

Underground Projects to Watch



CRG TUNNEL

Detroit, Michigan, USA & Windsor, Ontario, Canada
Continental Rail Gateway

START OF CONSTRUCTION: anticipated 2015

The Continental Rail Gateway (CRG) plans to build a \$400 million rail tunnel under the Detroit River adjacent to an existing smaller rail freight tunnel that was first constructed in 1909. The replacement high clearance CRG Tunnel, located between Detroit, Mich. and Windsor, Ontario, Canada, will be able to accommodate larger double-stacked container railcars and intermodal containers used in domestic and international trade. CRG is in the process of securing the necessary approvals and completing the funding package; detailed design and procurement will occur once the funding package is completed. Construction is expected to begin in 2015.



ROGERS ARENA SOUTH TOWER

Vancouver, British Columbia, Canada

OWNER: Aquilini Development and Construction Inc.

CONSTRUCTION START: Spring 2014

The 31-story South Tower, the second of three towers to be constructed around Rogers Arena, home of the Vancouver Canucks professional hockey team in Vancouver, Canada, will include underground parking, rental units and multipurpose facilities. Located under and adjacent to the Georgia Viaduct, the South Tower requires considerable site and foundation stabilization. The contractor, Matcon Canada, is using a range of underground solutions including a jet-grout water cutoff/shoring wall and micropile stabilization to the existing viaduct pier foundations to ensure a dry and stable shoring system for the tower's underground parkade.



CITYRINGEN METRO LINE

Copenhagen, Denmark

OWNER/OPERATOR: Metroselskabet I/S

COMPLETION: 2018

The new Cityringen underground city circle metro line in downtown Copenhagen, Denmark, will include two 15.5 km twin tunnels. The metro line will include 17 stations located 30 meters below ground level. The new twin tunnel line is wedged in between residences, narrow streets and historic buildings throughout the heart of the city. Trevi Group is building the structural walls for the new underground metro line and the first tunnel boring machine (TBM) began work in 2013. The project team is utilizing a wide range of innovative underground technologies to help meet the project's planned completion date of 2018.



CORBALIS TO FOX MILL WATER MAIN

Fairfax, Vir.

Fairfax Water

PIPELINE COMPLETION: Late 2014

The installation of approximately 11,300-ft, 54-in. dia water main that will extend transmission capacity in the western part of Fairfax County, Vir., required tunneling approximately 8,450 ft through solid rock at a depth of 35 ft to 55 ft. The first contractor was unable to complete the job. A second contractor, Southland, brought in a Robbins 7.3-ft double shield small dia tunnel boring machine (TBM), setting a North American record for excavation of high rock strengths (in excess of 50,000 psi (UCF) in the 6.5 ft to 9.8 ft TBM size class. Fairfax Water expects the contractor to finish the new pipeline installation by the end of this year.

PURPLE LINE EXTENSION

Los Angeles, Calif.

Los Angeles County Metropolitan Transportation Authority

PROJECT START: 2014

Metro in Los Angeles is on track to begin construction of the first phase of its \$6.3 billion, nearly 9-mile underground Purple Line Extension that will connect the Metro Purple Line's Wilshire/Western station to Westwood this year thanks in part to a recently received \$1.25-million federal grant package and \$856-million Transportation Infrastructure Finance and Innovation Act (TIFIA) loan. The 22-ft dia tunnel will be constructed with a tunnel boring machine typically 50 ft to 70 ft below the surface. Metro plans to select a design-build contractor in 2014 with scheduled completion in 2023.

CREDITS CLOCKWISE FROM TOP LEFT: CONTINENTAL RAIL GATEWAY, TREVI GROUP, (NO CREDIT FOR PURPLE LINE) SOUTHLAND CONTRACTING, MATCON