



Residential Solutions



**BUILDING SOLID
FOUNDATIONS**

At the MacLean-Fogg Company, our main purpose is to serve our customers. Our more than 3,500 employees work every day to provide our customers with solutions at a fair price, on time with world class quality. These are the principles our company was founded on over ninety years ago. These are still the principles that guide us today.

Family Tradition Since the 1920s

In 2015, Duncan MacLean was appointed as President of MacLean Fogg, making him the fourth generation to lead the family owned manufacturing enterprise. Today the company operates 35 global manufacturing facilities with annual sales in excess of one billion dollars and a workforce of over 3,500.

MacLean Civil Products (MCP), a division of MacLean-Fogg, is proud to carry on this tradition providing you with the assurance of an economical, engineered foundation system developed from over 40 years of experience in the helical anchor market. With the MacLean reputation, our years of experience and innovative product lines you can be assured your home's foundation is resting on nothing but the highest quality helical products.

Helical Industry Leader

MCP's Dixie helical product line provides products for solutions in foundation repair, new foundation and tie-back construction. Our Dixie helical products provide industry leading options for the most difficult construction or repair issues. Complying with your local building codes, our patented (US 8,777,520B2) and independently verified (ICC-ES ESR-3032) helical products can provide your home a foundation that can last a lifetime.

MacLean Civil Products Certification

All distributors and installers are trained and certified in the proper installation techniques for all Dixie helical products and resistance piles. Our certification process along with our extensive engineering support assist the owner and installer in the selection and installation of the correct product option, to maximize the performance and the life of the product.

Buy American Quality

MCP Dixie helical products comply with the Buy American Act for domestic products. The steel used for our products is tracked and documented with mill certification documents verifying origin and steel strength properties. Steel that does not meet our strict specification and quality standards is refused and never allowed into our plant. All final products, unless otherwise specified, are hot dip galvanized in accordance with ASTM A-153 or A-123 specifications for corrosion protection.

Rigorous Quality Inspections

Rigorous quality inspections: Random helices and extension bars are tested weekly to ensure that they meet compression and tension load requirements. Steel wall thicknesses, drilled holes and welds are checked throughout the fabrication process. All welds on pipe and square shaft anchors are stamped with the welder's identification mark. As one of our founding principles, our plant personnel ensure product quality that far exceeds all competitors both foreign and domestic.

New Construction



Helical Foundation Piles

Foundation Repair



Helical Foundation Piles

Tiebacks



Residential Walls
Basement Walls
Marine Applications



A Proven Solution

MacLean Civil Products (MCP) brings a patented and innovative solution to your home foundation construction or repair. Industry leading product support, high quality products and factory certified service providers qualify MCP as a leader in the helical foundation construction, repair and underpinning industry. MacLean support has proven to be a model for the technical support provided throughout the helical products industry. Our engineering staff with our online application software tools (MDRS) is second to none in providing the owner, design professional or installer with the most economical solution for any foundation issue. The MCP Dixie helical pile with the round corner square (RCS) and pipe shafts are the corner stone for the majority of home foundation repairs. Our foundations systems including round corner square (RCS), pipe, resistance and grouted piles offer solutions for the most difficult of home foundation issues. To ensure only the highest of quality of proven products, MCP Dixie products and manufacturing are evaluated by independent third parties through our ICC-ES ESR-3032 and ISO 9001:2008 certifications.

Strength Squared™ Coupling System

When it comes to ensuring a solid foundation, no two soil compositions are the same. For this reason, we continually strive to make a great product perform even better. The MCP Dixie's patented Strength Squared™ Coupling System (US 8,777,520B2) connects our pipe piles together by bolting individual male and female square couplers. These couplers are welded to the pipe eliminating damage from bolts passing directly through the pipe shaft. This connection system offers an ease of use during installation not seen in competitor's products and the versatility of easily connecting pipe and RCS shafts. This connection option provides optimal product performance in any soil condition.



Easy Installation, Easy Removal

As helical piles are turned or screwed into the ground without hammering or vibration, the ability for the pile to withstand large amounts of applied torque (turning force) is crucial. With the elimination of coupling bolts passing directly through the pipe wall our helical piles can withstand the maximum amount of installation torque with no damage to the pipe shaft. During installation this unique design enables bolt holes to perfectly align for faster assembly of the pile and connection to the torque drive.



ICC-ES 3032

The International Code Council Evaluation Service (ICC-ES) AC358 acceptance criteria for helical piles is specifically designed to subject helical piling systems to a rigorous testing program to evaluate the strength of the whole system, not just the individual parts. MCP Dixie's line of applicable helical foundation piles were tested according to the requirements of ICC-ES AC358 including:

- Full scale compression load test in sand and clay
- Full scale tension load test in sand and clay
- Full scale lateral load test
- Shaft torsion test
- Helix torsion test
- Coupling rigidity test
- Helix capacity test
- Bracket capacity test

Upon completing this program ICC-ES Report No. ESR-3032 was issued, signifying compliance with the requirements of ICC-ES AC358 ensuring specified MacLean Civil Products performance and quality.



MacLean



Bolt holes align for faster assembly – just insert next extension and add bolt. No alignment issues when in tight quarters. No damage to pipe piles or bolts.

Competitor



Competitor pipe piles are held together and rotated by the bolts alone. Torsion results in elongating the hole and reducing pipe strength and stability.

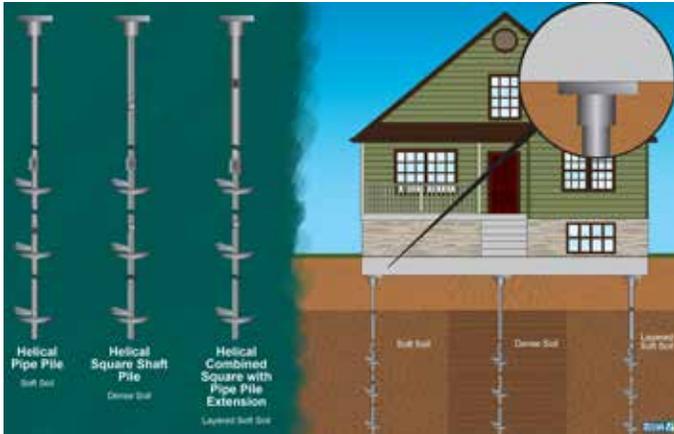
Build on Our Solid Foundations

Helical Piles

Whether you are repairing your home, building a new home or making a major renovation, MacLean Civil Products (MCP) has the foundation solution for your home project. The cornerstone of the MCP Dixie foundation system is the helical pile product line. Helical piles are a type of deep foundation which are a functional and economic solution for new construction and structural repair. MCP Dixie offers a full line of helical products including:

- Round Cornered Square (RCS) solid square shaft anchors and piles
- Hollow pipe helical piles with our patented square connection
- Hollow pipe resistance pile system with hydraulic jack and tooling
- Horizontal tie-back systems for retention walls for landscaping, basement walls and marine applications

New Construction



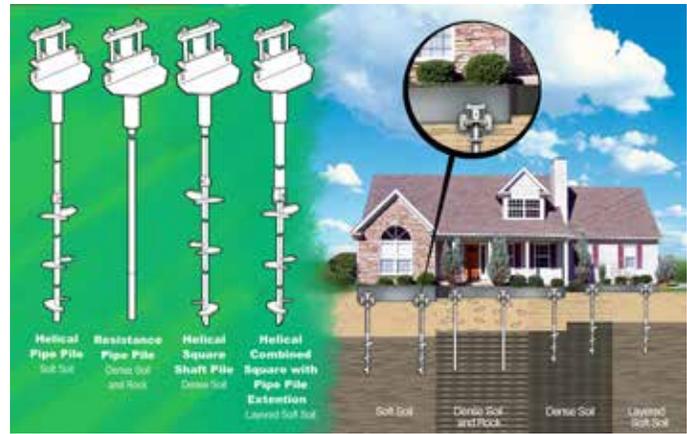
A helical pile system essentially consists of three elements: a lead shaft, one or more extension shafts, and a pile termination. Pile terminations include a new construction bracket or the crown jewel of the MCP Dixie foundation repair line, our patented (US 8,777,520B2) Dixie 350 cast foundation repair bracket. The Dixie 350 repair bracket is the most reliable and easy to install foundation repair bracket on the market. Let us provide you with the assurance your foundation is being repaired with the highest quality patented product that meets or exceed building code requirements.

Limited Access - No Problem

If you have a challenging site with limited access like low overhead or restricted width, MCP Dixie's helical foundation piles are the right products for the job. They can be installed using a lightweight hydraulic driving tool that fits into even the tightest work spaces. There's no soil spoils to remove and they install in any weather with just a small crew needed.



Residential Repair



Foundation distress and building settlement can occur through a number of mechanisms. Typically the loss of soil strength beneath the building foundation will cause the structure to settle and may cause foundation damage, especially when the settlement is uneven. Two major causes of the loss of soil strength are related to drainage issues and breakdown of organic material (roots) in the soils. This can occur at locations near chimneys where the load is concentrated and at locations where the foundation is discontinuous, such as at the interface between slab-on-grade garage and a home with a full basement. In cases where foundation distress is likely or has already occurred, a helical pile repair can prevent or halt the structural damage that may occur and, in some cases, raise the foundation back to its pre-settlement elevation.



MacLean Civil Product Solutions are engineered for new and failing foundations

Our manufacture certified distributors and installers provide the most professional service in the helical industry. MCP certified installers have been trained to not only understand your foundation issues but to also recommend and install the correct solution for your home. Not all homes require the same solution, it is important for the success of your home construction or repair to have a MCP certified installer recommending theright foundation solution.

Helical Tieback Systems

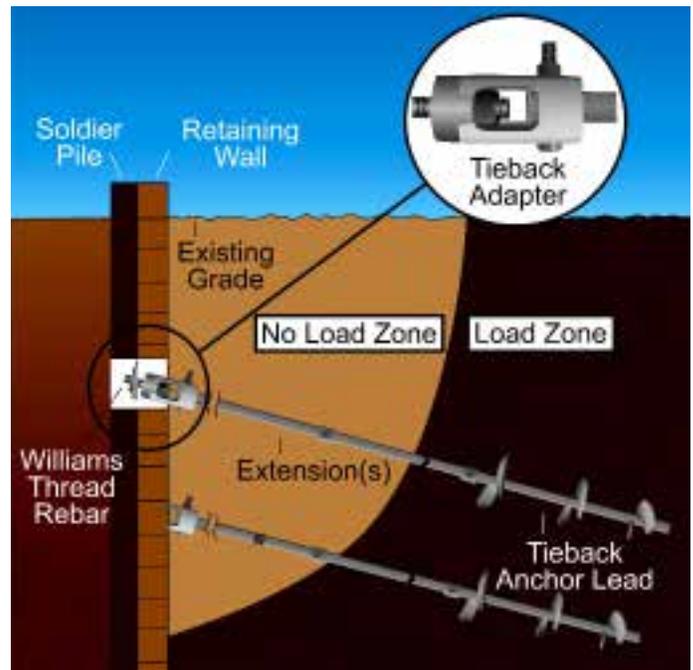
Helical Tieback products are used for retention walls, excavation barriers and specialized applications such as sea walls. MacLean Civil Products (MCP) manufactured for tieback applications meet the same stringent requirement of quality and performance as our civil anchor product lines. Along with installation by a certified and experienced installer MCP offer a safe, economic and schedule friendly solution to your tieback projects.

Installation is performed by rotating the Round Corner Square (RCS) helical tieback with a hydraulic torque drive into the vertical surface of the retained soil. Extensions are added to the tieback to ensure the proper depth into the soil mass is achieved. A calibrated torque measuring device is used to verify when the proper torque is achieved by the tieback to reach the estimated resistance capacity.

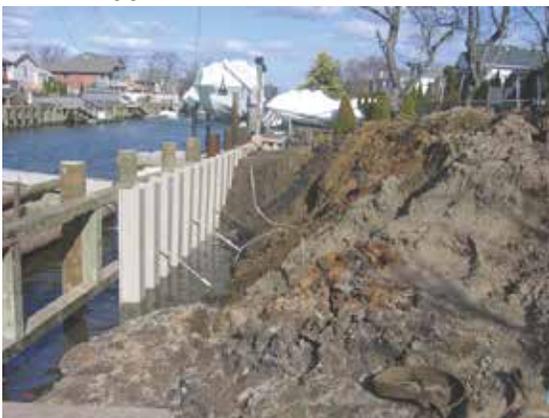
MCP Tieback Adapters are used to terminate and connect the tieback to the retention wall or seawall. Our adapters are easy to install and work with most wall systems. MCP has the capability to also manufacture a custom adapter if required by your project.

Features and Benefits

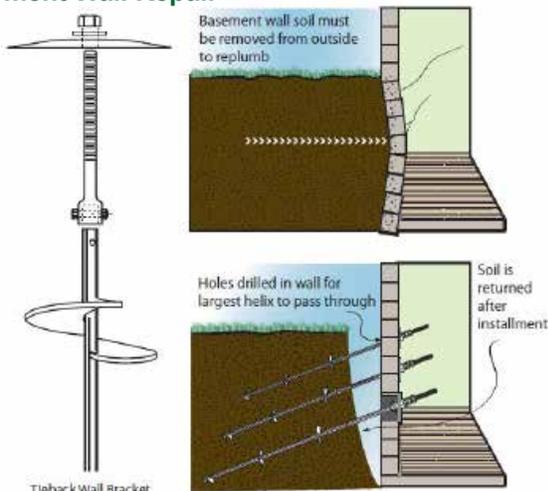
- Loads can be applied immediately after installation - no cure time for grouting
- Can be installed in adverse weather conditions
- Can be installed with small construction equipment found on most project sites (bobcats, skid steers, etc.)
- With continuous torque, monitoring estimation on capacity can be made prior to performance test
- Schedule and budget friendly
- May be easily removed for temporary applications
- No soil spoils to be disposed of off site
- Made from recycled steel offering a green construction solution and LEED certification credits



Marine Applications



Basement Wall Repair



Helical Tiedown System

Helical products for tie down applications are available in varying lengths and shaft sizes that can include either a fixed or welded plate for structure attachment or holes drilled into the end of the pipe where clamps can attach to the structure. Due to the use of the helix to pull the tie down into the ground and to resist the pull out force of the attached structure, the helical tie down is the most effective solution on the market. MCP has a full line of product option for your specific project.

Common uses include:

- Solar Panels
- Mobile Homes
- Secondary Structures (work sheds)
- Landscape Additions



Built on a Solid Foundation

MacLean Civil Products is part of MacLean-Fogg, a diversified international manufacturing enterprise with more than half a billion dollars in sales. A result of the acquisition and merger of Joslyn and Dixie, two prominent soil anchor manufacturers, MacLean Civil Products is now one of the leading suppliers of steel deep foundation systems for use in residential, commercial and marine applications. Our comprehensive product line for residential and commercial applications includes engineered solutions for tension, compression and structural stabilization in many different soils.

Quality That is Second to None

Why do installers and engineers across the nation choose MacLean Civil Products time and time again? Perhaps it is because our impeccable quality standards and rigorous testing procedures ensure that our products are second to none.

Every Welder Certified Under AWS D1.1

Our standards are just as high with our employees as they are with our products. All our critical joints are welded by craftsmen who maintain industry certification. Materials are traceable to the steel mill. We can trace every lot of steel back to the original mill that produced it. So we know that the chemistry, plus physical and dimensional properties are in accordance to our stringent standards.

State-of-the-Art Fabrication

With one of the largest manufacturing facilities in the industry, we are equipped to turn products around faster, more efficiently and more cost effectively.

Visit MacLeanDixie.com and EarthAnchor.com for more information and technical specifications.