

# Foundation Services



An engineered and properly installed foundation is the first step toward a successful project. SPEC Engineering's Civil and Structural Engineers design a broad range of foundations to meet any industrial need. The appropriate foundation will vary depending on the project location, the soil type and condition, and the equipment or structure being supported. SPEC will provide you with foundation options and help you choose the best solution for your project the first time.

SPEC has national and international experience designing foundations for clients. Our experience includes designs for deep foundations in extremely poor soils coupled with a high-water table, expansive clay soil prone to large swelling and shrinkage, deep frost penetration concerns, anchoring to ledge rock near the surface, and working around existing underground utilities and other obstacles.

Foundations that are not engineered properly for specific site soil conditions and loading required by code are at risk for excessive cracking, large settlements, frost heave and even failure. Today's code requirements for foundation engineering are stringent and can vary greatly depending on the adopted code by the local municipality for each project.

## SPEC Designs Foundations For:

- Pumps
- Provers
- Modular Buildings
- Pre-Engineered Metal Buildings
- Platforms
- Stairways
- Loading Racks
- Equipment Skids
- Walkways
- Horizontal Tanks
- Meter Skids
- Electrical Switch Racks
- Pipe Supports
- Pipe Bridges
- Aboveground Storage Tanks
- Cable Tray Supports
- Secondary Containment
- Motor Control Center Buildings

### Shallow Foundations:

- Continuous/wall Footings
- Individual Spread Footings
- Combined Spread Footings
- Mat/Raft foundations
- Shallow Drilled Shafts/Sono-tubes
- Retaining Walls
- Containment Slabs

### Deep Foundations:

- Helical Piles
- Timber Piles
- Precast Reinforced Concrete Piles
- Steel Pipe, Concrete Filled Piles
- Steel H Piles
- Drilled Shaft Foundation
- Hollow Pipe Piles