Transportation Learning Network

A partnership with
MDT, NDDOT, SDDOT, WYDOT and the
Mountain-Plains Consortium Universities

PRESENTATION SERIES 2015-2016

PIPE JACKING FOR CULVERTS AND STORM SEWERS

DATE: Tuesday, December 15, 2015
TIME: 2:00– 5:00 PM CT
REGISTRATION DEADLINE: Tuesday, December 1, 2015

DELIVERY: Video Conference
PRESENTATION HOURS: 3

PRESENTATION DESCRIPTION

Pipe jacking and tunneling demands are ever increasing as transportation agencies seek methods to reduce traffic disturbances and improve roadway quality. Failing conduits, the need for additional capacity, and critical or sensitive system expansions all mean more footage of conduit installation without surface disruption. The presentation will provide a good review of soil and pipe interaction factors, pipe designs, methods of installation and a review of selection criteria for pipe jacking and micro-tunneling methods.

Part 1: Jacking and Tunneling 101

- History
- Applications
- Pipe materials and properties appropriate for jacking and tunneling
- Engineering overview – jacking and soil loads, pipe material considerations
- Limitations and risk

Part 2: Construction / Installation Procedures

- Construction equipment for jacking and tunneling projects
- Jacking procedure: how does it work?
- Contractor challenges
- Remedies for unanticipated circumstances (i.e., soil issues, boulders, etc.)

Part 3: Case Studies

- Two or three case studies will be presented, including project challenges that were overcome by design engineers and construction personnel

SPEAKER(S)

Woody Rigdon is the Central Region Engineer for the American Concrete Pipe Association. He has worked for the largest national and regional pipe producers including Hanson Pipe & Precast, Sherman-Dixie Concrete Industries, and Contech Construction Products. Rigdon has a B.S. degree in Engineering from the University of Missouri-Rolla and a Master's degree in Health Services from the University of Arkansas. He has served as President of the South Central Corrugated Steel Pipe Association, as a member of the Arkansas Chapter of the Association of General Contractors, and as a member of the Arkansas Chapter of the American Public Works Association. Rigdon is a certified pipeline inspector through the Pipeline Assessment and Certification Program of the National Association of Sewer Service Companies.

Jason S. Kruger is the Technical Resource Director at Dakota Concrete Pipe Association (DCPA) and the Minnesota Concrete Pipe Association (MnCPA). He educates designers, specifiers, contractors, business owners and engineering students on the technical and economic aspects of concrete pipe for culverts, storm and sanitary sewer applications. Kruger has worked his entire 27 year career in the concrete and cement industry with positions in technical service and engineering management. He is a 1988 civil engineering graduate of Iowa State University in Ames.

TARGET AUDIENCE

State, county and municipal transportation field and design personnel; contractors and maintenance leads.