

# *HALFF Associates and OSPE Team Up to Present Education Series*

*Three Presentations • Two Different Days  
Two Locations to Choose From*

**November 2<sup>nd</sup> OR 3<sup>rd</sup>, 2017**

**9:00 a.m.**

**(Registration Begins at 8:00 a.m., Breakfast served at 8:30 a.m.)**

**November 2, 2017**

Tulsa Tech Center  
Owasso Campus  
10800 North 140th East Ave.  
Owasso, OK 74055  
[Map and Directions](#)

**OR**

**November 3, 2017**

Moore Norman Technology Center  
South Penn Campus  
13301 S. Pennsylvania  
Oklahoma City, OK 73170  
[Map and Directions](#)

The presentations will be the same at each location.  
Just choose the one that is most convenient for you

Registration Deadline is October 30, 2017.

\*No refunds will be given after October 30, 2017

Price: \$35 for Members, \$45 for Non-Members  
Students Free with advance registration

3 PDH's Available \* Breakfast Provided

**[REGISTER FOR THE OWASSO SESSION](#)**  
**[REGISTER FOR THE OKC SESSION](#)**



SMARTER SOLUTIONS



# AGENDA

**8:00 a.m. Registration**

**8:30-9:00 a.m. Breakfast**

**9:00-9:50 a.m.**

***SUE: Removing the Unknowns Associated with Utility Identification and Coordination***

*Michael Crain, P.E. – Subsurface Utility Engineering/Utility Coordination*

The utility infrastructure serving the public is complex. When locations of various infrastructure are unknown during projects, the result can be construction delays, interrupted service to customers, unfavorable publicity, damages, additional costs, safety hazards, and even injuries. SUE minimizes construction issues on multiple types of projects by accurately identifying the location of utilities early on. This allows better design decisions or design modifications prior to construction, which enhances construction safety, reduces contractor claims and delays, minimizes budget contingencies, and prevents service interruptions. Accurate utility information provides a foundation for a successful project.

**10:00-10:50 a.m.**

***3D Visualization: State-of-the-Art Capabilities and Trends that Benefit Stakeholders and Public Concurrently***

*Jeff Christiansen, Visualization*

3D visualization comes in many forms, and when used effectively, can quickly educate the audience at all levels. Typically, passive 3D visualization is quite powerful, but in some instances, virtual reality and augmented reality will take a foothold, albeit slowly, to improve the engineer and public's interactions. These technologies will be discussed and correlated thoroughly.

**11:00-11:50 a.m.**

***Mill Creek/Peaks Branch/State Thomas Drainage Relief Project***

*Todd Woodson, PE, LEED AP BD+C*

Drainage relief for the Mill Creek / Peaks Branch / State Thomas areas in Dallas, Texas, will be accomplished through the design and construction of a 30-foot diameter, 27,000-foot long drainage relief tunnel. The deep tunnel will provide drainage relief to these frequently flooded areas. The tunnel will be mined in the Austin Chalk formation between 70 and 150 feet below the surface and will outfall to White Rock Creek.

# ABOUT THE SPEAKERS

## ***Michael Crain, P.E.; Subsurface Utility Engineering/Utility Coordination***



Michael Crain has 17 years of experience in Subsurface Utility Engineering (SUE), utility coordination (UC), and management for a wide range of transportation and major utility infrastructure projects. Michael has extensive experience working with state DOT's in Texas, Oklahoma, and Louisiana for large- and small-scale transportation projects, as well as municipalities, electric providers, and oil & gas companies. He has worked on large billion dollar design build projects in Texas, such as the DFW Connector Project and North Tarrant Express Project. Michael is a licensed Professional Engineer in 17 states, including Oklahoma, where he is worked with the Oklahoma DOT as a Utility Coordination Service Provider since 2010. Michael earned his bachelor's degrees in Civil Engineering and Architecture from Texas Tech University and is a member of several professional and industry-related associations, including the National Society of Professional Engineers (NSPE).

## **Jeff Christiansen, Visualization**



Jeff Christiansen has been the Director of Visualization at Halff Associates since 2005, bringing nine years' experience as a business owner and senior visualization provider. Over the past 21 years, he has created a solid understanding of industry leading 2D and 3D software programs, while researching and utilizing the most advanced visualization, VR and AR technology available. Jeff received his Bachelor of Science in Biology from Iowa State University.

## **Todd Woodson, P.E., LEED, AP, BD+C Public Works**



Todd Woodson serves as the project manager for Mill Creek/Peaks Branch/State Thomas Drainage Relief Tunnel in Dallas. Todd has 21 years of experience in design, management, and construction of heavy-civil projects. His design expertise includes airfield, military construction, land development, transportation and drainage-relief projects. Todd received his Bachelor of Science in Civil Engineering from Texas A&M University.