

CASE STUDY

Utilities and Power

Project Specs

Location: Water Treatment Plant - Dallas, TX

Application: Utility Trench Covers

Product: T5020 Pultruded Grating with 1/2 inch covered plate with custom, stainless steel, retractable, flush mounted handles

Overview

Fibergrate FRP provided an innovative, superior solution to traditional cast iron utility trench covers.

Problem

The installation of traditional cast iron utility trench covers is expensive because it requires a forklift and two people to move the heavy material. In addition, with cast iron utility trench covers, the same costly machinery is needed every time there is maintenance on the valve station. The excessive weight of cast iron covers, also, put the workers at risk for injury.

The customer decided to look for a lightweight solution to replace traditional cast iron utility trench covers in order to increase worker safety, cut costs on installation, and to make the valve stations more accessible.

Solution

With the persistence of a local Fibergrate representative, our engineering team custom designed FRP utility trench covers. The trench covers are made with VEFR T5020 pultruded grating with a half inch covered plate. The covers include stainless steel retractable handles that make the valve stations even more accessible. Fibergrate FRP provides a safer, lightweight design in addition to several other benefits.

Fibergrate FRP is chemical and UV resistant. Even in some of the most corrosive environments, Fibergrate FRP has maintained its structural integrity. These aspects allow the high quality FRP manufactured by Fibergrate to have a significantly longer life span than cast iron.

The lightweight aspects of FRP significantly reduce the costs of installation and cost of maintaining the valve stations over time by eliminating the need for heavy machinery. In addition to installation and maintenance costs, the product's long life span will help the customer save even more money.

One benefit of Fibergrate FRP that the customer was not expecting from our lightweight utility trench covers was the ability to handle light wheeled traffic. The customer initially thought only cast iron could handle that type of weight but was pleasantly surprised when they put FRP to the test.

While the life cycle cost is typically the main driver for FRP products, in this case, the installed price was significantly less than the installed price of cast iron. The lightweight properties of FRP, chemical and UV resistance, long product life cycle, reduced installation costs, and reduced lifetime maintenance costs all made it clear that Fibergrate's FRP Trench covers were the right solution.



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