

Unprecedented federal funding now makes it possible to address the infrastructure and structural repairs that are an ongoing challenge in the state.

These repairs are often approved projects covered by American Rescue Plan Act (ARPA) funds. When you combine the solid, low-cost Helms solution with these ARPA funds, you can address more projects.

Our area has no shortage of soil issues and aging infrastructure. We know firsthand how inconvenient and costly it can be to excavate a busy road to fix a leaking culvert or to wait days for concrete demolition and cure.

In the past, these projects were often put off due to cost and disruption. But that doesn't have to be the case. Not only does Helms Polyfoam have permanent MDOT-approved solutions, but our cost-effective repairs require minimal downtime.

Let us help you make your funds go further so you can create a lasting impact in your community.

Here are a few of the challenges Helms Polyfoam can solve for you:

- Concrete Lifting
- Soil Stabilization
- Leak Seal

- Void Fills
- Deep Lifting
- Sea Wall Repair
- Crack Injection
- Water Treatment Plant Leaks

INFRASTRUCTURE REPAIRS • ARPA FUND PROJECTS • MDOT-APPROVED SOLUTIONS

Concrete Lifting, Deep Lifting and Void Fills

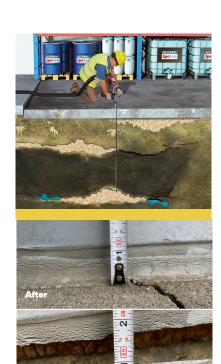
Settling happens as a result of shifting soil, compaction and many other environmental conditions. Structures may settle gradually or happen overnight. You don't have to excavate and pour new concrete to fix settled concrete.

SOLUTION:

Our resins are injected beneath the concrete in a liquid state. This creates a chemical reaction, turning the resins into foam that expands to create pressure. The pressure fills voids, compacts weak soil, then lifts the concrete at a controlled rate back to its original height.

FACTS:

- Typically 50% less expensive than tear out and replace
- Resins lift and level concrete without excavation
- Lightweight material provides strong structural support (weight: 3.5 lbs./cu. ft. and supports: 14,000 lbs/sq. ft.)



Soil Stabilization

Unstable soil can be caused by a variety of reasons including erosion, poor compaction, freeze/thaw cycles, and decomposition. Infrastructure, such as roads, bridges, and buildings can be compromised or damaged when soil is unstable.

SOLUTION:

Voids can be filled, seawalls remediated, soil consolidated, and water migration halted by permeating the soil with an ultra-low viscosity polyurethane resin. Once the bearing capacity of the soil has been increased with this process, then the structure can be lifted if necessary.

FACTS:

- Resin stabilizes soil and seals leaks without excavation.
- Hydrophobic resin displaces moisture from soil while permeating and creating a solid, water impermeable barrier.
- Pre-construction curtain walls mitigate erosion risks from site development.



Leak Seal: Crack Injection

Concrete is a common building material, but even brand new construction may require leak seal fixes. Older concrete is even more susceptible. Concrete leaks are typically through cracks, joints and the areas in poured concrete course aggregate with voids called honeycombs. Leaks can be weeping, steady or gushing.

SOLUTION:

Liquid resins are pressure-injected into leaking defects, cracks and joints. Our water-activated, flexible foam repairs leaks by forming a flexible, watertight seal.

FACTS:

- Closed-cell polyurethane injection resin serves as a powerful leak seal to shut down even high-flow underground leaks.
- Optimal for sealing pipe penetrations, hairline cracks and larger concrete defects.
- In addition to concrete, our leak-seal solutions also work on metal, wood, brick, block and other non-concrete structures.







Leak Seal: Sea Wall Repair

As tides rise and fall, water pushes against sea walls, penetrating cracks, joints, and defects. As water flows out, it carries sand and soil, undermining the structure and causing voids to form. Over time this deteriorates the structural integrity of the sea wall.

SOLUTION:

Seal any leaks along the wall, fill the voids that have occurred, and mix with the soil to form a solid, impermeable mass. Our polymers are used extensively in seawall applications to seal cracks, voids and defects, as well as fill voids and stabilize the soil.

FACTS:

- Combined with proper drainage, this method can extend the life of your sea wall.
- Seals cracks, fills voids, repairs defects and stabilizes the soil.







About Our ResinsAP Fill 720 and AP Lift 475



Department of Transportation approved



High density polyurethane resin, like the AP 475, has been in service under interstate highways since the early 1990s.



All state DOTs now use polyurethane resins to stabilize highways and lift approach slabs.



Approval came after 8 years of testing it in service; testing was originally done by the DOT in Pennsylvania, Michigan and Illinois.



Polyurethane resins have an expected service life of at least 100 years in the soil.



Polyurethanes have high chemical resistivity.



AP Lift 475 can support 14,000 lbs per square foot by itself. When installed underneath a slab, the strengths can multiply up to 10X.



AP Lift 475 resin is in service under high-speed railway slabs. Slabs over 5' thick were lifted into place with AP 475 and have been successful since 2013.



AP Lift 475 and AP Fill 720 are made in the U.S. from U.S.-sourced raw materials.



WHY HELMS?

Helms is your local expert on all structural, polyurethane resin repairs. Our polyurethane resin stabilizes, lifts and repairs concrete.

Polyurethane-lifting resins are stronger than crystalline bedrock. They can be used to level highways, airport slabs and support the heaviest freight trains. So don't let the word "foam" fool you. These resins cure to strengths beyond what is needed to support any structure.

We implement a repair plan that doesn't require you to shut down operations or leave you with a big mess. It requires no excavation. This means a smaller footprint on your jobsite or facility and minimum downtime. Most of our repairs are ready for traffic within 30 minutes.

