



**TUNNELING DIVISION**

**Firms Role:** General Contractor

**Location:** City of Lakewood, Washington

**Project Owner/Manager/Engineer Reference:**

Pierce County Public Utilities  
10311 Chambers Ck. Rd.  
Tacoma, WA 98467  
Contact: Kip Julin, Project Manager  
Phone: (253) 798-3044

**Start Date:** February 2003

**Completion Date:** July 2004

**Contract Delivery Method:** Design/Bid/Build

**Description of Work:**

This challenging project included the completion of the work that was started by another contractor who was eventually terminated from the work after failing to complete the project. The previous contractor had employed three different tunneling machines during more than thirty months of effort. We were able to complete the tunneling portion of the project in less than eleven months.

The scope of the project called for construction of 2,450 lineal feet of 78-inch microtunnel, 3,270 lineal feet of 72-inch CCFR open cut (20 – 30 foot depth), extensive soil grouting, ground improvement and dewatering. The project was successfully completed in four tunnel drives of approximately 300 feet, 600 feet, 670 feet and 880 feet using a Soltau RVS 800 microtunnel boring machine (MTBM). The Casing/carrier was 72-inch Hobas and 74.5 inch Permalok pipe for sewer conveyance with Madison Corropipe II waste liner. Site conditions were cobbles and boulders with strengths up to 42,000 psi under the groundwater table.

