Advanced Shoring & Underpinning Inc. is a deep foundation construction company specializing in earth shoring and foundation underpinning systems. Our strength is the ability to provide high quality solutions that save both time and money for our clients. We achieve this by leveraging our in-house engineering expertise, which provides both engineered drawings and as well as innovative solutions for our clients.

Founded in 2002 on the principles of Integrity, Innovation, Quality, and Performance, we continue to leverage these foundational concepts as we build the right team to deliver the right solutions for our customers.

The company is owned and operated by Per-Ole Danfors, a registered professional engineer, who has built the company from the ground and up using his engineering skills, problem solving, innovation and loyal, experienced hard working employees which are the backbone of the business. Per-Ole, originally from Sweden, has been able to travel internationally to both work on and study deep foundation projects in Europe and Asia while learning about different means and methods of solving deep foundation challenges. He uses these insights to generate innovative solutions that help the customers solve their problems and save both time and money.

We provide the following products:

- Soil Nails
- Ground Anchors
- Tiebacks
- Limited Access Work
- Micropiles
- Sheet Pile Walls
- Soldier Beam & Lagging Walls
- Driven & Drilled Piles
- Rockfall Protection
- Structural Shotcrete & Gunite
- Architectural Shotcrete
- Engineering/Testing
- Secant & Tangent Pile Walls
- Augercast Piles
- Jet Grouting
- Foundation Repairs
- Drilled Piers/Caisons
- Rock Anchors
- Helical Piers
- Crane Services
- Stone Columns
- Diaphragm Walls
- Ground Freezing
- Pressure Grouting
SOIL NAILS

Soil nailing is a well-suited for support and protection of excavations especially in situations with height, vibration, and noise restrictions. This shoring method involves installing grouted steel tendons into drilled holes in soil or rock, embedding the nail heads and exposed cut in reinforced shotcrete. Soil nail walls are installed from top down in 5-7 ft steps until the bottom of excavation has been reached.
GROUND ANCHORS & TIEBACKS

Rock & soil anchors/tiebacks offer an economical solution to offer temporary or permanent stability of support problems. Designed to withstand tension, these structural members are typically used for lateral support in earth shoring and anchoring of structures. Most anchors consist of grouted steel tendons or strands but can also be expandable non-grouted anchors such as helical piers, expandable anchors, or Manta Ray anchors depending on the soil conditions and applications.
LIMITED ACCESS WORK

Limited access work refers to foundation and shoring work in complicated locations such as inside buildings and basements, high up on existing walls or slopes, down in deep trenches or shafts, work in bodies of water, on narrow hillside shelves and so on. This work is more and more common as additions or seismic upgrades to existing structures or construction on less desirable land such as hillsides or close to water. A large portion of our work consists of limited access work and we have a large fleet of specialized foundation drills and pile drivers to handle the most complicated challenges.
MICROPILES

Micropiles are high capacity, small diameter, drilled and grouted in place piles designed with steel reinforcement to primarily resist structural loading. Micropiles are rapidly gaining popularity in urbanized areas or in locations with low head room and restricted access. They are an ideal choice for underpinning or emergency repairs because they can be installed in virtually any ground condition with minimal vibration and disturbance to existing structures.
Sheet piles are commonly used for both temporary and permanent excavation support. This system is easy to install and can be removed and reused when only temporary support is required. Sheet piles are normally installed before excavation and provide a finished shoring system that does not require any work during the excavation. Sheet piles are especially useful in excavations that need to go past the level of ground water.

Soldier beams and lagging normally consist of driven or drilled single piles, so called soldiers, that are spaced 5-10 feet with the space between them filled with lagging consisting of wood, metal plates, or shotcrete. This shoring system is very beneficial in locations with obstructions in the ground, or hard soil that does not allow for the driving of sheet piles.
DRIVEN & DRILLED PILES

Driven piles consist of either end bearing or friction piles ranging from lightly loaded wood piles to high capacity steel or concrete piles. These can be driven into most types of soil to depths of over 100 feet in some cases. The piles are installed using impact or vibratory hammers which are mounted on leaders hung from cranes or excavators.

Drilled piers/caissons and augercast piles are concrete pilings cast with concrete in predrilled holes with or without reinforcing. These pilings are capable of supporting highly concentrated loads and are often used on vibration sensitive projects.
ROCK FALL PROTECTION

Advanced Shoring and Underpinning installs a variety of active and passive solutions for unstable rock slopes. Some of our experience with slope stabilization systems includes the use of catch fences, rockfall drapery/netting, rock anchors, and shotcrete.
SHOTCRETE

Shotcrete is a special mix of concrete that is placed by spraying. Due to the “sticky” consistency of shotcrete, it does not require forming. Therefore, it can be used for different applications that would otherwise require complicated forming and pouring. Shotcrete can be used to create unique architectural facing by carving, sculpting, and cutting the concrete. Shotcrete is commonly used as wall facing with different architectural finishes or left rough for soil nail facing, shear walls, or concrete repairs.
ENGINEERING & TESTING

To be able to provide the best and most flexible solutions to our customers, ASU works closely with its sister company PDA Engineering Inc., which specializes in providing engineering consulting, foundation and shoring designs along with field testing. The company has a registered professional engineer on staff as well as engineering technicians for performing all the testing and documentation. Our “in-house” engineering capability is a great advantage for the services we offer. For more information please visit their website at www.pdaengineering.com