*Resume of*

# James H. Anspach, P.G. F.ASCE Cardno, Inc.

## EDUCATION

B.S., Geologic Sciences, Pennsylvania State University, 1977 (Geology, Geophysics, Geochemistry Options)
Appalachian Underground Corrosion Short Courses (Basic, Intermediate, Advanced)
Institute Of Gas Technology, 1979. Gas Distribution Engineer Certificate

## REGISTRATIONS

**Initial Registration**: Professional Geologist, Virginia, 1992. (retired)
**Additional Professional Geologist Registrations**: PA (retired), TN (retired)

## AWARDS

**2014 Recipient of the FIATECH CETI Innovation Award, Life Cycle Data Mgmt & Info Integration Category**
**2012 Recipient of the ICTAS Water Infrastructure Center of Excellence Awards Program –Utility Engineering Category**
**2010 Recipient of the FIATECH CETI Innovation Award, Real-Time Project & Facility Mgmt, Coord., and Control Category**
**2009 Recipient of the FHWA's Excellence in Utility Relocation and Accommodations Awards Program -Leadership Category**

## SKILLS

Utility Mapping, Geophysics, Buried Asset Management, Utility Condition Assessment, Codes & Standards Development, Technical Writing, Project Management, Corrosion Engineering, Leakage Detection, Utility Coordination, Utility Relocation Design, Innovation, Expert Witness Services, Forensic Engineering for Utility Issues, Utility Damage Prevention Management, Research and Development, Training/Education, Executive Management.

## PROFESSIONAL QUALIFICATIONS

**Director – Senior Fellow –Intl Practice Lead, Utility Engineering and Survey - Cardno Inc.**
Mr. Anspach is responsible for M&A activity, international standards development, and research concerning underground utility engineering issues. His corporate role is to be the thought leader for the utility engineering and survey profession.

Mr. Anspach is considered a principal founder of the profession of subsurface utility engineering, and subsequently, Utility Engineering. He is an authority on standard of care issues for the utility damage prevention and the practice of subsurface utility engineering. He has 40 years' experience in the research, development, and application of surface geophysical techniques for the purpose of utility identification and detection and in utility coordination practices. Mr. Anspach routinely serves on national and more recently international committees regarding utility detection, mapping, damage prevention, and standards.

He is a frequent lecturer at Universities on utility issues. Universities include: Princeton, Rutgers, Bucknell, Penn State, Carnegie Mellon, Oklahoma State, Wisconsin, Purdue, IUPUI, LA Tech, Washington State, Oregon State, Arizona State, Alabama, Florida, Florida State, Delaware, North Carolina State, Wyoming, Colorado State, Cornell, Brown, George Mason, Texas A&M, Texas Tech, Univ of Texas, and Louisiana Tech.

Mr. Anspach has served as a Project Manager or Principal for thousands of utility mapping and/or coordination projects. These include mega-projects (Woodrow Wilson Bridge, Alaska Way Viaduct); classified projects for the White House, CIA, Pentagon, Department of State; and infrastructure projects for the state DOTs of RI, VA, NY, NJ, DE, MD, WV, NC, SC, GA, FL, TX, MO, OH, PA, AZ, WA, DC, WI, and KY. He has also served in the same capacity for nuclear power plant and conventional power plant projects, water and waste water facilities, airports, ports, and industrial plants.

Mr. Anspach served as a workshop moderator for the ASCE Pipelines Conference in 2010 and 2014. He was a keynote speaker at the 2009 International Conference on Construction Research Funding, and at the 1994 NTSB Workshop on Damage Prevention and the 2016 CCGA conference. He holds several citations from the US Secretary of Transportation for his work in Utility Damage Prevention. He has delivered courses in utility damage prevention practices for HDD projects at University of Wisconsin and for many industry events.

## PROFESSIONAL ASSOCIATIONS AND ACTIVITIES

**American Society of Civil Engineers - ASCE FELLOW**

**Utility Engineering and Surveying Institute: Charter Board Member / Institute Formation Committee / President 2018**

**Construction Standards Council: Chairman (1998-current)**
The Construction Standards Council (CSC-CI) oversees all standards committees and proposals for the Construction Institute. CSC is responsible for reviewing and approving the technical content of its standards, recommending leadership positions within the committees, and resolving disputes/conflicts.

**Codes & Standards Committee: Chairman (2008-2012), Member (1998-current), CTA Liaison (2012-current)**
The Codes and Standards Committee (CSC-ASCE) oversees and directs the Codes and Standards Program of the Society. It develops, modifies, and maintains rules and procedures in accordance with ANSI accreditation requirements. It approves appointment of standards' chairs and hears and adjudicates any appeals from members or the public. It approves all standards for development and publication.

**Board Committee for Technical Advancement: Charter Member (2012-current)**
The Committee for Technical Advancement (CTA) was formed in 2012 to oversee and coordinate the technical activities of the Society, its Institutes, and Academies. It has 13 constitute Divisions, Councils and Committees: Aerospace Division, Cold Regions Engineering, Computing & IT, Energy Division, Forensic Engineering, Geomatics Division, Lifelines Earthquake Engineering, Critical Infrastructure, Disaster Risk Management, Pipelines Division, Wind Engineering, Codes & Standards, and Adaption to Changing Climate. .

**Board Task Committee on Claims Reduction and Management: Charter Member (2016-current)**
The CCRM Committee brings coordination and focus to what had been disparate activities around the Society. This high-level committee has begun work to elevate the standing of the issue, enhance ASCE's professional liability insurance and educational programs, and provide guidance and advocacy on related legal and legislative matters

**ASCE 38: Chairman (1998-current)**
ASCE 38, *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data*, is an internationally recognized standard regarding utility mapping. It is increasingly cited in state statutes, case law, and project procurements.

**Utility Engineering Committee: Charter Chairman (2012-2015)**
The Utility Engineering Committee was formed in 2012 to bridge the gap between current engineering and construction practices and subsurface utility engineering. It will serve as ASCE and AASHTO's main vehicle to get Utility Engineering recognized as a specific sub-discipline of engineering.

**EJCDC Engineering Committee: Observer Member (2013 – 2014), Delegate (2014-2017), Chair 2018**
The Engineers Joint Contract Documents Committee is comprised of individuals appointed by ASCE, ACEC, and NSPE. It also has 15 other participating member organizations (APWA, AGC, Insurance, etc.). EJCDC has existed since 1975 to develop and update fair and objective standard documents that represent the latest and best thinking in contractual relations between all parties involved in engineering design and construction projects.

**ASCE XX (Utility "As-Builts" Standard): Member and CI-CSC Oversight (2013-current)**
This new activity was formed to develop a national format and procedure for developing as-builts for utilities. It will focus on new utilities under construction mainly.

## OTHER

NIST/NOAA/DHS/EPA Community Resilience Panel Member 2016-Current
Buried Asset Management Institute-International, Board Member 2013-current
Transportation Research Board, Member AFB70-Committee on Utilities (2008-current)
Transportation Research Board, Member – Subcommittee on Airport GIS (2009-current)
American Association of State Highway Transportation Officials – (2009-Current) Utility Project Scoping and Coordination Technical Council
American Association of State Highway Transportation Officials – (2013-Current) Utility Mapping and Subsurface Utility Engineering Technical Council

National Highway Institute (FHWA) – Instructor / Course Developer "Highway / Utilities Issues Course" (2001-2010)
National Academies / TRB SHRPII Co-Principal Investigator "Encouraging Innovation in Locating and Characterizing Utilities"
National Academies / TRB SHRPII Investigator "DOT-Utility Coordination: Understanding Key Aspects of the Problem and Opportunities for Improvement"

National Academies / TRB NCHRP Principal Investigator, "Utility Location and Highway Design"
National Academies / TRB ACRP Principal Investigator, "Subsurface Utility Engineering Information Management for Airports"
National Academies / TRB SHRPII. Co-Principal Investigator, Project R01(A), **"**Technologies to Support Storage, Retrieval, and Utilization of 3-D Utility Location Data."
National Academies / TRB SHRPII. Investigator, Project R01(B), "Utility Locating Technology Development Utilizing Multi-Sensor Platforms."
National Academies / TRB SHRPII. Investigator, Project R01(C), "Innovations to Expand the Locatable Zone for Underground Utilities."
National Academies / TRB NCHRP. Technical Expert Task Group, Project 21-10, "AASHTO Manual on Subsurface Investigations."
National Academies / TRB NCHRP. Technical Expert Task Group, Project 24-44, "Guidebook for Managing Subsurface Differing Site Conditions Risk in Design-Build Projects"."
National Academies / TRB SHRPII. Investigator, Project R-31 "Deployment of Innovative Technologies."
Federal Highway Administration / Applied Research Associates. Investigator – Technology Transfer Activities, "Every Day Counts" Initiative.
Engineering and Physical Sciences Research Council (UK), Project Steering Committee and Investigator, Assessing the Underworld Project 2013-2017.

## Over 100 PUBLICATIONS as Author or major contributor

## RESEARCH AND DEVELOPMENT PROJECTS

Jim has participated in a wide variety of research projects, either as an Investigator or Principal Investigator, for over 30 years. Many of these projects are performed in conjunction with research universities. Jim's wide array of expertise in surface geophysics, data repositories, damage prevention statutes and procedures, utility design, highway design, utility construction practices, and project management make him a valuable addition to research teams dealing with these, and peripheral, issues.

The following sampling of projects illustrates the breadth of these investigations. These do not include the many projects where Jim had significant input as a project resource but was not part of the primary research team.
1978: Gas Research Institute, development of the early ground penetrating radar units for utility detection
1985: Battelle Research Institute, correlation of depth accuracy claims by surface geophysics vs actual exposure
1995: Virginia Center for Innovative Technology, correlation of accuracy and completeness of utility records to actual utility location
1999: FHWA, *"Cost Savings On Highway Projects Utilizing Subsurface Utility Engineering*." (in association with Purdue University)
2007: National Academies/SHRPII, "Encouraging Innovation in Locating and Characterizing Utilities" (in association with Louisiana Tech University) R-01
2007: National Academies/SHRPII, *"DOT-Utility Coordination: Understanding Key Aspects of the Problem and Opportunities for Improvement." (in association with University of Florida) R-15*
*2008:* National Academies/TRB, *"Utility Location and Highway Design" NCHRP Project 40-04, 20-05.*
*2010:* Engineering and Physical Sciences Research Council (UK). *Mapping the Underworld*
*2009:* National Academies/SHRPII:
Co-Principal Investigator: Project R01-A: *Innovation in Technologies to Support the Storage, Retrieval, and Utilization of 3-D Utility Location Data*
Investigator: Project R01-C: *Innovations to Expand the Locatable Zone for Underground Utilities*
Investigator: Project R01-B: *Multi-Sensor Platforms for Locating Utilities*
Co-Principal Investigator: R-01 SAULT
2011: National Academies/TRB, "Subsurface Utility Engineering Information Management for Airports." ACRP Project 34.
2011: National Academies/SHRP2. Personal Services Contract for Technology Transfer of projects SHRP2 R-01 and R-15.
2012: National Academies/SHRP2. Deployment of Innovative Technology, SHRP2 R-31.

2012: FHWA DTFH61-12-R-00036. Feasibility of Mapping and Marking Underground Utilities by State Highway Agencies.
2013: National Academies/SHRP2. Technology Transfer of Innovative Technology, SHRP2 R-55.
*2013:* Engineering and Physical Sciences Research Council (UK). *Assessing the Underworld*
*2014: Every Day Counts 3 Briefings to State DOTs*
*2015:* FEASIBILITY OF MAPPING AND MARKING UNDERGROUND UTILITIES BY STATE HIGHWAY AGENCIES." FHWA – USDOT Project DTFH61-12-C-00025, McLean, VA. 2015
2015 *Every Day Counts 3 Workshops and Webinars Development*