Superior
Est. 1983

THE UNDERGROUND AUTHORITY

SUPERIOR
POLYLIFT SYSTEM



State of the art approach to repair sinking concrete.

THE POLYLIFT™ SYSTEM

The PolyLift™ System is a state of the art approach to repairing sinking concrete. PolyLift™ takes the original concept of mudjacking and combines it with modern knowledge and technology.

Rather than using a mixture of portland and top soil, this method utilizes high density polymers to raise slabs back to a desired level. This is done by drilling small holes (smaller than a dime) in the slab and then specially designed equipment is used to inject structural grade polymers into the void. After the void is filled, the expansion of the polyurethane allows for a precise lift and stabilizes the slab.

ADVANTAGES OF THE POLYLIFT™ SYSTEM

MINIMAL SIZED HOLES – The size of holes we drill are only 5/8" (smaller than a dime) as opposed to a 2" hole that is needed for the mudjacking system.

LIGHTWEIGHT – PolyLift™ weighs approximately 4-6 pounds per cubic foot when installed, which is significantly less that the 120 pounds per cubic foot of typical fill material. This means there is almost no additional load added to the supporting soils.

HIGH CAPACITY – Lifting action is a result of the expansion of the polymer, allowing for lift on much higher loads than typical mudjacking that relies on hydraulic pressure being contained under a slab.

ACCURATE LIFT – Calculated reaction time of the PolyLift™ foam allows for a targeted, precise lifting operation.

WATERPROOF – PolyLift™ is fully waterproof so it cannot wash out. In addition, because it cannot take on water, it is not impacted by freeze/thaw cycles. Additionally, PolyLift™ can be used to under-seal slabs and stop a variety of infrastructure leaks.

NON-INVASIVE – The equipment used to install PolyLift™ can be used in limited access areas, is far less messy than other methods, and can be installed more quickly.

CURE TIME – Quick cure time allows for immediate loading, even in high traffic, within 15 minutes after injection.



Equipment capabilities and experience are the fundamentals that make us successful at performing this process.

COMPRESSIVE STRENGTH – The in-place compressive strength of commercial grade PolyLift™ material is minimally 11,000 pounds per square foot, and often exceeds 15,000 pounds per square foot.

CONSOLIDATES SOIL – As Poly Lift foam exerts the energy to lift a slab, it is placing an equal amount of pressure on the soil beneath the slab. This process not only fills the void and raises the slab, but also densifies the soil below.

BEFORE



AFTER



Reduces trip hazards and restores property values.

POLYLIFT APPLICATIONS BY MARKET



ROAD & BRIDGE APPROACHES

Settlement of highways and roadways is a problem that Departments of Transportation across the country are tasked with correcting on a regular basis.

As expansion joint materials break down over time and allow water to penetrate below the slab, the subgrade below the concrete compresses as a result of heavy traffic flow, creating depressions in the roadway. These depressions create hazardous driving conditions to the public.

Bridge authorities face similar issues when dealing with the settlement and misalignment of bridge approach slabs. Often, these approach slabs are supported with backfill material which is both loose and poorly compacted. The stress and constant vibration the slab encounters during daily traffic compresses this fill material, thus creating voids below concrete. As a result, many bridge approaches settle to the point where they are no longer within tolerance of what is considered a safe and acceptable gradient.

> *With its quick cure time, high compressive strength, and efficient installation, PolyLift™ is often installed without having to completely shut down the roadway or bridge, allowing traffic to continue to flow without any major disruptions.*



THE PROCESS

Step 1: Small 5/8 inch holes are drilled through sunken slab.

Step 2: An injection port is installed in each hole.

Step 3: High-density polymers are injected into the port, lifting the slab.

Step 4: With the port removed, the holes are cleaned and patched with cement.

The PolyLift™ system offers a long-lasting solution to repair sinking highways, roads and bridge approaches, while also providing many benefits that alternate options fail to achieve. While traditional methods of repair such as diamond grinding or removal and replacement of the concrete have been used in the past, these solutions are often temporary, cost prohibitive, time consuming, and fail to address the underlying cause of the problem – the soil beneath the slab.

With the PolyLift™ system, city and state agencies are able to correct the problem quickly, effectively and with little inconvenience to the public. With its quick cure time, high compressive strength, and efficient installation, PolyLift™ is often installed without having to completely shut down the roadway or bridge, allowing traffic to continue to flow without any major disruptions.

POLYLIFT APPLICATIONS BY MARKET



INDUSTRIAL & COMMERCIAL WAREHOUSES

In many warehouse environments, minor voids under the slab or under control joints cause concrete flexing or displacement which creates unsafe working conditions, as well as maintenance issues with equipment. These voids are typically caused by traffic flow of heavy machinery coupled with poor compaction of the soils beneath the slab. As the slabs begin to flex or settle, sags within the concrete and displacement at the joints often disrupt efficiencies and productivity within the warehouse.

The PolyLift™ system provides a superior solution to fill voids, densify the soils below the slab, and raise the settled concrete. With its quick cure times, high compressive strength, and minimal disruption during installation, PolyLift™ offers an effective solution with little or no disruption to normal work flow.

Concrete settlement and uneven floors affect commercial properties and office buildings everywhere. Whether the building was constructed on poorly compacted fill, water infiltration underneath the slab caused washout of the soils, or air leakage from under-performing duct work below the concrete resulted in shrinkage of the subgrade, this settlement causes significant damage to the interior finishes of the structure. Often, the damages are so severe that businesses are forced to cease operations until the problem is corrected.

The PolyLift™ system offers many advantages over traditional methods of repair such as mudjacking or tear out and replacement of the concrete. With its ability to access tight areas, precise lifting ability, and quick cure time, PolyLift™ provides a superior solution that is unmatched.

Unlike other repair options, the installation of PolyLift™ can also be completed in a matter of days, if not hours, without having to remove any interior finishes. This allows the tenants to continue working with little or no disruption to normal business operations.

> *The installation of PolyLift™ can be completed in a matter of days, if not hours, without having to remove any interior finishes.*



The PolyLift™ method utilizes high density polymers to raise slabs back to a desired level with precision lifting.

POLYLIFT APPLICATIONS BY MARKET



RAILROAD & INFRASTRUCTURE

As communities grow, maintaining functionality of the aging infrastructure is an issue that is both pressing and common.

Without having effective rehabilitation systems in place to keep things such as airports, public railways and sewer systems operations at efficient levels, our cities would not be able to operate as needed.

In the past, settling concrete at airports and railway crossings or leaking sewer lines below roadways were often fixed by tearing out the old and replacing with new. This solution is not only expensive and time consuming, but also causes major inconveniences to the public.

The PolyLift™ system offers an excellent solution to these aging infrastructure problems that allow our towns and cities to maintain operating efficiencies and serve the public while repairs are taking place.

With its non-invasive, superior adhesion and waterproof characteristics, PolyLift™ provides a safe and effective repair to leaking water lines and sewer lines. The system also provides many benefits when fixing sinking concrete over alternative methods such as tear-out and replacement or grout injection.

With its high compressive strength, quick cure times, and non-invasive equipment, PolyLift™ gives airport and railway authorities a cost-effective solution without compromising service levels.



Our experts can assist you in achieving stellar results for the most challenging of projects.



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POLYLIFT APPLICATIONS BY MARKET



AIRPORTS

Raise It – Don't Replace It!

Tarmacs, hangars and peripheral ground operations are essential infrastructure of airports – relied upon by pilots, ground operations crews, equipment operators and ultimately passengers. It is a critical necessity to keep these surface areas in tip top condition to eliminate potential safety hazards and ensure all-around safe ground operations.

Settlement of concrete, which results in unlevel and cracked concrete, causes unsafe operating hazards and can cause damage to planes and ground equipment as well as tripping hazards for grounds crews.

Typical types of concrete settlement issues which occur on airport grounds include:

> Unlevel Surfaces
> Cracked Concrete

Common areas where concrete settlement occurs on Airport grounds include:

> Runways
> Gate Tarmac Surface Areas
> Passenger Transportation Surface Areas to/from Planes
> Hangars
> Peripheral Ground Operations Surface Areas





Advantages of Polyurethane Lifting for Repairs on Airport Grounds

Why spend time and money on costly replacement and repair of unlevel and cracked concrete, when you can cost-effectively raise slabs? As well, replacement projects create unnecessary airport downtime that is disruptive to airport operations.

Superior Grouting's PolyLIFT system injects polyurethane foam beneath slabs to fill voids, stabilize soil and lift concrete.

Benefits of the Superior Grouting PolyLIFT System

> Cost-Effective vs Slab Replacement
> High Lifting Strength
> Waterproof
> Environmentally Safe



We proudly service greater Houston and the entire Gulf Coast Region.

About SUPERIOR

Established in 1983, Superior Grouting Services, Inc. is one of the best known, most reliable names in the industry in the Greater Houston and Texas Gulf Coast Region.

"Continuing to evolve and always being on top of the newest technology and innovations has kept Superior Grouting ahead of the competition".

Specializing in creating solutions that get results, Superior Grouting's team of experts have decades

of experience in specialty grouting projects and concrete remediation. We have completed thousands of commercial, industrial, municipal and institutional projects including; roadways, highways, toll ways, railroads, airport runways, infrastructure, pipeline, industrial product storage tanks, warehouses, distribution centers, convention centers, professional buildings, retail centers, schools, restaurants, apartments as well as many other structures.

In 2012, Superior Grouting expanded its focus by adding a new process to the mix of solutions it offers. Not only offering cementitious and chemical grouting services, it has moved into a new arena by adding a polymer based grouting and injection process, "**Superior PolyLift**".

With the evolution of the Superior PolyLift Method, we are not only providing services to the municipal, industrial and commercial sectors, we also provide concrete raising services to homeowners through our residential division.

2017 was a milestone for Superior Grouting Services, Inc., Surpassing our 34th year in business and now known as Superior, the company is continuing to evolve and work with the newest technology and innovations so we can offer the best and most creative solutions to achieve stellar results on the most challenging of projects.

At Superior we will find the right solution for you. Thank you for allowing us to serve you!

Superior
Est. 1983

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