

# TTC CONTINUES TO LEAD THE WAY WITH INNOVATION, VALIDATION, AND EDUCATION

by Dr Tom Iseley and Saleh Behbahani, TTC at LA Tech

After introducing the Auger Boring School, the TTC hosted the first Utility Investigations School – UIS – developed with the American Society of Civil Engineer's Utility Engineering and Surveying Institute in August 2016. TTC/UESI UIS provided attendees the knowledge and tools to provide competent utility investigations in accordance with accepted national standards.

American Society of Civil Engineer's (ASCE) 38<sup>th</sup> Chair and 2018 UESI President Jim Anspach developed the school curriculum and the course covered geophysics, utility systems construction and configuration, ASCE 38 risk-based presentations and professional liability issues. After successful collaboration, Trenchless Technology Center (TTC) and Utility Engineering and Surveying Institute UESI have teamed up again to hold the seventh UIS on 2–6 May 2020.

This five-day school will be taught by the foremost experts in the geophysics and subsurface utility engineering field. In addition to the classroom lectures, practical sessions will be held where participants will be offered hands-on experience with the ground penetrating radar and other technologies.

Vic Weston, who retired as the President and Owner of Tri-State Road Boring Inc., based in Los Angeles, US will be the seventh TTC UIS Banquet Guest Speaker. Mr Weston played a major leadership role in generating millions of dollars of construction industry support for construction education programs, increasing its impact across the state and nation.

Mr Weston has also been a strong supporter for innovations that our institutions could bring to Louisiana's construction industry, such as the support he helped secure for the TTC. He, and the construction industry he leads, have been role models for industry/academia collaborations and support that are now being



At the top of Lake Lure's dam.

replicated by other industries and states.

Mr Weston will be introduced by President of Louisiana Tech University Dr Les Guice and TTC Founder and Director of Development Dr Tom Iseley. Dr Guice was the department head of Civil Engineering in 1988 when he hired Dr Iseley and assisted with the establishment of TTC.

## UESI UTILITY INVESTIGATION SCHOOL

On 16–19 December 2019, UESI teamed up with BAMI-I to hold the sixth UESI Utility Investigation School (UIS) at Colorado School of Mines in Golden, Colorado. This short course gave the practitioners the knowledge and tools to provide competent utility investigations in accordance with accepted national standards (ASCE 38) and to defend against claims through this knowledge and

its documentation.

It discussed the interface between CO SB 167 and ASCE 38, while the lecture series included three 10-hour days with testing.

In addition to the classroom lectures, a one-day field-practicum was held where participants were offered hands-on experience with tooling.

The Colorado Department of Transportation spoke on its compliance and permitting program with SB 167 and a total of 22 students attended this school from Ayres Associates, Baseline Engineering, CDOT, Goodbee & Associates Inc., Harris Kocher Smith, HCL Engineering and Surveying, KCI Technologies, Inc., Kiewit Infrastructure, Maser Consulting, Prostar Corp, SAM LLC, SGM, SurvWest and T2 Utility Engineers. IDS GeoRadar North America and Intermountain Sales Inc. were

the industry partners and sponsors for the UIS.

## LAKE LURE PROJECT

On 30 December 2019, on behalf of BAMI-I and International Infrastructure Solutions (IIS) Dr Iseley and Saleh Behbahani participated in a project meeting in the Town of Lake Lure (TOLL) in North Carolina, US. This project was a 10 inch (254 mm) diameter section of the penstock rehab utilising QuakeWrap's carbon fibre wet layup technology.

QuakeWrap was founded in 1994 by Dr Mo Ehsani, a Professor of Structural Engineering at the University of Arizona. The company serves on the TTC Industry Advisory Board.

SDG Engineering was retained by the town of Lake Lure to provide limited program management professional engineering services to assist with several simultaneous infrastructure projects, two of which are the structural integrity of the Lake Lure Dam and the Powerhouse located at the Lake Lure Dam.

The Penstock at the dam is essentially a water pipe. Construction was completed on the dam and penstock in 1926 and consists of rivet steel plates, the bottom of which rests in a concrete cradle.

The purpose of the Penstock, which is located in the basement of the Powerhouse, is to convey water from the intake structure on the west side of the dam to the turbines.

## UPDATES, APPOINTMENTS AND SEMINARS

Dr Iseley was invited by the Center for Underground Infrastructure Research and Education (CUIRE) to give two lectures on 'Pipeline Renewal Methods' and 'Pipe Inspection Methods for Gravity Pipes' in the Pipe Lining and Renewal School on 28 January 2020. This session was held in conjunction with Underground Construction Technology Conference in Texas, US where Dr Iseley talked about the history of the BAMI-I and the CTAM program.

The BAMI-I Board of Directors meeting was held in conjunction with UCT Conference in Arlington, Texas. This meeting was open to all members and friends of BAMI-I.

On behalf of BAMI-I, Dr Iseley welcomed

the new board members: Ace Pipe Cleaning President Steve Hontz, ICTIS/CISTT Executive Director Arlex Toro Rodriguez, Aging Water Infrastructure's Greg Baird and BGE's Shah Rahman.

BAMI-I successfully updated CTAM to demonstrate the highly impacting relationship of America's Water Infrastructure Act-2018 (AWIA) to asset management. Recently, Mr Behbahani received Plastics Pipe Institute (PPI)'s student travel support scholarship to attend the PPI Municipal Advisory Board (MAB) meeting.

This meeting was held on 12–15 November 2019 in Michigan, US where Mr Behbahani presented a poster on behalf of BAMI-I on 'AWIA of 2018, Consequence Management Strategy for Drinking Water Utilities'.

Please contact if you would like more information on the BAMI-I AWIA Road Map to successful compliance.

After a successful workshop on CTAM 100 in May 2019, the New Jersey Water Environment Association (NJWEA) has once again requested BAMI-I to hold a one day workshop on CTAM 200 in May 2020.

CTAM 200 is an exclusive part of series in asset management coursework for water infrastructure and certification. This workshop will be held in conjunction with the NJWEA annual conference in New Jersey, US. Upon completion of the course, participants will receive a certificate.

On 23 January 2020, TTC, BAMI-I, Fracta, Inc. and Applied Engineering & Science teamed up to offer a Lunch & Learn (L&L) session on asset management developments and how artificial intelligence, machine learning and AWIA 2018 are impacting the future of the asset management.

This L&L session was held in Louisiana Tech University and with attendees from Boyd Tech Inc, City of Shreveport, and the Rutgers University.

On 2 April 2019, the light curing CIPP (LCC) industry responded to an invitation from Dr Iseley and Mike Burkhard to meet at TTC. The intent of this meeting was the



BAMI-I/UESI Utility Investigation School in Golden, CO.



Practical session at BAMI-I/UESI Utility Investigation School in Golden, CO.

first step in developing a partnering relationship between TTC and the industry's leading organisations to address challenges and facilitate open discussions on issues facing the industry and not individual companies.

This meeting was fascinating and, so far, three more successful meetings have been held. The fourth meeting was held in conjunction with the Water & Wastewater Equipment, Treatment & Transport Show at Indiana University – Purdue University Indianapolis. So far, the following committees have been established:

- LCC Specifications Committee
- LCC Training Committee
- LCC Third Party Testing Platform Committee.

The next LCC meeting will be held in Denver, Colorado in conjunction with No-Dig Show. 📍

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For more information visit [www.ttcutilityinvestigationsschool.com](http://www.ttcutilityinvestigationsschool.com)