

THATCHER FOUNDATIONS INC.

Driven Piling

DEEP FOUNDATIONS • EARTH RETENTION SYSTEMS • MARINE CONSTRUCTION

Thatcher has been the clear leader in driven piling in Chicago for decades. We have driven piles for everything from private residences and local businesses to some of Chicago's largest buildings. From over 52,000 timber piles driven for the Jardine Water Purification Plant in the 1950s to over 2,200 H-piles for the new Soldier Field in 2002, Thatcher has been the contractor to get the tough, big jobs done right and on schedule.

We specialize in driven piles because we believe they offer many advantages:

Quality

- We pride ourselves on our extensive load test procedures. We provide load testing and probe piles to establish the length of piles that will be required and minimize cost. On some sites, the length may vary ± 20 feet. We use one or more of the following methods for each installation:
 - * Static load testing. We have conducted load tests up to 740 tons ultimate capacity (370 ton design capacity).
 - * Wave Equation Analysis (WEAP)
 - * Pile Driving Analyzer (PDA)
 - * CAPWAP
- A driven pile is a tested pile. As we drive the pile a driving log is kept. The driving log verifies the actual soil conditions encountered by each pile, rather than the assumed soil conditions based on borings scattered around the site. This enables us to further optimize the foundation and eliminate the guesswork.
- We use natural materials (timber piles) or manufactured structural shapes. All piles conform to ASTM standards.
- Soft soil conditions do not affect the shape or integrity of driven piles.
- Utilizing our 60+ years of experience, our engineering expertise, and the latest software, we can predict the equipment that will be required eliminating schedule delays. We're ready to work the day we arrive.

Adaptability

- We drive piles to a pre-determined blow count (x number of blows per foot or inch). If the length of pile is unable to achieve the blow count due to unexpected subsurface conditions, the piles may be spliced. The splice is designed to exceed the strength of the pile therefore there is no loss in capacity.
- Driven piles can easily accommodate lateral loads through the use of battered piles. Piles may be easily battered in any direction to best transfer the load.

Cost Effective

- You only buy what you need.
- Costly extras due to unexpected subsurface conditions are minimized.
- Driven piles require no set-up or cure time. You can build on the pile as soon as it is driven.





Environmentally Friendly

Driven piles reduce or eliminate the amount of soil that must be removed. Particularly advantageous if the soil is contaminated or hazardous, lessening the owner's risk.

Types of Driven Piles

Thatcher utilizes many different pile types depending on the soil conditions, foundation requirements, and site location. Some of the types of piles used are:

- Steel H-piles
- Steel pipe piles
- Timber piles
- Pre-stressed concrete piles (various profiles)



H-piles are the most widely used. The most common profiles and their allowable structural capacities are shown below. Geotechnical capacity often may be less.

Profile	Area (in ²)	Allowable Load (tons)			
		12ksi	15ksi	18ksi	21ksi*
HP14x117	34.4	206	258	310	361
HP14x102	30.0	180	225	270	315
HP14x89	26.1	157	196	235	274
HP14x73	21.4	128	161	193	224
HP12x84	24.6	148	185	221	258
HP12x74	21.8	131	164	196	228
HP12x63	18.4	110	138	166	193
HP12x53	15.5	93	116	140	162
HP10x57	16.8	101	126	151	176
HP10x42	12.4	74	93	112	130
HP8x36	10.6	64	80	95	111

*Under special conditions

Installation

Thatcher uses several different types of hammers to install H-piles. The hammer selection is dependent on the soil conditions, required capacity, site location, and pile type among other factors. Some of the hammers that we use are:

- Air (single-acting and differential)
- Diesel
- Hydraulic Impact
- Hydraulic Vibratory

Call us today and let us show you how we can help you complete your project on time and on budget.

THATCHER FOUNDATIONS

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