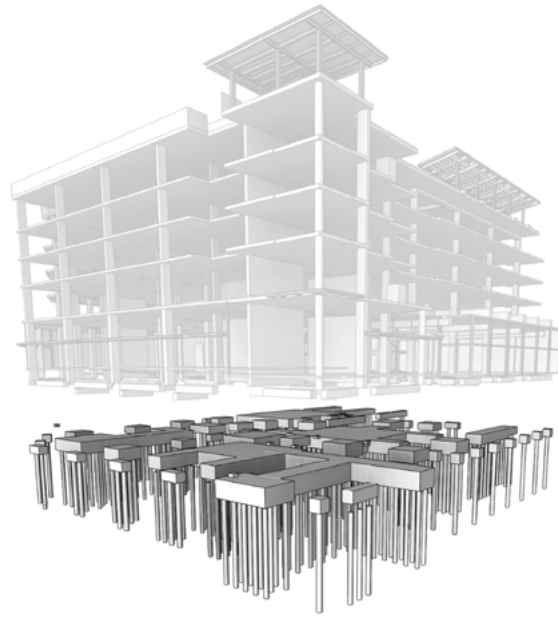


Go Vertical with Confidence[®]



Proven Foundation Solutions

Ground Improvement • Deep Foundation Piles • Peer Review & Design



FARRELL
DESIGN-BUILD

Farrell's Collaborative Process, Specialized Experience, and Proven Solutions Set Us Apart

At Farrell, we approach the project with a high awareness to the shared goals of our customers; be it the owner, the engineer, or the contractor. We collaborate with the project team to provide the best foundation solution that fits the owner's overall project goal.

We Collaborate. Our Process:



STEP 1
Site Assessment
& Application
Feasibility



STEP 2
Design,
Cost & Schedule
Estimating



STEP 3
Engineering &
Contract
Documents



STEP 4
Construction,
Safety &
Quality Control

Whether you're an engineer needing to address poor soil conditions, a contractor wanting to expedite the project schedule, or an owner looking to save money, our specialized experience will help you achieve your desired results.

Farrell delivers proven foundation solutions to discerning owners and their teams in a responsive, honest, and passionate way to assure your projects ***Go Vertical with Confidence!***

Your Success is Our Priority



FOR ENGINEERS

We collaborate. You succeed.

Farrell strives to build lasting relationships with engineers. Good partners listen first and we want to be your best partner.

Because you are a licensed geotechnical engineer, I can always count on your honest feedback and discussion regarding foundation solutions. With Farrell, we get a well-engineered solution that is reliable, appropriate, and will ultimately save our client time and money.

Frank L. Rollo
Principal Engineer
Langan Treadwell & Rollo



FOR CONTRACTORS

We deliver value. You succeed.

Farrell delivers value with prompt responses, timely solutions, high safety awareness, equipment that gets the job done, and schedule focus that you can count on.

Farrell Design-Build began working with the design professionals on our projects only months before final DSA submission and your firm was able to assemble a complete set of documents and get them approved for use without delay.

Brendan Mullholland
Project Manager
McCarthy Building
Companies Inc.



FOR OWNERS

We support your goals. You succeed.

Farrell understands what owners want: investment satisfaction, realized goals, solutions to tough sites with no hassles, all for a good deal that's on time.

Farrell worked through the difficult site conditions after unusually heavy rains and brought value to the project because they could work on a less-than-perfect pad.

Duane Wray
Vice President
Regent Development



FARRELL
DESIGN-BUILD

Foundation Systems and Services

Farrell specializes in proven, design-build, Ground Improvement Support and Deep Foundation Pile solutions. Farrell also provides design-build excavation support solutions, foundation design peer review, and specialty ground improvement and pile design services. Proven Foundation Solutions include:

ACP DDP Auger Cast Pile & Drill Displacement Pile	ACC DDC Auger Cast Column™ & Drill Displacement Column™	CSC CAP Compacted Soil Column & Compacted Aggregate Pier	VSC VDC Vibro Stone Column & Vibro Displacement Column	RIC RVC Rapid Impact Compaction & Rapid Vibro Compaction	MP HP Micro Piles & Helical Piles
Diameter/Depth					
14, 16, 18, 24 in dia 20 – 104 ft deep	14, 16, 18, 24 in dia 10 – 80 ft deep	18, 24, 30 in dia 6 – 32 ft deep	18 – 48 in dia 14 – 58 ft deep	5 – 8 ft dia 6 – 48 ft deep	4 – 14 in dia 10 – 150 ft deep
Compatible Soils					
Sand (SP, SM, SC) Silt (ML, MH) Clay (CL, CH) Contaminated Soil - DDP Undocumented Fill	Contaminated Soil - DDC Sand (SP, SM, SC) Silt (ML, MH) Clay (CL, CH) Undocumented Fill	Silt (ML, MH) Clay (CL, CH) Clayey Sand (SC) Silty Sand (SM) Undocumented Fill	Poorly Graded Sand (SP) Silty Sand (SM) Silt (ML) Clayey Sand (SC) Undocumented Fill	Sand (SP, SM, SC) Sand - Gravel mixtures Silt (ML, MH) Undocumented Fill Contaminated Soil	Sand (SP, SM, SC) Silt (ML, MH) Clay (CL, CH) Bedrock Contaminated Soil HP
Bearing Capacity Range (ASD)					
100 – 800+ kips	4,000 – 14,000 psf	4,000 – 9,000 psf	3,000 – 8,000 psf	2,000 – 8,000 psf	20 – 250+ kips
Key Advantages					
Deep pile with ground improvement - DDP High capacity No vibration Low spoil - DDP Steel reinforcement CBC compliant	High stiffness & High capacity - Type 2 No vibration Low spoil - DDC Uplift-tension hold-down Well defined concrete/ grout column Liquefaction mitigation	Cost effective support Readily available material - CAP LEED opportunity Re-use onsite soil - CSC High bearing capacity Uplift-tension hold-down	Liquefaction mitigation Densification CBC/SP117 compliant Use for confinement Low spoil No casing	Highly cost effective Liquefaction mitigation Densification Use for confinement Fast install process No spoil	Small equipment for tight access Ideal for repair/retrofit Minimal site impact Low spoil - HP No vibrations CBC compliant
Key Considerations					
Deep pile Engineered grout Low spoil - DDP Concrete cleanup Flat stable pad Pile connections	Impermeable Rigid inclusion Gravel cushion Grout with low spoil Concrete cleanup Flat stable pad	Vibration system Requires confinement in liquefiable layers Spoil haul-off - CAP Semi-rigid inclusion Casing Moderate depth limit	Vibration system Requires confinement in liquefiable layers Soft clay need grout Big operation for small site No work next to buildings	Vibrations at 30 ft Pad grading Import needed Shallow depth - RIC High noise - RIC	High material cost Steel below water Pile connections Need access
Comparable To					
Auger pressure grouted piles CFA Piles Driven piles Concrete piers Torque/pipe piles	Rigid inclusions Concrete piers Driven piles Geopier® Soil mix columns	Overex/replace Concrete piers Driven piles Geopier® Soil mix columns	Overex/replace Concrete piers Driven piles Geopier® Soil mix columns	Deep dynamic compaction Overex/replace Geopier® Resonant Compaction	Torque piles Pipe piles Concrete piers Driven piles Soil nails/tiebacks

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