



5211 NE 88th Street / Vancouver, WA 98665
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 E: info@tbhdrill.com / www.tbhdrill.com

Summary of Services

We would like to take the opportunity to introduce TBH & Associates, LLC as a general engineering / contractor specializing in drilling, shoring, underpinning, earth retention, slope stabilization, and dewatering services.

We construct drilled shafts, caissons, tiebacks, soil nails, shotcrete, carved shotcrete, micro piles, pin piles, augercast piles and helical anchors. To compliment these services, we can also provide general excavation, site work and structural construction. We specialize in difficult access applications with equipment that can be used in remote locations. We are able to provide foundations and earth retention systems throughout the Western U.S.

If there is any way we can assist with any future projects, please let us know. We can help you with design and cost feasibility analysis on projects involving shoring or deep foundation systems. Please give us a call.

Here is a brief list of clients we have worked for over the years: British Petroleum/Arco, Shell Oil/Matrix, BNSF, UPRR, Washington Department of Transportation, Oregon Department of Transportation, US Army Corp of Engineers, Boise Cascade, Clark Public Utilities, Hawkeye Construction/MYR Group, and Michels Power.

Following is a partial list of references: Additional information is available on upon request.

Goodfellow Brothers	PO Box 598, Wenatchee, WA 98807	503-256-4114
Hoffman Construction	805 Broadway, Suite 2100, Portland OR. 97205	503-221-8811
International Line Builders	19022 SW Cipole Rd, Tualatin, OR 97062	877-546-3975
JE Dunn Construction NW	437 N Columbia Blvd., Portland OR 97217	503-972-6170
John L Jersey & Son, Inc.	7015 NE 42nd Ave, Portland, OR 97218	503-287-4185
Kerr Contractors, Inc.	PO Box 1060, Woodburn, OR 97071	971-235-5041
Kiewit Pacific Co.	PO Box 1769, Vancouver Wa 98668	360-693-1478
LCG Pence Construction, LLC	2720 SW Corbett Ave, Portland OR 97201	503-252-3802
New Horizons Telecom	901 Cope Industrial Way, Palmer, AK 99645	907-761-6124
North Sky Communications, Inc	11818 SE Mill Plain Blvd, Vancouver, WA 98684	360-254-6920
Pease & Sons, Inc.	PO Box 44100, Tacoma, WA 98448-0100	253-531-7700
Robinson Construction	21360 NW Amberwood Dr., Hillsboro, OR 97124	503-645-8531
Skanska Construction	2555 SW 153rd Dr., Beaverton, OR 97006	503-641-2500
Stacy & Witbeck, Kiewit Pacific,	403 SE Caruthers, Portland, OR 97214	503-641-2500
Stellar J Construction	1363 Down River Drive, Woodland, WA 98674	360-225-7996
Turner Construction Co.	4901 NE Hoyt St., Portland, OR 97239	503-561-4637
York & Curtis Contractors, Inc.	4480 SW 101st. Ave, Beaverton, OR 97005	503-646-2123

Shotcrete is pneumatically placed concrete typically ranging in thickness from 2" to 24" thick. Shotcrete is applied to create a concrete fascia for permanent and temporary earth retention systems. Shotcrete is cost effective because it does not require the use of forms and can be installed quickly, often accelerating the project schedule. In the past, a disadvantage of shotcrete has been its rough and unattractive appearance in permanent installations. TBH specializes in sculpted shotcrete. This process, in which the shotcrete is stained and textured to match nearby geologic formations, allows shotcrete to blend seamlessly into the environment. A carved shotcrete structure saves time and provides an attractive, natural looking, yet structurally sound retaining wall.



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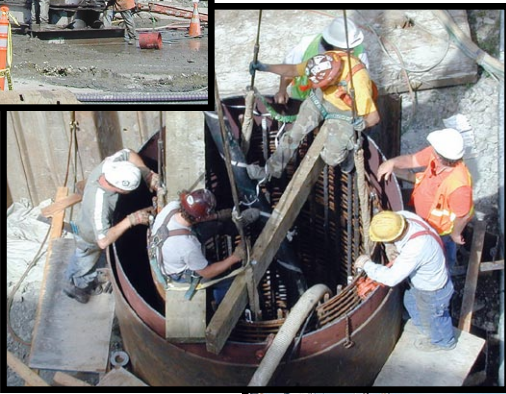
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Drilled Shafts are deep foundation structural support elements for buildings, bridges, towers, above ground reservoirs or any structure requiring load bearing support. Drilled Shafts range from 12 inches to 10 feet diameter or larger and 5 to 200 feet in depth.

TBH has the capacity to rotate and oscillate permanent and temporary casing. The advantage of using a casing oscillator or rotator is that the casing is installed without the use of vibration.

TBH offers drilled shaft services in: bridge and building foundation support, transmission tower foundations for the power and cellular industry, drainage control systems, landfill drilling and tunnel access shafts.



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Soil Nails consist of closely spaced steel or fiberglass elements installed nearly horizontal as an excavation progresses. Grouting secures the soil nails in place. Soil Nails reinforce the existing ground thereby retaining the natural earth. When combined with a shotcrete facing or a high tensile steel wire mesh, an inexpensive and versatile soil nail wall is created. Soil Nail walls can be constructed in many ground conditions and in areas of limited access. Aside from schedule and cost advantages, the primary benefit of soil nails is the ability to construct a temporary or permanent wall from the top down, requiring no additional shoring or excavation. In addition to soil nails, TBH installs rock bolts and driven nail elements. Applications include slope stabilization, permanent or temporary shoring, tunnel and rock face stability.



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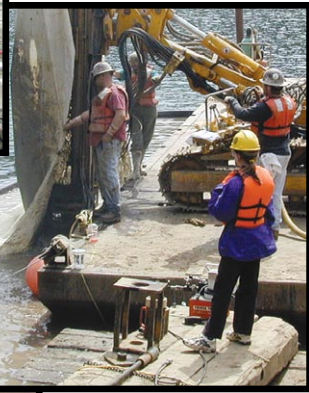
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Micropiles are small diameter piles which may consist of steel casing, steel reinforcement and grout to create high capacity piles with both a vertical and lateral capacity. Micropiles can be installed in limited access locations with little noise or vibration and in various ground conditions including obstructions and contaminated soils. TBH designs and installs micropiles with diameters ranging from 3 to 12 inches and individual load capacities up to 200+ tons. Micropile applications include: seismic retrofit, resisting uplift/dynamic loads, underpinning, limited access support and shoring. Other pile foundation systems installed by TBH include driven pipe and pin piles.



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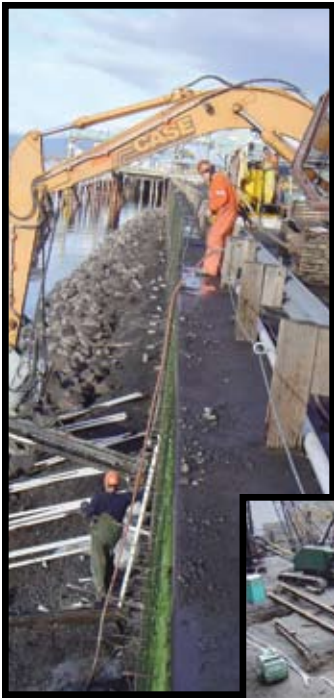
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Soldier piles are steel wide flange or pipe piles installed vertically into the existing ground to provide either temporary or permanent shoring for a vertical excavation. Depending on soil conditions and vibration requirements, they can either be driven into place or installed in a drilled shaft and backfilled with concrete. Depending on the height of the wall ground anchors can be used to further restrain the piles. Soldier pile walls also have the advantage of allowing a permanent wall structure to be constructed without separate temporary shoring or excavation behind the wall face. The soil between the piles is typically restrained with either wood lagging or shotcrete, allowing for a variety of wall finishes.

Ground anchors are small diameter drilled elements of steel strands or bar that are grouted in place and tensioned to provide a preloaded condition in the ground. Applications include earth retention, slope stabilization and resistance to seismic, hydrostatic or over turning forces. Use of ground anchors can reduce the cost of conventional mass concrete and steel structural systems.



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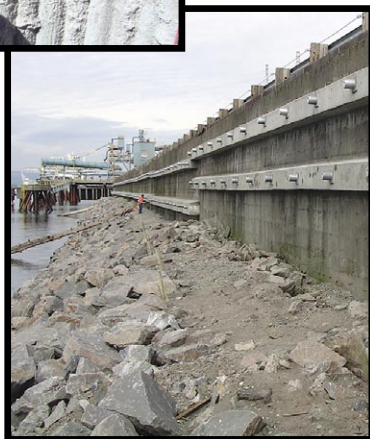
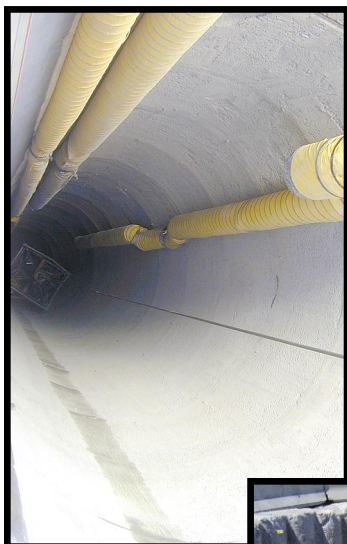
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Shoring systems are installed for temporary and permanent earth retention. TBH specializes in designing and installing custom shoring systems that meet the specific site and budget constraints of each project. TBH has installed shoring to minimize the quantity of excavation and backfill, to limit size of excavations, to allow construction of deep foundations and structures in limited site footprints, to minimize excavation impacts on adjacent properties, and to create jacking and receiving shafts for tunnel boring operations. TBH is capable of designing and constructing cost effective shoring systems to meet the project requirements. Traditional shoring methods used are sheet piling, soldier piles with tie-back anchors. We also utilize tangent and secant pile walls and ground improvement systems for earth retention.



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