

# High performance repair of large diameter pipelines



Structural repair of  
5.5 ft. storm sewer



Structural repair of 100 ft. deep, 12-ft diameter storm water tunnel

**StifPipe® is the award-winning FRP composite pipe technology** that uses a lightweight core with carbon and glass fabric reinforcement to create an extremely lightweight pipe capable of resisting heavy external loads and internal pressure.

## Advantages

- ✓ Made of uniquely designed high strength FRP
- ✓ Can be manufactured to any shape to fit the host pipe or culvert
- ✓ Extremely high strength to weight ratio materials mean easy installation (average weight for 36-inch StifPipe® is 30-35 lbs/ft)
- ✓ Smooth surface improves hydraulic capacity for most applications
- ✓ Highly corrosion-resistant (inert to sulfuric acid and other chemicals listed in ASTM D543)
- ✓ High dimension ratio (50-100) due to high strength and minimal wall thickness required

## Applications

**Structural lining of large pipelines (no digging required)**

**Structural point repair of pipelines (no-dig)**

**New pipe installation (open-cut or trenchless)**

**Applicable to nearly all types of host pipe materials**

**Contact a QuakeWrap engineer today:**

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# World's First Green and Sustainable Pipe\*



Manhole/vertical pipe rehab



Culvert rehabilitation by sliplining

**StifPipe® is specifically designed for each project depending on internal and external loads.** A typical design comprises dual layer fabric of glass fiber, carbon fiber and 3D polymeric fabric for improved stiffness.



## Installation Types

### SLIP LINING

- ✓ Slip-lining using custom-manufactured pipe segments
- ✓ Minimal or no loss of hydraulic capacity
- ✓ Minimal surface prep required
- ✓ Segments joined using wet layup fabric method or using bell and spigot joints
- ✓ Annular space between StifPipe® and host pipe filled with grout

### WET LAYUP

- ✓ Fabric layers are directly bonded to the surface of the host pipe
- ✓ No grouting needed
- ✓ Requires proper pipe surface preparation prior to installation
- ✓ StifPipe® thickness depends on design load requirements
- ✓ Minimal service interruption
- ✓ Pipe can be returned to service in 12 hours or less using heated cure

\*ASCE 2016 Innovation Award as the World's First "Green and Sustainable" Pipe

The StifPipe® repair system and product is U.S. patent protected. **QuakeWrap, Inc. is the original innovator and developer of Fiber Reinforced Polymer (FRP) products for infrastructure repair and renewal**, providing structural engineering services, sealed drawings, tested materials, and installation by its own specialty company, FRP Construction LLC.

More can be found at [QuakeWrap.com](http://QuakeWrap.com), [info@quakewrap.com](mailto:info@quakewrap.com) or (520) 791-7000

