

United States



Name: Underground Construction Association (UCA of SME)

Type of Structure: non-profit, open association

Number of Members: Total number: 1,472, number of corporate members: 67

ASSOCIATION ACTIVITIES DURING 2019 AND TO DATE

- 2019 and 2020 George Fox Conferences. These one-day conferences provide concise information on the themes of water tunnels: past, present and future (2019) and design and construction of complex projects (2020).
- Provided numerous student scholarships for attendance of the Rapid Excavation and Tunnelling Conference (RETC) held in Chicago, Illinois.
- 2019 Cutting Edge Conference. Annual two-day conference to explore technical advancements and innovations in the industry. This year's event featured the ITA tunnelling awards in Miami, Florida, and included two days of discussion on advances in tunnelling technology.
- Our Young Members group continued their activities, including organization of monthly webinars on various topics of interest to our developing associates.
- Published four editions of our magazine, "Tunnelling & Underground Construction".
- Published a second edition of the Recommended Contract Practices for Underground Construction (2019), edited by Sarah Wilson.
- Completed the majority of planning for June's North American Tunnelling (NAT) Conference, UCA's biennial technical event to be held this year in Nashville, Tennessee.
- Realized a 6% growth in membership within the past 12 months.

CURRENT TUNNELLING ACTIVITIES

There are dozens of notable tunnels currently under construction in the United States. These include:

Highway Tunnels

- The Parallel Thimble Shoal Tunnel project in Virginia Beach, VA is advancing. This EPB TBM excavation

will twin the existing immersed tube tunnel under the Chesapeake Bay constructed between 1960–1964.

- Hampton Roads Bridge and Tunnel Project in Virginia Beach, VA is underway. This is another example of an EPBM tunnel paralleling two immersed tube tunnels.

Transit Tunnels

- Ahead of the 2028 Olympics, Los Angeles continues to be the American hot bed for transit tunnels. Four major subway projects are currently underway; Crenshaw/LAX Corridor, Regional Connector, Purple Line Extension–Phase 1 and Purple Line Extension-Phase 2. Phase 3 of the Purple Line Extension is in design with mobilization to site expected during the spring of 2020. Combined, these projects will add 19 miles of new commuter lines and connect existing lines for shorter overall travel times.
- Las Vegas Convention Center is underway with a people mover tunnel that is partially completed.

Water Supply

- TBM tunnelling is completed and lining operations are underway for a water supply tunnel beneath the Hudson River in upstate New York on the Rondout West Branch Bypass Tunnel. As the project name implies, this tunnel will bypass a deteriorating portion New York City's main water supply.
- The Deep pump station cavern and connection tunnels are nearing completion and commissioning in Las Vegas, NV.
- Mill Creek/Peaks Branch/State Thomas Drainage Relief Tunnel Project. This project includes 26,385 lf of 32.5-ft excavated diameter (30-ft ID) tunnel and 7 shafts (ranging in depth from 120 to 200 vf).

Wastewater

- Sewer and drainage tunnels continue to be the most prevalent tunnels being constructed in the United States. Several municipalities continue with their programs, as others are just beginning.
- In Washington, D.C., The Northeast Boundary Tunnel CSO tunnel is underway.
 - St. Louis, MO currently has wastewater tunnelling underway, at Deer Creek tunnel (22,800 lf of tunnel, 19 ft diameter, with an average depth of 120 ft. There are 5 drop shafts). Jefferson Barracks Tunnel (17,800 lf of 11-ft excavated diameter tunnel, and the installation of a 7-ft diameter FRP carrier pipe and fiber optic conduits in the tunnel). Maline Creek CSO Storage Tunnel (now 90% complete).
 - The Ship Canal Water Quality Project



in Seattle is underway. This 18-foot diameter x 14,000-foot-long tunnel project includes the construction of five shafts.

- Cleveland, OH has the Shoreline CSO tunnel about to get started in construction. Westerley Storage Tunnel (CSO) is approximately 50% complete.
- Joint Water Pollution Control Plant Effluent Outfall Tunnel. This outfall tunnel for the Los Angeles County Sanitation Districts issued NTP on April 8, 2019. The tunnel will be approximately 7 miles long and 18 ft ID.
- Indianapolis, IN Fall Creek Tunnel began in 2019. This 17,850-ft, 18-ft finished concrete lined tunnel is approximately 250 ft deep and

features ten CSO connecting structures/deaeration chambers and tunnel connection adits.

- Ohio River Tunnel (ORT) for the Louisville and Jefferson County Metropolitan Sewer District (MSD) issued NTP on Nov. 8, 2017, and is scheduled to reach Substantial Completion by Dec. 31, 2020 (Final Completion: March 31, 2021). The tunnel length is 21,300 ft; Diameter: 22 ft excavated, 20 ft finished; Depth – 200 ft; Shafts – 6.
- Hartford, CT, Akron, OH, Ft. Wayne IN and Louisville, KY have the first of their wastewater tunnel projects underway.

FUTURE TUNNELLING ACTIVITIES

Several large tunnelling projects are on the horizon in the United States.

- Subject to available funding, the massive Bay Delta Water Conveyance Program may get started in 2019-2020, as several design and logistical contracts are scheduled for procurement. The entire project is planned to consist of over 36 miles of twin 40-foot diameter tunnels. Recent state government decisions may reduce the scope of this project to a single bore.
- We may see the Gateway Tunnels Project in procurement in 2021. These twin heavy rail tunnels will run under the Hudson River between New Jersey and New York to complement the existing and aging North River Tunnels. This project originally went into procurement in 2009 but was cancelled when the State of New Jersey withdrew funding. A follow-on project will rehabilitate the existing tunnels to effectively double current rail commuter rail capacity. The project continues to face major funding hurdles.
- Wastewater tunnels will continue to make up the majority of tunnelling projects in the United States throughout 2020. Cleveland, OH, Providence, RI, Columbus, OH, Los Angeles, CA, and the burgeoning tunnelling markets of Houston, San Antonio, and Dallas, (all in Texas) are just some of the U.S. cities that will continue to expand their facilities.



STATISTICS

1. **Length or volume excavated - % mechanized/% conventional during 2019**
UCA does not track this statistic.
2. **Amount (USD or EUR) of tunnelling/underground space facilities awarded in 2019:**
UCA does not track this statistic.
3. **List of tunnels completed**
Alaskan Way Viaduct Replacement Tunnel opened. Indianapolis, IN White River /Lower Pogues Run Tunnel completed tunnelling in 2019. Purple Line Light Rail Tunnel recently completed with Project completion in 2022. Doan Valley Tunnel in Cleveland, OH.
4. **List of tunnels under construction**
See Update list above for major tunnels under construction.