1965 Charles Walker | 1975 William Miller |
| 1966 Richard Connelly | 1976 Dan Marks |
| 1967 Robert Rose | 1977 James Wilgus |
| 1968 George Buchanan | 1978 Ralph Gaines |
| 1969 Avery Phillips | 1979 Garland Rose, Jr. |

The same trend continued during the 1960s and 1970, but there were some presidents from the private sector.

Branch Presidents, continued

| | |
|----------------------|---------------------------|
| 1980 James Beavers | 1990 Nancy Rector Roberts |
| 1981 Don Garrett | 1991 Teresa J. Pierce |
| 1982 Lawrence Barker | 1992 Angelia Parham |
| 1983 Joe Hunt | 1993 Stephen Wilkinson |
| 1984 Larry Coomer | 1994 Randall Neuhaus |
| 1985 Neil Johnson | 1995 Michael MacIndoe |
| 1986 Carl Barker | 1996 Kenneth Fricke |
| 1987 Harry Johnson | 1997 John D. Long |
| 1988 Paul Ivie | 1998 Ken Barry |
| 1989 Cal Knoke | 1999 Suzanne Mc Ginley |

During the 1980s and 1990s, when TVA was downsizing its engineering organization in Knoxville, the leadership was mixed between public and private sectors.

Nancy Roberts, Branch President, 1990



- First Female President of the Knoxville Branch
- Served several years as Branch Treasurer
- Always willing to be the “go to” person

Nancy Roberts was highlighted in the previous slide. She was the first female president of the Knoxville Branch and served several years as the Branch treasurer following her term as president. She was always willing to be the “go to” person. If something needed to be done, she would always say, “I’ll take that.” She retired from the Civil and Environmental Engineering Faculty at the University of Tennessee and moved to Northern Virginia in order to be close to her daughter.

Branch Presidents, continued

| | |
|------|------------------|
| 2000 | Mohamed M. Nofal |
| 2001 | Gerald A. Hogan |
| 2002 | Daniel Smith |
| 2003 | David E. Ott |
| 2004 | Mark C. Harrison |
| 2005 | Mark C. Harrison |
| 2006 | Clyde R. Tant |
| 2007 | Greg R. Eidam |
| 2008 | Mary M. Hensley |
| 2009 | Joshua D. Corum |

| | |
|------|-------------------|
| 2010 | Michael D. Hogan |
| 2011 | Matthew S. Alt |
| 2012 | Justin A. Goss |
| 2013 | Helen S. Hennon |
| 2014 | Nathan C. Babelay |
| 2015 | Helen S. Hennon |
| 2016 | Sam Mayes |
| 2017 | David Matlock |
| 2018 | Daniel Boles |
| 2019 | Patrick Fiveash |
| 2020 | Karen Mckeehan |

The branch presidents in 2000 have been mostly from the private sector.

These five slides list the 83 past presidents and the current President, Karen Mckeehan, of the Knoxville Branch of ASCE. Note that Mark Harrison (2004 and 2005) and Helen Hennon (2013 and 2015) served two terms.

ASCE Knoxville Branch, First President to Today



N. W. Dougherty



Karen McKeehan

1935 ... 1940 ... 1950 ... 1960 ... 1970 ... 1980 ... 1990 ... 2010 ... 2020



The Knoxville Branch has had great leadership for 85 years. From Dean Dougherty to Karen McKeehan, the Knoxville Branch has consistently had great leadership.

ASCE Knoxville Branch Officers, 2020



- Helen Hennon, P.E.,
Treasurer and former Branch
President (2013 & 2015)
- Melissa McKenzie, P.E.,
Secretary
- Dr. Jennifer Retherford, P.E.,
Vice President
- Karen McKeegan, P.E.,
President

And, that leadership continues today.

Questions



Questions? Or better yet, does anyone have a story about the history of the Knoxville Branch of ASCE that you would share?