



Cost savings of 25% to 50% is common.

Example 1: Low-Rise Hotel Foundation

Three-story steel frame. Ultimate column loads = 140 kips. Poor soils at surface and to 10 ft. bgs, improving modestly at greater depth.

Original Specification

H-Piles

\$375,000

- Three H-piles at each column location (50 locations)
- 50 ft. depth
- \$50 linear ft. installed price
- \$7,500 per column location

Structural Foundations

- One 16" dia. steel foundation at each column location (50 locations)
- Foundations at building perimeter will have permanent anchors for frost resistance
- Foundation depth of < 6 ft.
- Steel building columns welded directly to the foundation top plates (no poured concrete pile cap)
- Total installed price: \$4,600 per foundation with anchor and \$4,150 per foundation without anchor; Average \$4,400 per foundation

\$220,000

Savings =
\$155,000
41.3%

Example 2: Residential Foundation

Two-story wood frame building with approximately 5,500 sq. ft. footprint, having full basement and garage footing walls. Poor soils at surface, improving to moderately poor at 8 to 10 ft. bgs.

Original Specification

Helical Piers

\$234,000

- Two helical piers at each site approx. 6 ft. on centers and at right angles
- 260 piers
- \$900 installed price per pier

Structural Foundations

- One 16" dia. steel foundation at approx. 13 ft. centers and at right angles
- Some foundations at building perimeter will have permanent anchors for frost resistance (walkout basement)
- Foundation depth of < 6 ft.
- 55 foundations
- Total installed price of approx. \$2,500 per foundation
- Note: A thicker reinforced concrete floor slab (6") is required with this approach

\$137,500

Savings =
\$96,500
41.2%

Example 3: Retaining Wall

112 ft. long retaining wall of 12 ft. average height (1,344 sq. ft.) and 16 ft. at highest. Surcharge from large masonry patio. Moderate-strength soils with weathered sandstone starting at 5 to 7 ft. bgs.

Original Specification

Auger-Cast

\$215,040

- 15 ft. deep auger-cast concrete caissons with H-beam
- Spaced 6 ft. on centers
- 6" thick reinforced precast concrete
- Tiebacks
- \$160 sq. ft. total installed price

Structural Foundations

- 10" dia. steel foundations approx. 8 ft. long with welded W-flange beams
- Spaced 8'2" on centers
- 6" thick reinforced precast concrete
- Steel wale and tiebacks
- \$110 sq. ft. total installed price

\$147,840

Savings =
\$67,200
31.3%

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StructuralFoundations.com
Info@StructuralFoundations.com
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