

RAVEN

SUMMER 2021 | No. 33






Leib Oehmig
CEO

What a difference a year makes. Without a doubt, 2020 was a year to remember and one we will recall for decades to come. For Glen Raven and its customers, this past year has been marked by fits and starts, but through it all, we find ourselves nearly on the other side of a pandemic that wreaked havoc on the global economy and reordered our personal and professional lives. This issue of Raven profiles customers who have weathered the storm as well, and as you review the content, I think you will be struck by a central theme in their recent successes: leadership.

That is certainly the case for our cover story on the first adopters of Sunbrella® Horizon®, Riviera Australia and Albury Brothers Boats. Since debuting at the Miami International Boat Show in 2019, Sunbrella Horizon, the first vinyl marine seating material by Sunbrella, has made an impression across the globe, as this profile demonstrates. Riviera, which celebrated 40 years of international success in 2020, continues to push the envelope with smart, sophisticated designs that helped it not only survive the pandemic but also thrive. A Q&A with its brand director confirms as much.

Speaking of longevity, Costa Marine Canvas has reached the half-century mark in part because of a commitment to designing for the long term. The family business has braved many economic hardships in its lifetime, from wars and recession to the pandemic, and through it all they pressed forward through the best and worst of times, emphasizing function, comfort and customer service. There's no doubt they will remain an industry leader for generations to come.

When you need the industry's best display products and display solutions, Consort Display Group has you covered. Founded in 1983, Consort is a global, design-oriented manufacturer that uses advancements in technology to improve its offerings. Innovation is a hallmark of these offerings, so when Consort decided it needed to find a way to print Sunbrella digitally instead of cumbersome screen printing, it partnered with Sunbrella for a remarkable result.

Hanes Geo Components, a customer of geosynthetic manufacturer Strata, which was founded as a joint venture of Glen Raven, is the epitome of holding it together when the world is falling apart. Hanes regularly collaborates with Strata on the toughest of technical applications, so it was no surprise when Hanes' CEO summed up the strength of his company's relationship with Strata in a single word: execution — which is perhaps another way of saying leadership.

Finally, we take an in-depth look at Mayflower II, a Connecticut sailboat whose sails were restored using a performance-oriented technical fabric from Glen Raven. Our customer Contender Sailcloth supplied the finished fabric to the sailmaker, North Sails, and you won't want to miss how these artisan sailmakers breathed new life into an old ship. Not unlike how each customer in this issue continues to innovate, evolve and press forward regardless of how rough the waters around them are swirling.





Sunbrella Horizon, the first vinyl marine seating material by Sunbrella, features a luxuriously soft hand specially designed to resist bacterial staining, cold cracking, stretching and fading — and the fabric has made an impression across the globe. | Page 02

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SUNBRELLA HORIZON HAS
A BEAUTIFUL TEXTURE, FEEL
AND COLOR PALETTE.”

STEPHEN MILNE

Brand and Communications Director,
Riviera Australia

SUNBRELLA HORIZON

FINDS SUCCESS IN FIRST YEAR AFLOAT

Since debuting at the Miami International Boat Show in 2019, Sunbrella® Horizon®, the first vinyl marine seating material by Sunbrella, has made an impression across the globe.

“Sunbrella Horizon features a luxuriously soft hand specially designed to resist bacterial staining, cold cracking, stretching and fading,” said Bill McDaniel, marine market manager for Sunbrella. “Our customers love the performance properties, but also the Sunbrella-backed brand promise, which includes an industry-leading warranty and a vibrant color palette.”

Two customers in particular, Riviera Australia and Albury Brothers Boats, quickly realized the advantages Sunbrella Horizon has to offer for their customers and were early adopters. The overall five-year warranty with a three-year warranty against pinking was key to their decision.

McDaniel describes the typical yacht owner as someone who will spend extensive time on their boat, perhaps going out on the water in the morning, dining on board and showering and sleeping on the yacht. Because it offers a homelike space as well as outdoor seating, multiple types of color-coordinated fabrics are often appreciated.

Riviera, Australia's largest luxury motor yacht builder, touts Sunbrella® upholstery as a feature among many high-end and luxurious furnishings. They were the first Sunbrella Horizon® Collection customer, offering it as a complement to their existing woven Sunbrella options.

"Sunbrella Horizon has a beautiful texture, feel and color palette," said Stephen Milne, brand and communications director for Riviera. "Because it has all of the superb Sunbrella properties such as durability and superior finish, we were excited to start using Horizon vinyl for the headlining and pelmets in the interiors of our Platinum Edition Sport Yacht models. This superbly complements the interiors of our motor yachts, which utilize soft furnishings and beautifully polished cabinetry to create a supremely luxurious living environment. All models of Riviera motor yachts now include Horizon."





FABRICS SHOWN Head and hull liner, Sunbrella Horizon, Capriccio Cloud; wall lining, Sunbrella, Demo Putty; Lounges, Sunbrella, Level Pumice.



FABRICS SHOWN Headliner, Sunbrella Horizon, Capriccio Cloud; port side lounge, Sunbrella, Action Linen; dash and windscreen, Sunbrella Horizon, Capriccio Charcoal.

“

BECAUSE IT HAS ALL OF THE SUPERB SUNBRELLA PROPERTIES SUCH AS DURABILITY AND SUPERIOR FINISH, WE WERE EXCITED TO START USING HORIZON VINYL FOR THE HEADLINING AND PELMETS IN THE INTERIORS OF OUR PLATINUM EDITION SPORT YACHT MODELS.”

STEPHEN MILNE

Brand and Communications Director,
Riviera Australia

For a more sports-oriented platform, Albury Brothers builds center console boats that are perfect for fishing, watersports and other activities that don't require an interior cabin. The family-owned boatbuilder operates out of headquarters in the Palm Beach, Florida, area, with additional offices in Newport, Rhode Island; Charleston, South Carolina; and the Bahamas.

"I've been a boat fiend since I was 6 years old," said Jeff Lichterman, owner of Albury Brothers Boats. "My mother saved a letter I wrote when I was 11 years old in 1972 saying I wanted to be a dealer for Concord Yachts."

A regular boater and visitor of the islands, Lichterman admired the Albury Brothers Boats he saw in the Bahamas. After following a more traditional career path, he decided to strike out on his own, obtaining a license to build and sell the same high-quality classic boats from Albury Brothers in the United States. While he was nervous for the business and the half dozen or so people he employs as the pandemic took hold in 2020, the canceled vacations actually led to a surge



THE AESTHETIC IS SUPERIOR. YES, IT'S THE COLOR AND THE QUILTING, BUT IT'S ALSO THE FABRIC ITSELF. IT HAS TEXTURE. IT LOOKS SO RICH."

JEFF LICHTERMAN

Owner, Albury Brothers Boats





in boat buying as people sought out safer, socially distanced leisure and entertainment. By the end of 2020, Lichterman's waitlist for interested buyers was years long.

"There's a high demand for these boats from people who prize the traditional craft," Lichterman said. "We don't chase trends or participate in this industry arms race for more and more gadgets — or things that can break easily."

To complement his classic, quality boats, Lichterman offers Sunbrella® as an upholstery option. These sporty vessels benefit from Sunbrella Horizon's industry-leading three-year warranty against bacterial staining, commonly known as the pinking effect, which is a notorious problem for the industry.

"The old vinyl upholstery had quality, pinking and longevity problems," Lichterman said. "We were long overdue for a super high-quality replacement."

In addition to providing a new solution to an old problem, Lichterman said he also appreciates the fabric for its look.

"The aesthetic is superior," Lichterman said. "Yes, it's the color and the quilting, but it's also the fabric itself. It has texture. It looks so rich. If you sit on it, you're not going to sweat. Other vinyl upholsteries make you feel sweaty and sticky. Cloth is much more desirable."

Whether for sport or leisure, Sunbrella Horizon® brings innovative performance to the industry, helping boat owners maintain elasticity and durability longer. "The Sunbrella Horizon brand is fast becoming known for the quality of hand and performance of the fabric," McDaniel said. "It's exciting that we're already hearing excellent reviews from our customers who love the performance, the functionality and the option to coordinate colors and patterns with our woven Sunbrella marine seating options."

On the web at rivieraaustralia.com and alburybrothers.com

RIVIERA AUSTRALIA

A UNIQUE CULTURE OF CARE

Riviera Australia, which operates the largest luxury yacht-building facility in the Southern Hemisphere in Coomera, Gold Coast, Australia, celebrated 40 years of evolution in 2020, marking a proud history for Australia's most-awarded luxury motor yacht builder. Riviera has launched 5,700 motor yachts since 1980 and, today, is praised internationally for its innovative design, engineering, performance and the most luxurious of interiors.

From its state-of-the-art, nearly two-million-square-foot (16.8-hectare) facility in Queensland, Riviera handcrafts 23 models from 39 feet to 78 feet across five distinctive model collections. These include the Bluewater Heritage Flybridge range, the stylish and sophisticated Sport Yachts, the sporty and adventurous SUV series, the luxurious and long-ranged Sports Motor Yachts, the distinguished new-era Motor Yacht and the timelessly classic Belize Collection.

Riviera exported its first motor yacht to the United States in 1983. Today, more than half of the yachts built by the company are exported globally and can be found cruising the Pacific, the Mediterranean, the Caribbean, New Zealand and Asia. Riviera has a team of more than 800 craftspeople, and to meet rising demand for Riviera motor yachts, the company recently embarked on a significant recruitment and expansion program of the facility.



In a recent interview, Stephen Milne, brand and communications director for Riviera, discussed his company's rich history, legacy of excellence and demand for marine fabrics that perform.

HOW HAS RIVIERA EVOLVED ALONGSIDE CUSTOMER NEEDS AND INDUSTRY TECHNOLOGY SINCE ITS FOUNDING?

At Riviera, we are committed to the ongoing refinement of our motor yachts to ensure that our owners enjoy the ultimate boating experience. Taking into account the needs and input of our motor yacht owners and our global representative network is a key driver in the evolution of the design and performance of our model range. This design refinement process involves many different people and skills from Riviera owner Rodney Longhurst and CEO Wes Moxey working in collaboration with a team of designers and new model development experts. Over many years, we have adopted advances in technology in every aspect of our yacht designs from contemporary lifestyle innovations such as our alfresco deck and foredeck entertainment zones to the most advanced drive systems that allow the yacht to be controlled in close quarters or driven offshore at speed via joystick. There are smart digital switching systems that feature preprogrammed modes for entertaining, cruising or leaving the yacht at the end of the day. The evolution of our motor yacht design has also seen the introduction of new materials and finishes to enhance livability and durability, such as the composite timber finish floors, Corian benchtops and Sunbrella® awning covers and upholstery fabrics.

WHAT ARE THE MAJOR TRENDS IN YOUR INDUSTRY TODAY?

Riviera is focused on creating world-class blue-water motor yachts that are seaworthy and built to last. Today's integrated propulsion system (IPS) technology has made more of our larger-model Riviera motor yachts accessible to more people. They are easier to operate, especially in close quarters when mooring at the marina simply by controlling the yacht by joystick. Riviera motor yachts are designed to cater to the many ways our owners enjoy boating with family and friends. Luxurious and functional interiors with all the comforts of a modern home are complemented by superbly appointed staterooms, with some master staterooms enjoying full-beam width. Each of our models is aligned with the various needs of motor yacht owners, whether they are looking for blue-water adventures, coastal passages, family entertainers or a true sports yacht to cater for any occasion.

HOW DOES RIVIERA ADDRESS THOSE TRENDS?

At Riviera, we are constantly refining our motor yachts to deliver the best boating experience possible. This involves every aspect of the boatbuilding process, from design and engineering to the materials we use to achieve excellence. Aesthetics play an important role in the distinctive style of Riviera motor yachts as does the enduring quality of the materials we use throughout the boatbuilding process. When we released the new Platinum Edition Sport Yachts, we had set out to create a single-level motor yacht that was practical as a leisure cruiser while offering uncompromising luxury. We had been using Sunbrella fabrics on all exterior upholstered areas

for some time with excellent results. When we introduced the new Platinum Edition Sport Yachts in 2019, we began using Sunbrella on interior surfaces as well. The durability and serviceability of Sunbrella is very impressive and well liked by our owners, and the fabrics also offered the soft luxurious touch we were looking for in our Platinum Edition. Sunbrella is used on all of our harder-wearing areas, such as the headliner, wall lining, interior lounges, exterior lounges and awnings. This enhances the functionality and durability of every Riviera yacht.

WHAT DO YOU CONSIDER RIVIERA'S GREATEST STRENGTHS AS A COMPANY?

For over 40 years, we have continually refined and evolved the design, performance and finish of our range of motor yachts. The yachts we build today are the best Riviera has ever built. As the needs of our motor yacht owners evolve, so do we. Our ethos is founded on the pursuit of boatbuilding excellence. Teamwork is an important part of that as is a focus on employing the best possible materials and using the latest technology to ensure that Riviera motor yachts are supremely seaworthy and built to last. Our skilled staff are leaders in their respective fields, and this is among the many foundations of our strength as a world-class boatbuilder. This is demonstrated with every new design and with every new motor yacht we launch.

WHAT ARE YOUR LEADING INNOVATIONS OF RECENT YEARS?

The emergence of IPS has provided the most significant change to our motor yachts. Riviera embraced this brilliant new technology, which delivers ease of operation, handling performance, fuel efficiency and quietness for our motor yachts up to 60 feet. It has given more people, especially couples, the confidence to captain larger motor yachts in our range. It has also allowed us to explore greater accommodation deck design. Boating on a grand scale has become so much more accessible for more Riviera owners.

HOW DOES GLEN RAVEN SERVE AS A BUSINESS PARTNER TO RIVIERA?

We have been using Sunbrella for exterior upholstery and canvases for many years. As a result, we have developed a close working relationship with the Sunbrella team. Our partnership with Glen Raven has extended our capacity for design innovation through the inclusion of high-performing exterior and interior fabrics that enhance the boating experience for our motor yacht owners. Sunbrella Horizon®, the newest product launched in partnership with Riviera in 2019, has been extremely well received as the first nonwoven marine-seating vinyl fabric that is ultrasoft to the touch while being microbial-pinking, cold-cracking and fade resistant. Our partnership with Sunbrella has inspired our team to add more fabric elements to the interiors. Sunbrella allows us to create a modern, minimized look that remains practical with a luxurious feel by introducing alternative quality materials other than timber to various applications throughout our motor yacht designs.





LEFT The team at Kalamazoo Banner Works is committed to design innovations using cutting-edge technology, resulting in the most tested and reliable displays on the market.



A BANNER YEAR

KALAMAZOO BANNER WORKS PARTNERS WITH SUNBRELLA FOR DIGITAL PRINTING INNOVATION

It started with a simple enough request when, in the early 1980s, the city of Kalamazoo, Michigan, asked Roger Lepley to take on the design and installation of the city street banners, asking specifically for banners “like they have in Chicago.”

Lepley, a licensed architect, took on the project as the 1980 recession zapped the Kalamazoo-area architecture job market and soon found his training in design thinking applicable to the process. With this first project, he saw opportunities to take the Chicago model and make it even better.

“I realized the hardware Chicago was using was primitive and awkward, so I immediately designed adjustable hardware using fiberglass rods to help spill wind and reduce wind force on the banner and utility pole,” Lepley said. “Therefore, a banner company, Kalamazoo Banner Works, was born.”

Since 1983, Kalamazoo Banner Works, which now falls under parent company Consort Display Group, has focused on the design and manufacture of vertical-format street banners and hardware. The banner designs are screen printed on Sunbrella® fabrics and commissioned by cities, cultural organizations, festivals, universities and more.

To make a screen-printed banner, the team makes a large screen out of two-by-fours with mesh stapled over it. The screen is then covered in photo emulsion paste and allowed to dry. After drying, the screen-design stencil is placed over emulsion and the screen is exposed to light, burning the design into the mesh. The design portion is then washed away, leaving the mesh holes for the ink to seep through onto the banner fabric. The screen is placed on the banner, and an ink color is squeegeed over it, one color at a time. To dry the ink, the banner runs through a 330° Fahrenheit oven for 45 seconds. This step is repeated for each color on both sides of the banner. A banner order may include anywhere from 20 to 200 identical banners.

The process typically takes a team of at least four people and is relatively time and labor intensive. While digital printing is available and widely used in the industry, it's typically on vinyl material because most of the printers can't adequately print onto a fabric. Screen printing is a laborious

process, but Lepley says the quality of printed vinyl just isn't the same as a Sunbrella® fabric banner.

"We are a design-oriented manufacturing company, and our banners are installed outside in all kinds of nice and nasty weather, so durability is a must," Lepley said. "Sunbrella is really an amazing outdoor textile, and it deserves the reputation that it has for strength and UV resistance. It also offers lots of colors from which to choose."

Rather than forgo the material, Lepley knew it was time for another product innovation: Find a digital printer of the right size and equipped with the right ink to print on Sunbrella fabric. He reached out to his Glen Raven Custom Fabrics regional sales representative, Dan Litster, for help in the research process. Litster set up appointments with three printer companies and attended daylong appointments with Lepley and his team to research printer capabilities.

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WE ARE A DESIGN-ORIENTED MANUFACTURING COMPANY, AND OUR BANNERS ARE INSTALLED OUTSIDE IN ALL KINDS OF NICE AND NASTY WEATHER, SO DURABILITY IS A MUST.”

ROGER LEPLEY
CEO, Consort Display Group



Kalamazoo Banner Works and parent company Consort Display Group are headquartered in Kalamazoo, Michigan, where they design, innovate and manufacture a range of display products.



"We traveled to each printer company and spent the day there," Litster said. "We ran tests with swatches of Sunbrella fabrics in different colors, printing the same image repeatedly with different equipment and inks to see how good a quality we could get."

To test the quality immediately, the team took to the unofficial fingernail and credit card test, scraping an edge against the ink to test for flaking. Prints that made it through that initial experiment were then sent to Glen Raven to undergo additional testing, such as the Martindale abrasion test, which uses a machine to vigorously and repeatedly apply friction to the test fabric for wear, tear and flaking on the design. It proved more difficult for most of the inks, which flaked and rubbed off the performance fabric.

"Dark and colorful fabric backgrounds require a dense white ink that saturates the fabric rather than caking on top of it," Lepley said. "The industry is making advancements with background ink, but it's not common to find an adequate white ink."

Lepley left the first two visits discouraged, as the prints needed to withstand harsh outdoor elements for multiple seasons but weren't passing the flaking tests. The third

time, as they say, was the charm though, and they found a printer that was able to withstand the rigorous testing and quality standards in the Toronto-based Agfa printing company.

"I really appreciate that Glen Raven took this research so seriously that they were physically present," Lepley said. "And after we discovered that the Agfa machine would print the way we needed, the Glen Raven folks performed durability and UV testing of the ink on the fabric. That was a huge bonus and time and money saver for us. I believe that assistance was instrumental in us being able to have the project up and running by the first of 2020."

The printer that passed the test? Agfa's Jeti Tauro H2500 LED printer, a robust hybrid UV inkjet system that features speeds up to 275 square meters per hour (2,960 square feet per hour) and prints up to 2.54 meters (100 inches) wide. With the high-quality background ink, the printer also allows the use of multiple vibrant pigments, which are UV cured in the machine instead of heat cured in a separate oven.

"We believe we are currently the only banner company that is roll-to-roll printing Sunbrella for exterior use," Lepley said. "Of course, we are printing Sunbrella not only for the banners but also for awning companies and some marine projects, which are well-known users of Sunbrella."

In total, there are nine unique brands that fall under Lepley's Consort Display Group, as well as another outdoor product line, Dori Pole Pennant System, which features durable, colorful, floating fabric that lasts through both light breezes and strong windstorms. From fabric banners to modern furniture, Lepley has built many businesses on creativity and dedication to quality. With this latest innovation, Lepley will be able to continue and grow Kalamazoo Banner Works operations.

"I believe our greatest strength is our drive for innovation," Lepley said. "We don't really want to do what anybody else is doing, if possible. Our product lines are generally unique in the world, and the Sunbrella/Agfa connection has helped us stay unique in the very competitive street banner market."

On the web at [consort.com](https://www.consort.com)

50 YEARS STRONG

COSTA MARINE CANVAS DESIGNS FOR LONGEVITY

Donna and Joe Costa had to make a decision. After three years headlining at Pacemaker Yachts, Joe moved to the upholstery department in 1965 and also handled canvas sales for Stone Harbor Yacht part time; meanwhile, the Costas were getting to know the boating network in the East Coast — all while on the heels of being first-time parents. The couple knew it was time to pursue their shared passion directly.

“Joe was just the kind of guy with a great personality, and that work involved talking to a lot of people,” Donna Costa said. “We had to make the decision to either go full time or stay with Pacemaker. In June 1970, he made the decision to go full time.”

Costa Marine Canvas, located in Egg Harbor City, a small town in southern New Jersey, designs custom canvas, upholstery and soft goods for marinas and businesses, which have included Post Marine, Ocean Yachts, Inc., Egg Harbor Yachts, Viking Yachts, Viking Sport Cruisers, Bayliss, F&S Boatworks, Weaver Boatworks, Jersey Cape Yachts, Bluewater Yachts, commercial water sports and Vahalla Boatworks.





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THE MATERIAL LOOKS REALLY
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DONNA COSTA
Owner, Costa Marine Canvas



But in an ever-shifting economic landscape, where businesses are challenged to thrive amid changing times while releasing quality products in tandem, the ability to stay afloat in a competitive marketplace is not easily achieved. For Costa and its team, this is a story of resilience. Today, the family-owned company is celebrating its 50 years in business, a milestone seldom reached.

“It takes a lot of talent, which is hard to find,” Costa said. “Some of our people have been with us for 32 years. My son, as a matter of fact, was 2 years old when we started the business. In his teens after school, he would come in and work. And my youngest daughter was not even born, and she, too, took a liking to it and is involved in it, which is great for both of them.”

As a tribute to their enduring history, the business is named after the family’s namesake: Costa. Since its founding half a century ago, rebranding itself from Anchor Custom Upholstery to a second manufacturing company in the city, the company has remained in the family. The Costas’ son, Chris, serves as president of Costa Marine Canvas while their daughter, Jennifer Costa Smith, serves as production manager.

While the company has grown to become a powerhouse in the boating industry, success did not always come smoothly. Costa Marine Canvas has braved through many economic hardships in its lifetime, from wars and recession to global crises, including the COVID-19 pandemic. During this time when people sought refuge from quarantine and the stay-at-home order, many turned to their boats for escape. This created a higher demand for businesses such as Viking Yachts and a pressing need for quality fabrics tailored to function and comfort.

To keep pace with the growing demand brought on by boating companies, Costa knew they would need a source for fabrics. Trivantage®, Glen Raven’s distribution subsidiary, has served as a partner for more than 10 years. And in a recent project for Viking Yachts, Costa and its team decided on a new product, Sunbrella® Horizon®.

“Every year just seems to be better and better,” Donna said. “We’ve had great response from Trivantage, and the material they presented, Sunbrella Horizon, has just taken off great.”



DONNA COSTA



CHRIS COSTA



“

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DONNA COSTA

Owner, Costa Marine Canvas

In addition to targeting marine upholstery, Sunbrella Horizon is engineered from synthetic leather, making it just the right fit for Costa Marine's latest project. Costa needed a new material that could perform for longevity, one that would strike the perfect balance between function and durability, without sacrificing their timeless, sleek style. When Costa was introduced to the product by a local Trivantage sales representative, she was impressed by the quality, color and three-year-limited warranty.

“They're just really fancy-looking, especially with the Textil pattern that matches the Capriccio material,” Costa said. “I showed Chris and he really liked it. He took all the samples up to Viking and they went for them. This has been great because not only do we use them on the small Valhalla center consoles, but recommended it for larger Viking Yachts because just about every boat gets a mezzanine seating area, and they seem to like the Horizon vinyl and the color combinations.”

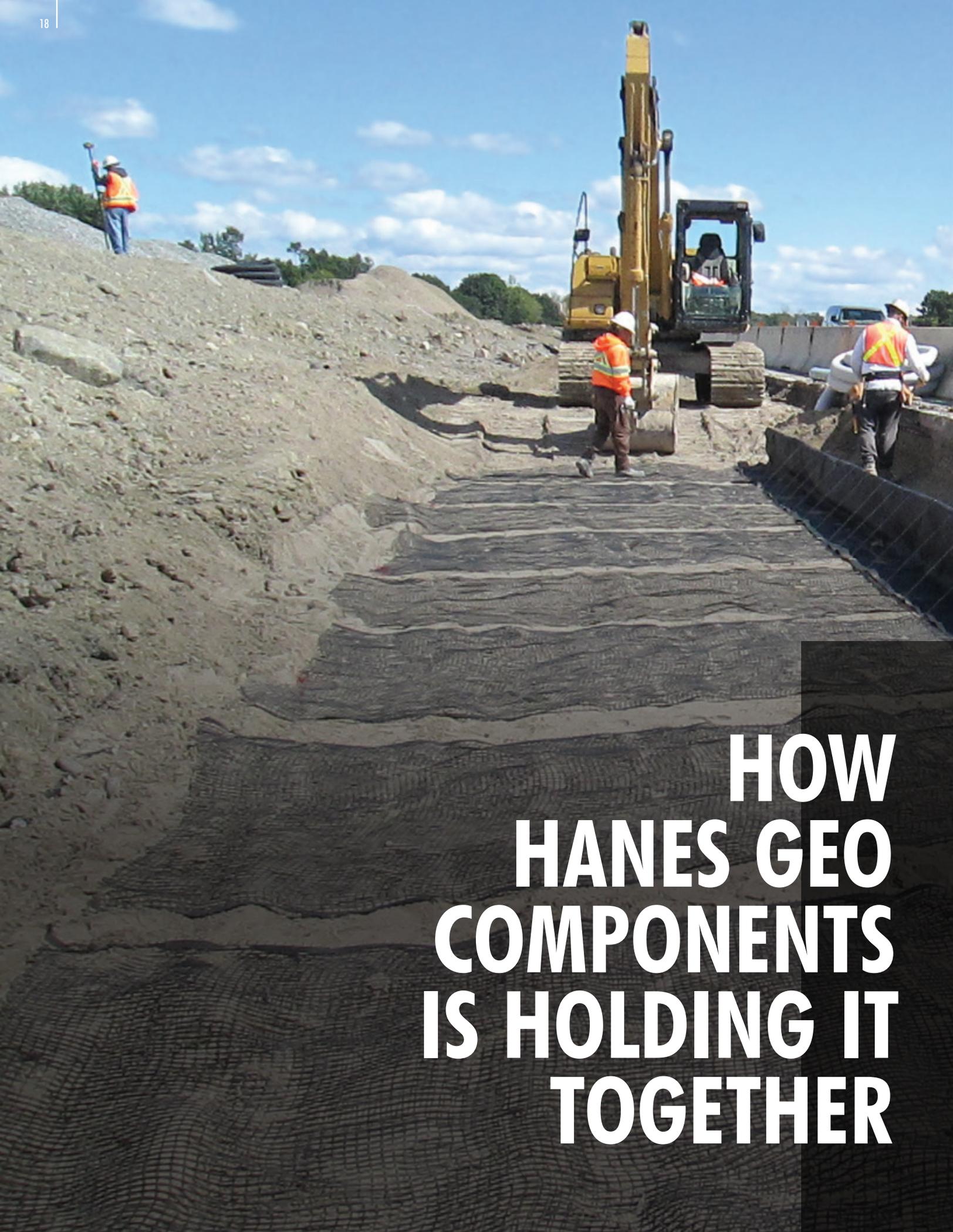
Achieving a premium level of comfort matched with a polished design aesthetic has been a volatile factor of Costa Marine's

successful marketing paradigm. The cushions have been a major selling point, but achieving the best quality of any product, including interior furniture enclosures and bench seating, has taken time through a continuous process of trial and error. Evolving from standard, flat cushions, Costa has turned to a “classier” look: pleated bolstered cushions, diamond quilts and custom-fitted Sunbrella carpet runners for a touch of elegance.

However, 50 years of success for Costa Marine Canvas boils down to more than a natural eye for design. For Costa, it comes down to service.

“Our service and quality are impeccable,” Costa said. “There's always changes, but our employees do everything we have to do to get ready for it. We use a ton of Sunbrella fabrics and have partnered with Trivantage for a long time. The material looks really nice and classy.”

On the web at costamarinecanvas.com



**HOW
HANES GEO
COMPONENTS
IS HOLDING IT
TOGETHER**



During times when it feels as if the world is falling apart, take comfort knowing that, at least in some instances, Hanes Geo Components is underfoot and holding it together — literally.

Established in 2005, Hanes Geo Components is a company dedicated to rolled and pallet-stored goods used for construction site erosion control, subgrade stabilization, revegetation and storm water management applications throughout the U.S. and Canada. Their geosynthetic products hold the earth together so that it's solid enough to support construction sites, from private properties to highways.

Steep slopes are often at risk for soil erosion, or the displacement of the topsoil by wind and water. Inconvenient, rapid erosion may result in a landslide, putting people, construction equipment and the site in harm's way. Techniques for controlling erosion are fairly well established but traditionally have involved "hard armor"

materials such as concrete or rocks. Geosynthetics are a fabric alternative to those hard armor solutions, employing a textile or grid to enhance the soil properties, with a possibility for many benefits.

"Geosynthetics offer the proven potential to significantly reduce the carbon footprint of roadway construction while lowering maintenance expenses over the life of the roads," Hanes Geo President John Dowdell said. "A wide range of our products also protects our waterways from unchecked sediment runoff during construction and post-construction."

For example, using a geogrid or geotextile for subgrade stabilization allows a construction team to reduce the amount of rock hauled in to a jobsite and use site soil to build structures necessary, reducing the amount of energy expended from extracting the rock to delivering it, which typically involves moving hundreds of loads of rock from a quarry to a jobsite.



In addition to energy and material savings, the geogrid solution often offers a more aesthetically pleasing end solution because it can support natural vegetation coverage, which further prevents runoff and erosion in the future.

Regarding soil type, size and use, construction sites around North America vary greatly, necessitating a highly technical proposal and sales process. As a result, the sales team and engineering team from Hanes Geo Components often collaborate with the project support and engineering team at Strata Systems, a geosynthetic manufacturer founded as a joint venture and wholly owned subsidiary of Glen Raven, Inc.

“The benefits we get from working with the Strata team are not only from a high-quality product but also in the technical support they give us when pulling a proposal together and executing a project,” Dowdell said. “The Strata team will look at the design, consider the loads and

the water flow, and come back to us with recommendations. Strata is an outstanding partner in every way.”

One of the challenges facing the Hanes Geo Components team is educating potential customers — who are accustomed to hard armor solutions — about Hanes Geo products. As a result, they’ve made a strong effort to increase education on geosynthetic technology with civil engineers.

“We offer many lunch and learns, bringing lunch and hosting a forum to present case studies around the products to engineers,” Dowdell said. “We’ve put in a lot of effort with state departments of transportation for our products to be recognized on approved products lists.”

The U.S. Department of Transportation-approved products lists vary by state, but Dowdell said they’re often working down to the municipality level to educate potential customers about the virtues and benefits of a geosynthetic system. At a

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JOHN DOWDELL
President, Hanes Geo Components



project level, they've also seen success flipping engineers from hard armor to vegetated walls with this education tactic. Typically, once engineers are introduced to the product, Dowdell said they see relatively quick acceptance into the market.

In their partnership with Strata, they comb a variety of platforms searching for new construction projects for which to write proposals. Dowdell said one of their strengths is their creativity, matching the product portfolio to a specific need and application for an effective custom solution, which is made easier by working so closely with the Strata team that tests and certifies which products are best for each application.

"Strata provides outstanding technical support," Dowdell said. "They provide design plan services that are best in class in our industry. And perhaps most importantly, Strata is a company with exceptionally high ethical standards. They truly are a company you can be proud to do business with."

Hanes Geo Components is based in Winston-Salem, North Carolina, not far from the headquarters of Glen Raven Technical Fabrics, a division of Glen Raven in Burlington that oversees Strata's operations. Dowdell said that roots in a geographical common ground was a nice place to build a relationship from, and it's one that has developed and grown from ethical business and trust over the last 15 years.

The relationship has allowed Hanes Geo Components to focus building a reputation from their greatest strength: execution.

"Once we set upon a strategy or make a commitment to a customer, we stay focused and deliver on those commitments," Dowdell said. "If you partner with Strata on designing a wall system, you can count on the work being done right."

On the web at hanesgeo.com





KEEP CRAFT AFLOAT

ARTISAN SAILMAKERS BREATHE NEW LIFE
INTO AN OLD SHIP

LEFT Precision comes standard at Latell Sailmakers, which partnered to make half the sails for the historic restoration of the Mayflower II (below, photo courtesy of Plimoth Patuxet Museums).



Just over 400 years ago, the Mayflower merchant ship sailed across the Atlantic from Plymouth, England, to the New World, carrying 102 passengers hoping to start a new life. After two reportedly stormy, miserable and seasick months at sea, the travelers arrived, but they were not where they meant to be. The ship was approved to settle in what is now Virginia, but in an era without GPS mapping, they landed instead in what later became known as Plymouth, Massachusetts.

The travelers spent their first winter living on board the ship where roughly half of

the passengers and crew died of disease and cold. When the Mayflower sailed back to England in the spring, the passengers moved ashore. The next winter claimed half of the remaining colonists. Indigenous people helped the rest survive, teaching the colonists about local fauna and flora.

While most Americans are familiar with the story of the Mayflower — or versions of it containing various storytelling embellishments — there are some interested in the one particular part of the story: the ship and its sails.

As a gift to honor the friendship between the countries established during World War II, the United Kingdom gifted a full-scale reproduction of the Mayflower ship, sailed by a crew of 33 men from England to Massachusetts in 1957. After more than a half century as a tourist destination with an estimated 25 million visitors, the Mayflower II retired to the Mystic Seaport Museum's Henry B. duPont Preservation Shipyard from 2016 through September 2020 for a full historic restoration, as it's now a historic landmark of its own merit. During the restoration, roughly 75% of the ship was replaced, including the sails. The ship debuted fully restored in 2020.

As engines power large modern-day ships, sails are now more commonly reserved for leisure, sport and historic replicas. While sport sails are more common, there are artisan craftspeople who keep traditional maritime craft alive. Two such sail lofts were commissioned to build the sails for this project using Glen Raven's Oceanus, a performance-oriented technical fabric developed by industry experts in the late 1990s for the USS Constitution restoration. Oceanus is distributed by Contender Sailcloth, a company that dominates the tall ship and restoration market.

Operating in the U.S. and worldwide, Contender Sailcloth was founded 30 years ago and sustains a reputation for its expertise and customer service.

"Modern sailcloths are some of the tightest woven textiles on the planet," said Tom Evans, a lifelong avid sailor and member of the Contender Sailcloth sales team. "The Oceanus has a unique construction that uses a relatively looser weave in conjunction with specially designed yarns. This design allows Oceanus to mimic the performance and feel of the sailcloth that tall ships used long ago. Those original sails were composed of cloth made with natural fibers like cotton or flax. With Oceanus, the cloth behaves and feels like a natural fiber cloth, but it's also extremely durable and has a long working life because we use modern yarn. It's a very





niche cloth in a niche market for the textile industry. We're the only ones who offer it."

In 2005, Glen Raven took over production of the greige from the initial manufacturer. Glen Raven added design improvements to the cloth construction over the years, moving from dyeing the greige in the finishing process to using solution-dyed yarns during weaving to ensure consistent color shade. According to Evans, everyone in their industry knows Oceanus, which boasts the natural canvas look of a traditional sail with high durability and performance of a modern one.

Mayflower II sailmaker Dayle Ward was first introduced to sailing when her father signed her up for a summer aboard the US Brig Niagara, a replica ship from the War of 1812, after seeing a magazine

advertisement for volunteers from their home in landlocked Colorado. An artsy kid who said she never felt at home behind a school desk, the hands-on, experiential learning was an instant match for Ward.

"It felt more real than anything I had experienced," Ward said of her first summer sailing. "I was expected to act like an adult. There is a hierarchy from captain to deckhand, but age-wise, everyone on a crew is on a level playing field, and I really appreciated that. When you're sailing a ship like that, you have to learn to trust yourself and learn to work in a team: Between the forces of nature, the ship and the crew, the consequences of your actions are real."

Ward went home to finish high school but got back to the water as soon as she could, sailing aboard historic ships for the next five years and learning about ships, sailing and history. After she met her husband, she took a job ashore in a sail loft where she learned to make sails. Over the years, she has become specialized in historic sailmaking and works with her husband in their loft, Traditional Rigging Company, in Maine.

For the Mayflower II, Ward made half the sails for the project. The other half of the project was awarded to Latell Sailmakers in Virginia. Both sail lofts are well known in the industry for their attention to detail and knowledge of the craft.

Latell co-owner Justin Ailsworth is a lifelong sailor from a family of sailors. From riding along with his parents as a baby through acting as captain of the varsity sailing team in college, his life has been dedicated to maritime sport, leisure and, now, history. After college graduation, while still considering his career options, his sailing coach offered him a job in a sail loft. He ended up sticking with it, getting a job in another sail loft in his hometown, where he is now a partner and co-owner of the business.



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TOM EVANS
Sales, Contender Sailcloth

Ailsworth's team makes plenty of modern sails, which he says they make with relatively advanced software.

“We take the measurements and put it into a design program,” Ailsworth said. “There's a 3D shape where we adjust the look and then it goes to a cut file. From the cutting table, the lines are printed and then we seam the sail together in the sail loft.”

For a traditional sail such as the those on the Mayflower II, Ailsworth said the sail pieces are so large that he and Jake Pender, a historic sail specialist at Latell who also worked on the Mayflower II project, have to lay them out on a gymnasium floor, measuring and cutting by hand. Perhaps surprisingly, Ailsworth noted that measuring and cutting by hand yields a higher efficiency of fabric usage, which he suggests would have been important for a sailmaker in the 1600s because materials were scarcer and more expensive.

From their respective locations, Ward and Ailsworth made much of the sails through hand measurement and finishes, including the grommet holes.

“Metal was precious at this time in history, so there's no hardware involved in any of the sail work,” Ward said. “The sails consist of twine, thread, sailcloth and rope-based grommets instead of steel rings. We hand sew all the grommets, and then rope is hand sewn to the edges, which creates a sort of skeleton to provide the structure of the sail.”

To put it in perspective, Ailsworth compares a rope grommet to the metal grommet of a modern racing sail: In a traditional sail, one grommet may take 15 minutes per grommet, whereas one grommet in a racing sail takes only about two minutes. There is a grommet located every 20 inches along the head of the sail. While it's considerably more time consuming, both sailmakers agree there is something satisfying about the process.

“It is what it is with a metal one,” Ailsworth said. “But for a traditional sail, it's a direct result of your work and so much more about the craft and handwork.”

Ward echoes Ailsworth's sentiment, adding her appreciation for the beauty and function of old-world craftsmanship and the importance of making things that last for a long time. She jokes that durability is something she loves about the Oceanus fabric but that she imagines the manufacturer must be annoyed by how rarely the sails need to be replaced. Ultimately, restoring historic ships and using aesthetically accurate sails is a labor of love, not one of mass production.

“Real-life historical interpretations can be so much more effective than textbooks for many people,” Ward said. “Keeping these skills and the history alive is important.”

For more information on sailcloth applications, contact Kirk Fitzsimmons, director of industrial manufacturing, at kfitzsimmons@glenraven.com.



GLEN RAVEN GLOBAL LOCATIONS

GLEN RAVEN, INC.

- Corporate Office
Glen Raven, NC
336.227.6211
- Altamahaw Conference Center
Altamahaw, NC
336.227.6211

GLEN RAVEN ASIA

- Corporate Office/
Manufacturing Plant
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86.512.6763.8151
- Sales Office
Xuhui District, Shanghai
86.21.5403.8385

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336.886.5720

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Burnsville, NC
828.682.2142

GLEN RAVEN TECHNICAL FABRICS

● Corporate Office
Glen Raven, NC
336.227.6211

● Shawmut Park Avenue
Glen Raven, NC
336.229.5576

STRATA SYSTEMS, INC.

● Corporate Office
Glen Raven, NC
800.680.7750

STRATA GEOSYSTEMS (INDIA) PVT. LTD.

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91.22.4063.5100

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Bhimpore, Daman
91.260.222.1060

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Hyderabad
91.9949.361.706

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Gurgaon
91.9871.102.146

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Daheli, Gujarat
91.992.043.2001

DICKSON-CONSTANT

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Ho Chi Minh City, Vietnam
84.906.397.888

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Jakarta, Indonesia
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Glen Raven, Inc.
 1831 North Park Avenue
 Glen Raven, NC 27217
 336.227.6211
 glenraven.com



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GLEN RAVEN LOGISTICS

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