

BULLETIN

News from *SubTerra, Inc.*®

Auger Bore recovery from beneath Interstate I-405 Renton, Washington

Northwest Boring were contracted by WSDOT to construct a replacement for a culvert that was constructed in the bottom of Thunder Hills Creek prior to the construction of Interstate 405 (I-405). The existing culvert had been placed in the base of the creek or in a trench just below the original creek bed. Fill was placed over the culvert during the construction of the fill prism for I-405. Culvert replacement alignments above and below the existing pipe were considered and an alignment crossing above the existing pipe was selected by WSDOT for construction as a jack-and-bore tunnel.

***SubTerra, Inc.** was retained by Northwest Boring to analyze the planning basis and develop and document an opinion regarding differing site conditions when their TBM encountered steering difficulties and significant loss of line and grade and could not be advanced to complete the bore.*

***SubTerra** examined the historic construction records and geological and geotechnical data conducting a detailed evaluation of the data from proximate boreholes.*



Various methods including grouting the softer than expected ground, were considered and a recovery tunnel finally selected for implementation.

A jacking shaft was constructed just east of the northbound Interstate I-405 lanes near Renton and a large diameter pipe was jacked over the stranded TBM.



SubTerra personnel observed installation of the recovery tunnel and the tunnel face on encountering the TBM.

