



**Geneva Pipe
and Precast**
A Northwest Pipe Company



Composite Fiber Reinforced Plastic (FRP) **Rehabilitation Panels**

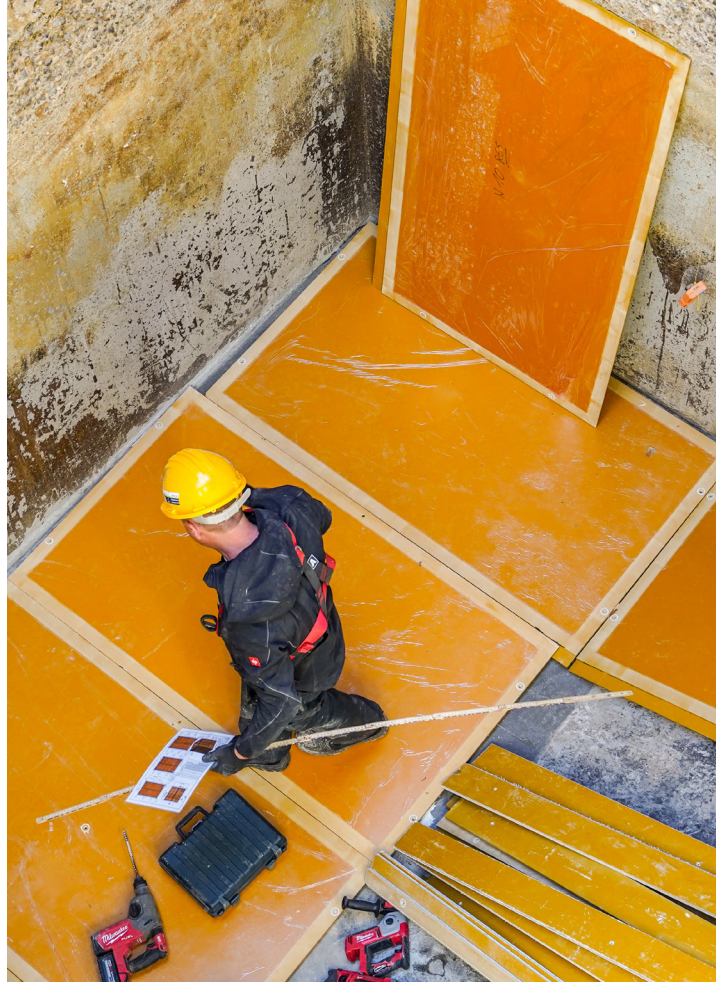
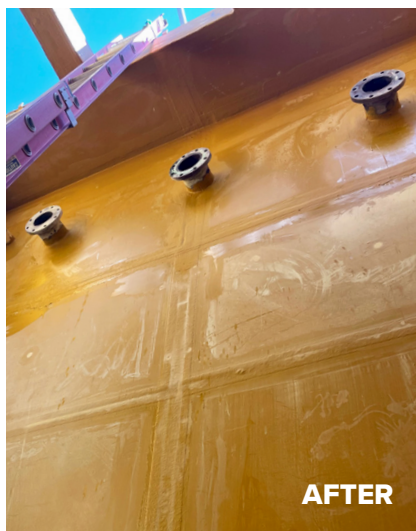
Extend the Service Life of Large Wastewater Structures with our Composite FRP Rehabilitation System

Our Rehab Solution

Geneva Pipe and Precast's Composite FRP Rehab Panels are easy to install and maintenance-free. FRP Panels are ideal for rehabilitating existing large wastewater structures as well as for providing a corrosion-resistant lining to new structures, extending the service life by decades.

COMPOSITE FRP REHAB PANELS

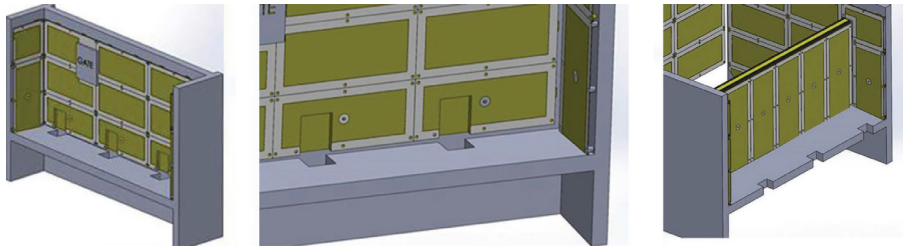
Our composite FRP Rehab Panels consist of a PP honeycomb core with polyester fleece backing and a thick outer layer of corrosion resistant FRP. Panels come pre-drilled and ready to be mechanically fastened to the walls of an existing concrete structure. Once the panels are securely mounted, the void between the panels and the walls is filled with high-strength grout to provide additional strength to the system. Seams between the panels and all fastener heads are sealed with high-strength woven C-Glass fabric impregnated with ester resin, providing seamless protection from the corrosive environment of hydrogen sulfide gases.



Quick to Install, Maintenance-Free!

The Composite FRP Rehab Panels are quickly installed with stainless steel concrete screw anchors. The void between the existing wall and the installed panel is filled with high-flow, high-strength (12,000psi), non-shrink grout. If the structural strength of the existing system is compromised, walls can be bolstered by placing reinforcement between the wall and the panel, providing additional strength to the system.

Once installed, panels are sealed to form a gas and water tight lining.



3D Modeling

Using a 3D scanner, the interior of the structure being rehabilitated will be scanned to obtain a representative digital model. Geneva's Engineering team will evaluate the model based on the digital visuals and will dimensionally compare it to the as-built drawings of the structure. After a thorough analysis, if significant deviations in interior dimensions exist, or significant structural deterioration is evident, Geneva's Engineering team will report their findings to the owner and recommend third-party engineering review to evaluate the condition further.

If the structure is suitable for rehabilitation, Geneva's Engineering team will design a panel layout to fit the existing structure's configurations. From top to bottom, the access hatch locations, pump discharge pipe, inlet pipes, odor control pipes, flow channels, and other features are identified with proper sealing details provided for each individual structure.

Upon completion, the entire structure is scanned again. Geneva's Engineering team will inspect all work performed and either accept it or provide a statement of remedial work in specific areas. Once the work has been accepted the owner will be provided with a manufacturer's acceptance document and a digital image that can be used in the future to evaluate any changes in the structure.



Rehabilitate with Confidence

Composite FRP Panel materials undergo third-party testing and have a proven record of protecting concrete sanitary sewer structures against corrosion.

Composite FRP Panels are designed to be affixed to the existing walls of the structure with stainless steel concrete anchors. Panel joints are sealed against sanitary gases by bonding FRP C-Glass over all joints and fastener heads, creating a completely corrosion-resistant system.



Testing

- ✓ **Pickle Jar - Weight Change**
SSPWC211-2
- ✓ **Pickle Jar - Tensile Strength**
ASTM D638
- ✓ **Pickle Jar - Hardness**
ASTM D2240
- ✓ **Abrasion**
ASTM D4060
- ✓ **Compression**
ASTM D695
- ✓ **Flexural Strength**
ASTM D790