

2020

FALI

ທ

**APPLICATION** 

ď

**NEWS** 

TRONGWELL

## Case Study: EXTREN® & SAFDECK®

Using FRP to Bridge the Gap in a Suburban Community

As suburban communities continue to expand throughout the United States, so do the demands of creating recreational trails and walkways within those spaces.

This was the case for a subdivision in the Mid-Cities region of Texas. In this instance, a homeowner's association in Arlington needed to extend a walking path over a narrow section of a pond within a community park.

The association sourced multiple designers before selecting Areté Structures, LLC for this new build. The Areté design offered the best overall value and quality of building materials. Upon delivery of all materials to the worksite, the assembly portion of the job was completed by installers within a few days.

As a pedestrian application, EXTREN<sup>®</sup> Series 500 structural shapes made up the supporting structure and parapets. For the surface of the bridge, the design used SAFDECK<sup>®</sup> overlapping decking panels, as it offers superior performance over materials susceptible to corrosion and rot.

For decades, SAFDECK® has competed with wood, aluminum, and steel in applications such as temporary flooring, odor control covers, wind walls, dock surfacing, cellular wall panels, and even rooftop decking for cooling towers. The appeal in this design is that the interlocking design reduces tripping hazards while remaining structurally strong.

Because of its proximity to foliage and water, the use of treated lumber decking raised long-term durability concerns due to constant exposure from surrounding detritus.

The finished bridge spans over 40 feet and is five feet wide, so it can easily accommodate two lanes of pedestrian traffic.

The homeowner's association is happy to report that the reactions from its community have been overwhelmingly positive regarding this structure, which is expected to offer many years of maintenance-free service.





Corporate Offices / Bristol 400 Commonwealth Ave. Bristol, VA 24201 USA (276) 645-8000

> **Chatfield** 1610 Highway 52 South Chatfield, MN 55923 USA (507) 867-3479

Highlands 26770 Newbanks Road Abingdon, VA 24210 USA

Mexico Avenida La Silla Apodaca #110 Fracc Parque Industrial La Silla Apodaca Apodaca, NL 66648 MX

www.strongwell.com



Tanks and silos are designed to handle the rigors of chemical storage and dry goods. The materials to construct these structures are heavily influenced by environmental and structural variables.

For over 30 years, Fiberdome Incorporated has been a leading builder of fiberglass tanks and silos ranging from 6' to 12' in diameter serving the dry bulk storage market.

When one of their design-to-build projects required specific weight tolerances, the engineers from Fiberdome turned to Strongwell's SAFRAIL<sup>™</sup> Ladder and Cage systems. Since the 1950s, SAFRAIL<sup>™</sup> Fiberglass Ladders and Cages have been a common sight as wall mount ladders, base/ floor mount ladders, walk-through ladders with return, side mount cages, and walkthrough cages with return.

Upon the completion of the tank, Strongwell's Chatfield facility fabricated and shipped a SAFRAIL<sup>™</sup> Ladder System measuring 31'-2" in height. To gain access into the hatch of the tank, a sloped 42" x 42" SAFRAIL<sup>™</sup> Industrial Handrail system was designed to accommodate elevated tank stairs. Both systems were pultruded with a premium polyester resin with an OSHA safety yellow pigment.

Manufactured in Chatfield, Minnesota, SAFRAIL<sup>™</sup> ladder and handrail products provide structural access materials for process vessels, tanks, walkways, and railways within industrial and chemical facilities where weight, safety, and corrosion are issues of concern. The ladder and cage systems can be highly customized in their design, manufactured with NSF certified materials upon request, and are approved for use by the American Bureau of Shipping.

Both the end-user and Fiberdome were thoroughly pleased with the overall design and product functions upon delivery and setup. •



## Case Study: SAFRAIL<sup>™</sup> Ladder

## All's Well Ends Well

Wastewater collection and treatment is an essential function of all communities. In processing wastewater, the force of gravity plays a vital role in the movement of water towards the wastewater treatment plant. In instances where gravity needs a boost, lift stations are installed at low points within the system to aid in the water collection process.

In 2018, Romtec Utilities, Inc., an engineering company specializing in the design, supply, and construction of pumping systems, worked with the City of Fife, Washington, to design a site specific lift station for its medium flow needs.

With emphases on quality, the engineers

at Romtec designed with automation and longevity in mind to meet the standards and requirements of the City. The City of Fife's standards specifically called for items such as ESSCO pumps and an Amazon Bubbler used as the primary level sensing device.

In the wet well portion of this lift station, maintenance access to pump valves and other essential operations is achieved with an 18' SAFRAIL<sup>™</sup> ladder. When procuring for access ladders, designers looked for a nonconductive and corrosion resistant product which could fulfill all of the customer's needs. Manufactured in the USA since the 1950s, SAFRAIL<sup>™</sup> fiberglass has demonstrated outstanding durability against steel and aluminum in complete immersion applications within corrosive environments.

Since the date of original placement into service, both the end-user and installer have been pleased with how the overall product has performed in the field.

## Literature Updates:

- Design Manual Sections (I+M): 2, 12, 14
- EXTREN® Brochure
- Intro to EXTREN®
- EXTREN DWB® Design Guide
- DURAGRID<sup>®</sup> Brochure (I+M)
- DURAGRATE<sup>®</sup> Brochure (I+M)
- Adjustable Pedestal Layout Guide
- Grating Field Fabrication Guide
- DURASHIELD<sup>®</sup> & DURASHIELD HC<sup>®</sup> Brochure
- HS Storm Panel vs. Plywood Flyer

Visit www.strongwell.com for the latest resources.



## Case Study: EXTREN® & DURAGRATE®



#### Composites Getting Boxed In

A homeowner recently needed to replace his deck. In doing so, he wanted to reimagine his home improvement project using fiberglass composites and concrete pavers.

After a little imagination and planning, the homeowner procured EXTREN<sup>®</sup> and DURAGRATE<sup>®</sup> materials for his project.

In lieu of the previous wooden deck substructure, the homeowner buried 24" EXTREN® I-beams just below the frost line. On top of those, he layered 6" EXTREN® I-beams perpendicularly to the 24" beams to support an additional layer of 1-1/2" DURAGRATE® molded grating. In this particular instance, the molded grating was used as subflooring and to ensure adequate drainage for the finished concrete paver deck. After placing all the concrete pavers, the deck was framed-in with pre-treated lumber to resemble a traditional deck.

With additional pavers and EXTREN® structural tubes, the homeowner was also able to create additional outdoor seating with two double benches.









Gilbert Valadez Accounts Payable / Payroll Administrator - Chatfield

Gilbert Valadez has joined Strongwell as Accounts Payable/ Payroll Administrator. Gilbert will

report to Sandra Fancher and will facilitate staff accounting functions for the Chatfield Location. Gilbert is a native of Turlock, CA. He received his Bachelor's Degree in Accounting and graduated from Luther College in Decorah, IA, in 2019. Gilbert was previously employed as an Assistant Wrestling Coach at Luther College for the 2019-2020 academic year.



#### Allen Hobbs Manager, Quality Assurance - VA Operations

Allen Hobbs has joined Strongwell as Manager, Quality Assurance for Virginia Operations.

Allen comes to Strongwell with many years of experience in quality assurance. Most recently, Allen was Quality Manager for Kennametal, Inc. in Johnson City, Tennessee where he was responsible for customer quality, system quality, and product quality. A few of Allen's certifications include Six Sigma Black Belt, ASQ Certified Quality Improvement Associate, ISO Internal Quality Systems Auditor, and ISO Certified Lead Auditor. He is also a senior member of the American Society for Quality.



#### Case Study: EXTREN® Being Enclosed with FRP

During the Spring of 2020, some fabricators forced to stay at home began to experiment with FRP products. One fabricator wanted to enclose the front of his existing carport. For this project, he chose Strongwell's Made in the USA 6" EXTREN® Series 525 channels to create a front wall as an addition to the existing structure. Upon completion of the project, he complimented the ease of assembly, handling, and painting the EXTREN<sup>®</sup> products. He is currently finishing up additional projects with FRP, making shed walls and constructing a floor planked with fiberglass ladder rail.



# Process Engineer - Bristol Nick Burke has joined Strongwell

Nick Burke

as a Process Engineer. Nick is a 2019 graduate of East Tennessee State University with a degree in

Manufacturing Engineering Technology. While studying at ETSU, Nick worked as a Manufacturing Engineering Intern at Alo Incorporated. After graduation, Nick worked for JTEKT as a Die Cast Process Engineer.

#### **Bryan Edgerton**

Minnesota Operations Production Manager - Chatfield

Bryan Edgerton has joined Strongwell in the position of Minnesota Operations Production

Manager. Bryan has spent his 16-year career in various manufacturing facilities with increasing roles of responsibility including Production Supervisor and Production Manager.



Todd Hawthorne Software Engineer - Bristol

**Todd Hawthorne** has joined Strongwell as Software Engineer. In his new role, he will report to the Corporate Director, Information

Technology. Todd comes to Strongwell with over 20 years of experience in information technology services. Most recently, he was Manager of Data and Architecture for K-VA-T Food Stores, Inc. in Abingdon, Virginia where he was responsible for data quality and security, along with business system architecture and digital transformation.



# PRSRT STD US Postage **PAID** MWI

# What's in this Issue:

Using FRP to Bridge the Gap in a Suburban Community



SAFRAIL<sup>m</sup> Goes Vertical for Storage Tanks



All's Well Ends Well



Literature Updates





Being Enclosed with FRP

**Composites Getting Boxed In** 



#### **DITCH THE PRINT** STRONGWELL NEWS & APPLICATIONS **BENEFITS:** Case Study: EXTREN®, DURADEK®, & SAFRAIL One Email per Month Easier Access to Your Corrosion Management Implemented on Industrial Rooftop Structu (Print Delivers Only 3x Salesperson ntly designed and it on steel tubing in the Midwest. This manufac cutting equipment, and an annealing furnace to sup per Year) (Simply Reply to the Email) nee multiple industries Technical Updates New Product Announcements d DURADEK® (Be the First to Know) Join Us in Reducing the Read More... **Overall Carbon Footprint** More In-Depth Case Studies TI HOW: Visit www.strongwell.com/godigital to sign up. Join Strongwell Structural Engin WANT MORE? September 2020 Email Register for our Design Manual at www.strongwell.com/member-signup

The Profile Newsletter is published by the Strongwell Corporate Marketing Department. To subscribe to the e-newsletter, please visit www.strongwell.com/godigital. Previous editions of The Profile Newsletter may also be found online at www.strongwell.com. © strongwell 2020 | Editor: Barry Myers Production/Reporting: Brian Godwin & Te-Kai Shu