

Upcoming Projects

California

Alameda County

New Irvington Tunnel

San Francisco

Public Utilities Commission

Constructing a tunnel parallel to the existing Irvington Tunnel, in Alameda County, Calif., will allow the San Francisco Public Utilities Commission to decommission the Irvington Tunnel for inspection and rehabilitation to improve the water delivery reliability. Located between the Calaveras and Hayward Fault Zones, the mixed-face tunnel is made up of inter-bedded layers of sandstone and shale, with several smaller fault zones. Adding more complications, the tunnel offers 700 ft of cover and high hydrostatic head with potential water inflows up to 1,000 gpm.

An 18,200-ft long excavation is proposed with the installation of a 10-ft inside diameter concrete liner. There will also be construction of a new access road to the Irvington Portal and a new Portal within the piping manifold. Additional isolation valves and connections to the Bay Division Pipelines, originating from the Irvington Tunnel site, will also be installed.

The total construction cost for the project is estimated at \$154 million. The bid date has been proposed for March 2009, with an estimated construction start around August 2009.

Berkeley-Orinda

The Caldecott Tunnel Project

California

Department of Transportation

The Caldecott Tunnel connects Alameda and Contra Costa Counties via state Route 24, and The Caldecott Improvement Project proposes to alleviate traffic congestion along Route 24 by constructing a fourth bore of the Caldecott Tunnel. The goals of the project are to improve mobility for motorists and emergency crews along State Route 24 via the Caldecott tunnels, reduce delays and improve travel times, eliminate the need for daily tunnel lane reversals and merges, enhance safety for the traveling public and Caltrans maintenance workers and respond to Regional Measure 2 and Contra Costa County Measure J.

The project is fully funded with a total production cost estimated at \$420 million. The design phase will be completed in summer 2008. Construction is planned to begin in the summer of 2009, with a completion in 2013 or 2014. It's proposed that excavation will be completed primarily by roadheader with around-the-clock activity from both sides. If the construction is limited to one side, the project's duration will be increased by 14 months, increased cost of \$45 million and increase risk for serious delays. A sound-isolating and absorbing temporary soundwall will need to be built — 1,000 ft long and 35 to 40 ft high.

San Francisco

Bay Tunnel

San Francisco

Public Utilities Commission

Down by the Bay, the Bay Tunnel Segment of the new Bay Division Pipeline (BDPL) No. 5 will extend five miles from Newark. From there, it will cross under the San Francisco Bay and adjacent marshlands, ending in Menlo Park, Calif. Under the San Francisco Bay, it's a mix of sandy and silty clays of the San Antonio Formation, with one 500-ft section through the Franciscan Formation bedrock.

Using a pressurized-face tunnel boring machine, the construction of the 26,200-ft long tunnel will utilize bolted and gasket, pre-cast concrete segment initial lining and the installation of a 9-ft inside diameter welded steel pipe final liner. Two permanent shafts will also be constructed — one 58-ft in diameter and 129 ft deep and one 28-ft in diameter with a depth of 83 ft. It's proposed that these will be constructed using either slurry wall or caisson methods.

The total construction cost is estimated at \$280 million. The bid date is proposed for August 2008, with an estimated construction start in January 2009.

San Mateo County

New Crystal Springs Bypass Tunnel

San Francisco

Public Utilities Commission

Beginning from the south and mostly through bedrock contained within the Franciscan Complex, classified as melange and sandstones, the New Crystal Springs Bypass Tunnel will provide system redundancy for the vulnerable Crystal Springs Bypass Pipeline and improve delivery reliability. The tunnel passes under San Mateo Creeker near the north, where potential pre-grouting may be needed to strengthen the creek bed.

The excavation will measure 13-ft diameter and 4,200 ft long. Installation of initial pre-cast concrete segmental lining will be needed to support the tunnel excavation, in addition to the installation of additional isolation valves, vaults and connections to the existing pipelines and/or tunnel ends. The tunnel will sport an 8-ft ID welded steel pipe final liner.

The total construction cost is estimated at \$57 million. The estimated construction start will be in October 2008.

Indiana

Indianapolis

Belmont-Southport Interplant

Connect

City of Indianapolis

A key component of the City of Indianapolis' long-term, \$1.8 billion plan to reduce raw sewage overflows, the Interplant Connect

will connect the Belmont and Southport wastewater treatment plants. Design (Earth Tech) is to be completed in 2008 and the project will bid in 2009.

The \$161.2 million project includes 6.5 miles of 12-ft diameter tunnel between 35 and 70 ft below grade. When complete, the sewer will move an estimated 320 million gallons each day.

Kentucky

Covington

Western Regional Conveyance

Tunnel

Northern Kentucky Sanitation

District

Northern Kentucky Sanitation District No. 1 has selected a team including Hatch Mott Macdonald to provide design and construction management services for 38,000 ft of 9-ft diameter gravity sewer tunnel and 3,000 ft of open-cut gravity sewer line, shafts, odor control facilities and connections. The tunnel, which will extend through shales more than 300 ft below the ground surface, will convey sewage flows to the new Western Regional Wastewater Treatment Center on the Ohio River.

The project is scheduled for bid in 2009 or 2010.

Maryland

Laurel

Bi-County Water Tunnel

Washington Suburban Sanitation

Commission

The Bi-County Water Tunnel (formerly called the Bi-County Water Supply Main), is a new 84-in. diameter water main designed to meet growing demands and ensure continued reliable water supply to customers in Montgomery and Prince George's Counties. The new main will connect two existing mains in Montgomery County, Maryland.

The 5.3 miles of tunnel will be constructed within solid bedrock between 90 and 280 ft below ground. It will 12-ft in diameter and lined inside with 84-in. diameter pipe.

Black and Veatch are the prime design engineers, while Jacobs Associates and EA Engineering, Jacobs Engineering and Hatch Mott MacDonald are the short list of primary construction management firms. The design engineer will be providing technical review and performing with miscellaneous services during construction. The WSSC is in the process of selecting an engineer to provide inspection, quality control and other services during construction. Work to be performed by a contractor includes construction of the tunnel, liner and testing.

Construction is expected to start in mid-2008 and complete in 2012.

Upcoming Projects

Nevada

Las Vegas

River Mountains Tunnel No. 3 Clean Water Coalition

This 40,000 lf, 10-ft finished diameter wastewater tunnel is scheduled for bid in 2008. Black and Veatch has provided a feasibility study as well as conceptual and detailed design services. Black and Veatch provided similar services, in addition to construction management on the River Mountains Tunnel No. 2 project.

New York / New Jersey

New York City

No. 7 Line Extension

Metropolitan Transport Authority

To redevelop the Hudson Yards area of Midtown West, the Metropolitan Transport Authority proposed construction and operation of an extension of the No. 7 line. The MTA agreed on a \$2.1 billion expansion for the No. 7 train as part of the development of the MTA's rail yards on the West Side of Manhattan. Taking the subway further west from its current finishing point at Times Square, continuing along 41st Street and 11th Ave and then south to a new terminal at 34th Street and 11th Ave.

Construction of the No. 7 Subway Extension would be accomplished by a variety of mining methods, including the use of a tunnel boring machine, conventional excavation, cut-and-cover, and drill-and-blast. The contract to dig the tunnels for the expansion is estimated at \$1.14 billion

The contracts will be bid and awarded in 2009.

New York City / Newark

Hudson River Crossing

New Jersey Transit Board /

Port Authority of New York and New Jersey

The Federal Transit Administration (FTA) has committed \$3 billion to the tunnel connecting Secaucus, N.J., to midtown Manhattan rail hubs. The Port Authority of New York and New Jersey followed suit and New Jersey Transit is committing about \$1.5 billion. The tunnel will be nearly 30,000 lf and 20-ft diameter.

Scheduled to bid in 2009, with the first contracts awarded as early as April, construction is anticipated to start shortly thereafter. Extensive geotechnical investigation has been completed and officials have begun prequalifying contractors. Officials anticipate some 25 contracts awarded for the project.

Final design is completing this summer

and the project is scheduled for completion in 2017.

Washington

Seattle

University Light Rail Extension Sound Transit

The 3.2-mile underground light rail extension from downtown Seattle to the University of Washington has the Federal Transit Administration's highest rating for proposed transit projects in the nation and is scheduled for bid in 2009. Included in the \$1.75 billion project are twin 12,000 lf, 22-ft diameter tunnels and twin 3,800 lf, 22-ft diameter tunnels.

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5	15	25	35	45	55	65	75	85	95	105
6	16	26	36	46	56	66	76	86	96	106
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