COLORADOSCHOOLOF**MINES**

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ROCK TUNNELING FOR THE ALBANY PARK STORM WATER TUNNEL IN CHICAGO

March 11th, 12-1PM BERTHOUD HALL 243

The Albany Park neighborhood in Chicago, Illinois has historically experienced significant flooding impacting hundreds of homes along the North Branch of the Chicago River. To reduce impacts from flooding, the City constructed a 5,835-foot-long, 18-foot-diameter diversion tunnel that can relieve excess flows during flood events.

This presentation describes the challenges encountered during tunnel construction and the methodologies implemented for successful completion of the project. Sequential excavation method (SEM) for construction of the assembly chamber, tunnel boring machine (TBM) performance, the encounter of a fracture zone, and the instrumentation and monitoring programs are described.



Dr. Sotirios Vardakos is a Senior Technical Principal and supervising engineer at the Geotechnical and Tunneling Group of WSP in New York. He has a Master's Degree and Ph.D. in Geotechnical Engineering from Virginia Tech and Bachelor's and Master of Engineering in Mining Engineering from the National Technical University of Athens – Greece. He has more than 15 years' experience in underground design and construction and worked for various underground engineering

projects including the East Side Access and Second Avenue Phase 2 projects in New York. Dr. Vardakos currently serves as Principal Investigator and Deputy Manager for several Federal Highway Administration research programs including advanced geotechnical investigation methods for highway projects and US practice for large diameter TBM segmental lining design.



Mar. 11th, 12-1 PM – BERTHOUD HALL 243 LUNCH WILL BE PROVIDED

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