



DEFINITIONS AND TERMINOLOGY

Common Foundation Types

- ▶ **Masonry:** A foundation constructed of poured concrete, blocks, bricks, or stone that rests on a concrete base called a “footing”. This type of foundation is often acceptable in the FEMA designated “A-Zone”.
 - **Poured Concrete:** A continuous wall of poured concrete used to construct a solid foundation wall to support the structure. A concrete foundation can create an interior crawl space, basement area, or a garage and can be waterproofed for homes in low-lying areas.
 - **Block:** A continuous arrangement of concrete blocks (typically 8” high) used to construct a solid foundation wall to support the structure. A block foundation can create an interior crawl space, basement area, or a garage and can be waterproofed for homes in low-lying areas.
 - **Brick or Stone:** A continuous arrangement of bricks or stone used to construct a solid foundation wall to support the structure. This type of foundation was often used in older homes. Often times this foundation is sub-standard to current code and will be replaced by either poured concrete or block.
 - **Pre-Cast/Fabricated:** Factory manufactured, reinforced concrete walls are used to construct a solid foundation wall to support the structure. A pre-fab foundation can create an interior crawl space, basement area, or a garage and can be waterproofed for homes in low-lying areas.
 - **Slab:** A reinforced, poured-concrete floor that rests on top of the soil and supports the structure.
 - **Sub-Grade Pilings with a Masonry Foundation:** In certain soil types, below grade (below ground level) wood pilings or helical piers (see definitions below) are used to support and stabilize the weight of a masonry foundation and structure.
- ▶ **Pier:** A non-continuous arrangement of wood, metal, or masonry columns used to support a structure. A pier foundation allows water to flow, unobstructed, under a structure or home. This type of foundation is acceptable in the FEMA designated “A-Zone” and mandated for the FEMA designated “V-Zone”.
 - **Wood Piling:** A non-continuous arrangement of timbers driven/pounded, vibrated, or water-jetted into the ground. The pilings are set to a depth beneath the frost line and may extend above ground to the desired height of the home or structure.

- Helical/Steel Pier: A non-continuous arrangement of metal anchor screws augered (twisted) into the ground. The pilings are set to a depth beneath the frost line and either a masonry foundation or masonry pier would then be constructed above grade (above ground).
 - Masonry Pier: A non-continuous arrangement of poured concrete columns or block columns. The piers are typically constructed onto a grade beam footing (see definition below) and extend above ground to the desired height of the home or structure.
- ▶ None: It is possible that a house was not set on a foundation. This means that the structure is sitting on the ground and may be highly susceptible to rotting, cracking, and settling. It is possible to raise a home that is not on any foundation and have a new foundation constructed.
- ▶ Footings: A concrete, stabilizing structure constructed at a depth beneath the frost line. It supports specific portions of a building and distributes the weight of the foundation walls and the building itself. The size and type of a footing is determined by the amount of weight it must support and the composition of the soil it rests on.
- Typical Footing: A reinforced, rectangular section of poured-concrete set to a specific thickness. Footings are constructed under typical masonry foundations, under slab foundations, and can be used in conjunction with sub-grade pilings in particularly unstable or easily compacted soils. In these instances, sub-grade pilings would be installed below the footing.
 - Spread Footing: A typical footing constructed with a greater footprint to more effectively distribute the weight of the foundation and structure. Often times this footing is used when sub-grade pilings are not necessary, but when the soil composition is more easily compacted.
 - Grade Beam: A reinforced poured-concrete footing that runs as a continuous section between where typical or spread footings would be placed. In other words, it serves as one continuous footing to support the weight of the foundation and structure and to resist lateral (horizontal) forces (wind, water, soil pressure). In general, a grade beam is used for additional stabilization and weight distribution. It unifies the sub-structure (foundation construction), as well as unifies the sub-structure with the super-structure (the foundation to the building itself). It can also be used in conjunction with sub-grade pilings in extremely unstable or easily compacted soils to unify the pilings and distribute the weight of the foundation and structure.
- ▶ Crawl Space: The space that exists between the ground and the floor joists and girders. Crawl spaces can range in height from inches to several feet. Some crawl spaces have a thin cement flooring called a “dust cap” instead of just dirt or sand.
- ▶ Basement: An extended space that exists between the ground, floor joists, and girders usually measuring several feet and often high enough to stand in. Typically basements have a cement floor, although in some cases the floor may be dirt or sand.

Common Floor Systems

- ▶ Girders: A load-bearing supporting beam that is supported by the foundation. Girders provide support to the floor joists.
- ▶ Joists: Horizontal sections of lumber, metal, or concrete used to support floors and ceilings. Typically joists are installed perpendicular to the girders and sill plates.
- ▶ Sill Plates: A structural member constructed between the foundation and the framing of the walls of the structure.
- ▶ Sill Seal: An insulating material (fiberglass, foam, plastic, tar paper, synthetic fabrics, etc.) installed between the top of the foundation and the underside of the sill plate primarily to protect the sill plate from moisture, rot, or rust.
- ▶ Anchor Bolts: Threaded metal posts imbedded in the foundation that extend up through the sill plate. These posts are bolted to the sill plate and “anchor” the foundation to the sill plate. Anchor bolts help resist the forces of wind or water.
- ▶ Strapping: Strips of metal that fasten the sill plate and wall system to the foundation. Strapping can be used, in some instances, as a substitute for anchor bolts, or may also be used in conjunction with anchor bolts in areas subjected to high winds.