
Hazen Paper Company

*2023 Sustainability
Report*





TABLE OF CONTENTS

THE FOUNDATION OF HAZEN PAPER COMPANY.....	3
THE METAMORPHOSIS OF HAZEN.....	6
THE INTRODUCTION OF ENVIROFOIL®.....	9
TRANSFER HOLOGRAPHIC SOLUTIONS.....	14
PROCUREMENT POLICY.....	17
SUSTAINABLE FORESTRY.....	19
SOLID WASTE.....	21
ENERGY: HYDROPOWER.....	23
OUR COMMUNITY.....	25

1. The Foundation of the Hazen Paper Company



THE FOUNDATION

Hazen Paper was founded in 1925 by John N. Hazen in Holyoke MA. John had grown up on the Connecticut River in Hanover NH and served in the US Military in the First World War after which he sought his fortune in Holyoke. Holyoke was the large industrial city on the Connecticut River at that time. Known as the “Paper City” it was founded on a mammoth hydro-power system of dams, canals and spillways. Edward (Ted) Hazen, an engineer and John’s brother, joined the company in 1928 and the Hazen boys built the business on the decorative embossing of specialty papers. The company developed a new sheen embossing process with patented technology.

The company grew rapidly through the Depression and in the 1940’s the Hazen’s expanded into the lamination of aluminum foil to paper for use in ammunition packaging and for radar evading chaff. After the World War Two the company focused on decorative papers for cards, wraps, labels, tickets and packaging. The marriage of the sheen embossing process with chrome like aluminum foil suited the aesthetic of the Post War era and Hazen grew steadily for decades.



THE FOUNDATION (continued)

In 1968 the second generation, Bob and Tom Hazen, expanded and moved the company into its current facilities between the Third Level Canal and the Connecticut River. Bob and Tom expanded and modernized all facets of the business and dominated their markets with a strategy built on offering the highest quality product, rapid innovation and an absolute dedication to customer service. Gravure coating and the lamination of aluminum foil to papers of various types was the backbone of the business. The Hazen's have always been deeply involved in the day to day operation and leadership of the business. The Hazen's eat, breathe, and sleep the Hazen Paper Company and have always been very involved in the local community. Hazen has always been extremely conscientious about its environmental responsibility and was recognized for its environmental commitment by the State of Massachusetts in 1990. Hazen is not a newcomer to environmental sensitivity.



"Each year, we strive to outdo our own prior performance when the Hall of Fame asks us to work with them.."

- John Hazen



2. The Metamorphosis of the Hazen Paper Company

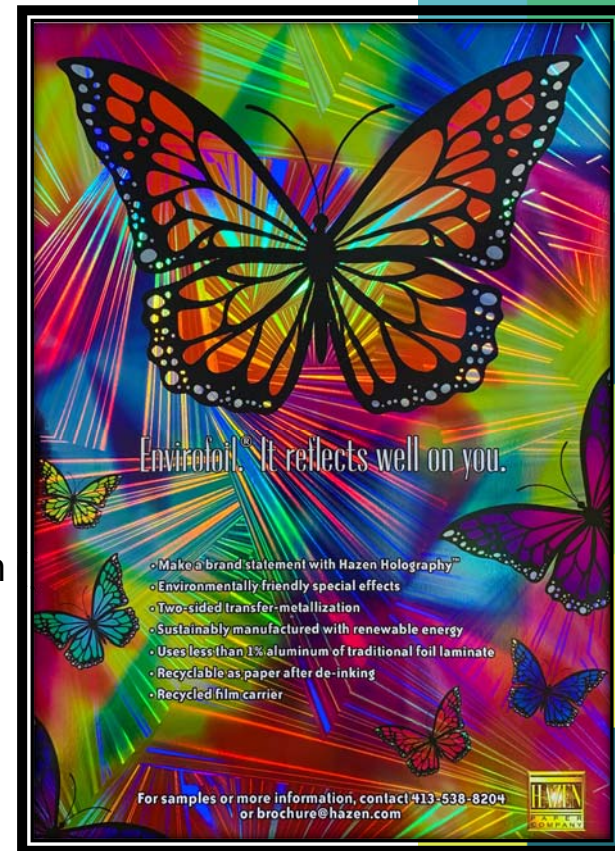


THE METAMORPHOSIS

As the baton was handed to the third generation of Hazen's, John H. and Robert E. Hazen, the fundamentals held fast. John and Bob have been deeply immersed in the onsite management and leadership of the company since 1990. The basic Hazen strategy of maintaining the highest standards of quality and service are still sacrosanct. However, the bar was raised dramatically on innovation and in the new millennium the Hazen's have reinvented the company.

In the late 1980's it became evident that society required a more enlightened ethos about protecting the planet. There was a great awakening to the need to conserve energy and natural resources and to protect and restore our mother earth. It was evident to the Hazen's that the future of the company depended on its success in developing new recyclable products that used less resources. Traditional aluminum foil and "met-poly" laminations though technically recyclable on an industrial level did not meet FTC guidelines for curb side pickup standards of recyclability at the consumer retail level.

Transfer metallization is a lamination technique whereby a sub-micron layer of coating and an incredibly thin layer of aluminum is transferred to paper from a light gauge carrier film. With aluminum foil or met-poly lamination the laminate is permanently adhered to the paper to create a new composite. The laminate is typically at least 6 microns and commonly 12 microns. Met-Poly is typically 12 microns thus the substitution of a met-poly with transfer metallization represents greater than 90% source reduction. In place of the 12 microns of plastic (Met-poly) is a sub-micron layer of coating and a 300- angstrom layer of aluminum. The aluminum layer is so thin that it is measured with light transmission. Transfer metallized paper has been generally viewed as recyclable for many years. The transfer film can be re-used and is ultimately recycled. An angstrom equals one ten-billionth of a meter.



THE METAMORPHASIS (continued)

Hazen built its' in-house holographic and metallizing operation beginning in 2007. This was a gargantuan undertaking that required radical innovation and a "bet the farm" capital investment. Hazen was vertically integrating. Prior to 2007 Hazen purchased holographic and metallized films from third party vendors. However, the previous decade had seen dramatic industry consolidation and off shoring by metallizers and holographic embossers.

The independents all sold out to mammoth multi-national companies. Early in the new millennium outsourcing to China, India and other freewheeling developing nations became the dominant trend. Hazen's contrarian decision to set up its own holographic operation in North America was made with eyes wide open and with the understanding that risk was existential. No other laminator in the Americas had ever undertaken an organic expansion of this magnitude in more than a decade.

Ultimately Hazen built a film coating, holographic embossing, and metallizing operations in Holyoke that resulted in one of the most vertically integrated and efficient transfer metallization operation in the world. Keeping in mind, Hazen already had the largest foil and decorative film laminating operation on this continent.



3. The Introduction of Envirofoil®



THE INTRODUCTION OF ENVIROFOIL®

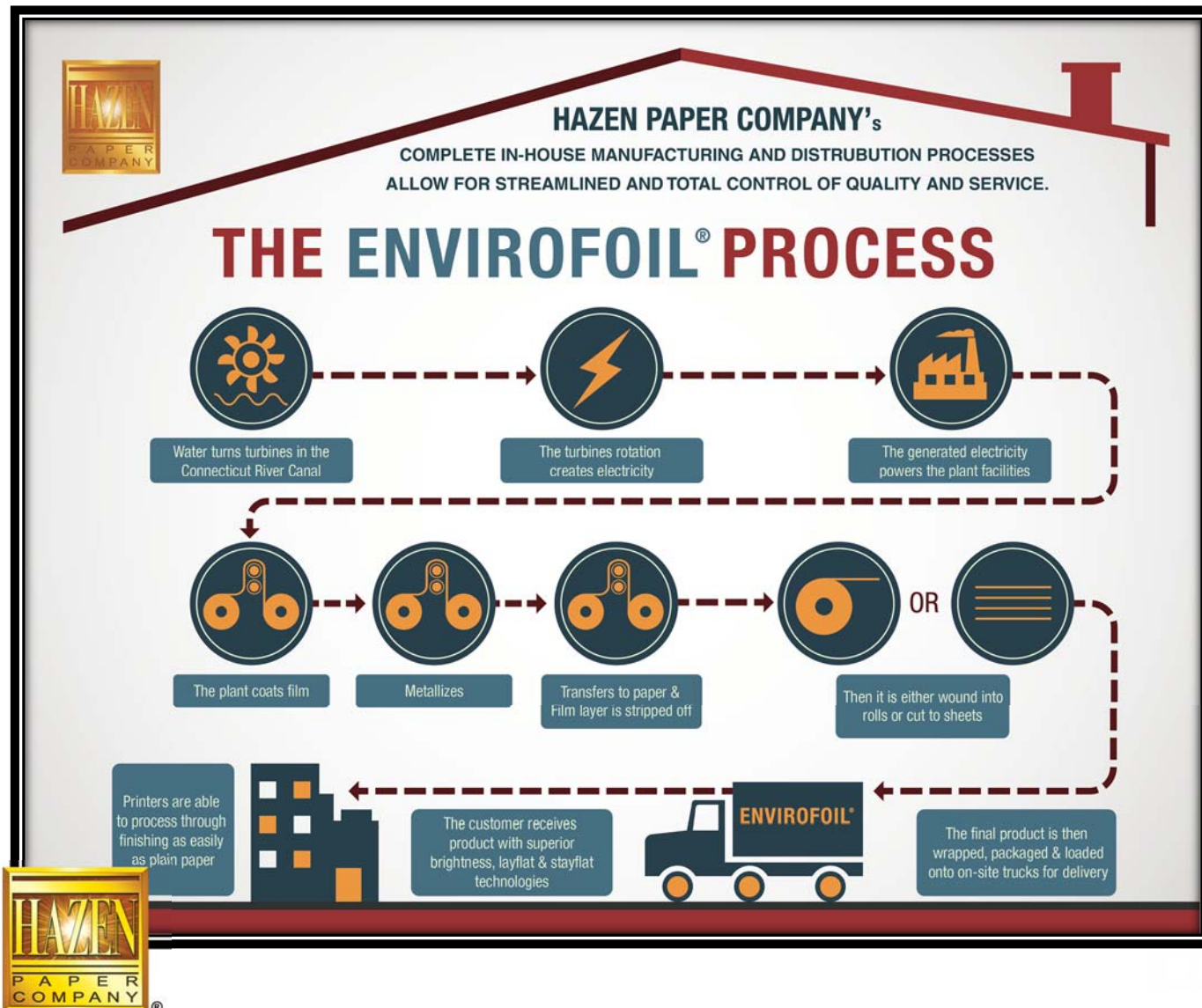
Envirofoil® is Hazen's transfer metallized paper. The first step in the process is to apply a polymer coating to the carrier film that serves as the transfer release coating. The transfer coating is the vehicle to deliver the 300 angstroms of extremely reflective metallization to the surface of the paper. Ultimately the transfer coating will release from the carrier film after lamination. The laminating adhesive has a stronger bond to the metallized surface and the transfer coating has a relatively weaker bond to the carrier film.

However, the bond between the carrier film and the transfer coating is strong enough to allow for further processing of the transfer film without the transfer coating picking or stripping prior to the completion of the lamination process. Typically, the coated transfer film is vacuum metallized as the next process step. In the vacuum metallizing process aluminum is vaporized and coated onto the surface of the transfer coating in an incredibly thin and uniform layer.



Hazen Wins 2018 AIMCAL Product of the Year with Envirofoil® and ultra-thin holographic embossing.

ENVIROFOIL® (CONTINUED)



Build a compelling brand package,
without nailing the environment.

A package created with custom holography on Hazen Envirofoil® delivers a unique selling tool customers want to pick up. It defies counterfeiting, and refracts light to simulate motion and a tactile appeal. But even more amazingly, it's environmentally friendly.

More impact on customers, less on the environment. Envirofoil is transfer-metallized, with no plastic and a minimal amount of aluminum – so it's as easily recycled as printed paper. Dramatic source reduction means it carries 20 times less metal per square inch than metallic ink. Envirofoil can be printed offset or with digital inks. It meets strict environmental criteria, certified by the Forest Stewardship Council, Sustainable Forestry Initiative, and the International Programme for the Endorsement of Forest Certification.

Use Hazen Envirofoil to show your true colors. Unlike full-spectrum holography, Hazen's next-generation "white-motion" holography allows you to enhance your most provocative ideas without compromising color. Add dimensionality, movement or texture while ensuring that corporate or brand colors stay true. Or capture the rainbow and dazzle customers with prismatic color.

We make dreams reality. Working in partnership with your designers and printers, our team of holographers develops holographic effects that realize your ultimate creative vision, optimized for printer capability. Our vertically integrated operation delivers tight production control and fast turnaround.

Pushing the envelope. And the package.

Hazen dedicated holography for the fragrance Beyoncé® Pulse was awarded "Best Applied Decorative Hologram" in 2011 by the International Hologram Manufacturers Association. Beyoncé Pulse was named 2012 FIFI® Finalist for best packaging by the Fragrance Foundation. Hazen also won AIMCAL 2012 honors in categories of Packaging, Decorative/Display, and Technical.

Responsible for success. Hazen Paper, founded in 1925, is committed to sustainability, using renewable energy sources and recycling hundreds of tons of laminated and transfer-metallized paper each year. We're proud to deliver exceptional materials that drive sales for our customers while conserving natural resources. Work with us, and you can be proud of it, too.

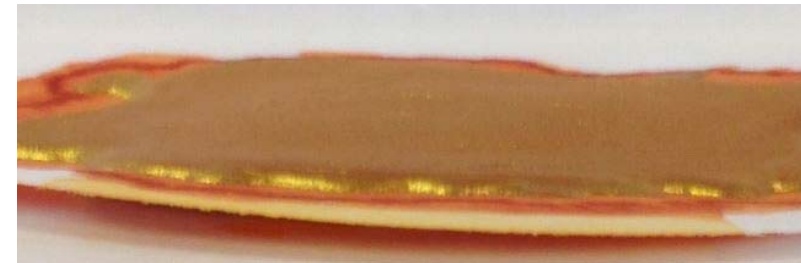
ENVIROFOIL®

AN ENVIROFOIL® CASE STUDY: GODIVA AIMCAL AWARD

The Technical Award in the Packaging: Food Category went to Hazen Paper Co. (Holyoke, MA) for its role in metallizing, coating and laminating box wrap for a gift box for Godiva Chocolatier, Inc., (Wyomissing, PA). The box, designed by Godiva's Global Design Group (New York, NY), features Hazen's transfer-metallized Envirofoil® paper, which is micro-embossed, modified tip-coated gold and flood-coated clear. The nano-thin layer of texturized aluminum and lightly applied gold tint and clear coat impart a lustrous effect as well as scuff and crack resistance. Compared to its previous box wrap, the gold coating relies on proprietary colorants that achieve the desired appearance with 98% fewer particulates and a significant reduction in energy consumption to apply and dry multiple layers of particulate-laden ink. The transition to Envirofoil® paper and the proprietary gold coating cuts costs 50%. Savings resulted from improved drying efficiency, which more than doubled line speed, plus a basis weight reduction of 25% to 60-lb paper. Verso Corp. Specialty Papers (Stevens Point, WI) supplied the substrate, while Burt Rigid Box, Inc. (Oneonta, NY), served as the converter for the project. The judges were impressed by the savings in both money and material. Despite the reduction in pigment usage, "It's a beautiful gold," said one judge. "The package is simple, but quite effective," added another.



OLD COATING:



ENVIROFOIL®:



ENVIROFOIL® (CONTINUED)

NOTEWORTHY ENVIROFOIL® AWARDS

CROWN ROYAL 75 VAP: 2010 AIMCAL SUSTAINABILITY AWARD

The heavy caliper paperboard not only protects the contents during distribution, but also is transfer-metallized on the uncoated side to provide a gold backdrop for a 750-milliliter bottle of Crown Royal and two glasses. Previous designs used a 48-gauge polyester/foil/paperboard insert, which had to be manually positioned. Replacing the film/paperboard laminate with Hazen's transfer-metallized - Envirofoil® - paperboard cuts material consumption by nearly one-third, requires substantially less metal, and increases production rates by eliminating hand-loading of the insert.



TITLEIST GOLF BALL CARTON AND SLEEVES: 2015 AIMCAL PRODUCT OF THE YEAR

"Transfer-metallized cartons for Titleist golf balls win 2015 AIMCAL Product of the Year. Envirofoil® hits a hole-in one" – *Converting Quarterly 2015 Quarter 2*. The carton stock also delivers environmental benefits. Envirofoil® is recyclable as paper, and the company calculates source reduction of more than 350,000 pounds of aluminum and plastic compared to foil or film laminate. Hazen's metallizing process is powered by sustainable sources of electricity, while vertically integrated production reduces shipping and cuts process time and cost.



4. Transfer Holographic Solutions



TRANSFER HOLOGRAPHIC SOLUTIONS

Holography is essentially a mechanism for reflecting and diffracting light with an interference pattern much like a prism. In 2006 Hazen set up a comprehensive manufacturing system for producing holographic effects on paper with a sub-micron embossing process. The front end of Hazen's process is a holographic design studio that originates unique large format holographic designs in a matter of hours. This holographic design capability feeds into an electroforming embossing shim making process which feeds into a holographic embossing process.

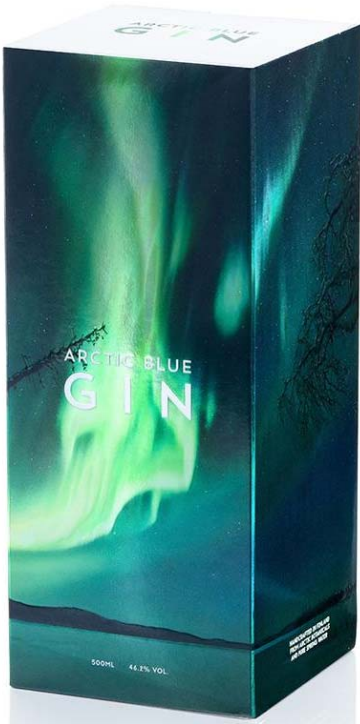


A critical feature of Hazen's holographic process is that it is based on an ultra-thin sub-micron optical structure. This makes it particularly compatible with transfer metallization (Envirofoil®), compared to other holographic structures that are based on grid patterns that are greater than 4 microns. The deeper structures do not work well in the transfer metallization process as the polymer is too thin to hold the structure.



TRANSFER HOLOGRAPHIC SOLUTIONS (CONTINUED)

Hazen is able to achieve stunning holographic effects with its shallow grid pattern using techniques like color motion and multi-channel. Hazen’s Holography has won many awards over the last decade.



2020 AIMCAL PRODUCT OF THE YEAR FEATURING HAZEN ENVIROFOIL® AND ULTRA-THIN HOLOGRAPHIC EMBOSSING



HAZEN WINS 2017 IHMA AWARD IN BARCELONA FOR THE LADY IN GOLD HOLOGRAM USING ENVIROFOIL® AND ULTRA-THIN HOLOGRAPHIC EMBOSSING



5. Procurement Policy

PROCUREMENT POLICY

Hazen Paper Company acknowledges the importance of the social and environmental impact that purchasing decisions create. The Purchasing department aims to only procure materials from companies that have a positive impact on the public, their employees, and the environment. By accepting an order from Hazen, the supplier represents and warrants that the materials have been produced in compliance with the requirements of the Fair Labor Standards Act of 1938. The supplier must not discriminate against any employee or applicant because of age, race, creed, color, sex, or national origin. The supplier must comply with all provisions of all federal, state, and local laws and regulations (ex. US Lacey Act and the EU Timber Regulation). Hazen Paper Company is Chain of Custody Certified from multiple certification bodies for paper and board products. Hazen values suppliers who hold the same certifications as it acknowledges that they are acting both ethically and sustainably in the purchase of their raw materials and conversion of product for Hazen.



6. Sustainable Forestry



SUSTAINABLE FORESTRY

Another major sustainability effort Hazen Paper has invested in, is Tri-Certification in Chain of Custody for wood fiber sources. Becoming Chain of Custody (CoC) certified demonstrates Hazen's commitment to the environment and vitality of a key raw material resource. Hazen's focus is to bring in paper and paperboard from responsible suppliers, who are also committed to sustainable forestry. There is no question the critical importance of forests to our planet, and we must safeguard this invaluable resource by ensuring they are used in a manner that allows regeneration without destruction. Hazen Paper continues to meet demanding environmental, economic and social criteria in order to be a key link in the chain from the forest to the consumer. These strict criteria include unacceptable activities such as illegal logging and converting of forests for non-forest use. Hazen also recognizes the International Labor Organization and follows and supports laws and rights with respect to the consumption and/or trafficking of endangered wildlife, the elimination of discrimination, and abolition of child labor and all forms of forced or compulsory labor. Hazen Paper has maintained Chain of Custody tri-certification since 2008.



The mark of
responsible forestry



7. Solid Waste



SOLID WASTE

Hazen Paper strives for 100% waste recycling. All materials that can be recycled must be recycled and all waste materials must be sorted into their proper designated containers. This includes but is not limited to all paper, wood, steel, aluminum, polyester, cardboard, plastic, and all by-products associated with the manufacture process. All Hazen Paper employees are held accountable for following the recycling methodology and guidelines set forth.

RECYCLE TOTALS	2019	2018
PAPER/BOARD	573,000 lbs	411,000 lbs
STEEL/ALUMINUM	189,000 lbs	188,000 lbs
POLYESTER	1,074,000 lbs	1,028,000 lbs
LAMINATED	2,266,000 lbs	2,576,000 lbs
WOOD	278,000 lbs	264,000 lbs
CORRUGATED	292,000 lbs	239,000 lbs
OTHER RECYCLED	354,000 lbs	452,000 lbs
LANDFILL	0 lbs	0 lbs
TOTAL RECYCLED	5,026,000 lbs	5,158,000 lbs



8. Hydropower



HYDROPOWER

More than two-thirds of Hazen's electrical power is provided by the Holyoke Gas and Electric renewable hydro facilities. With a 90%-plus efficiency rate, hydropower is one of the most efficient, clean, renewable energy sources.

Furthermore, approximately 7% of Hazen's electrical supply comes from Solar. In total more than 85% of Hazen's electrical supply is carbon free.

The Holyoke Canal system is a three tiered, 4 ½ mile system that runs throughout downtown Holyoke and provides water to approximately 11 in-service generating stations which have a total combined capacity of approximately 17 megawatts. The three Canal System tiers are known as the First, Second and Third Level Canals, and the drop between canal tiers, as well as drop from the Canal System back into the Connecticut River multiplies the electric generation by three separate times using the same water.



9. People and Community



PEOPLE AND COMMUNITY

Hazen Paper has been blessed with incredible and dedicated employees throughout our history. The Hazen's have long recognized that the success of Hazen Paper is primarily a function of the efforts and commitment of our employees. Hazen's basic formula of providing the highest quality product and the most responsive customer service has always been the result of extremely focused and dedicated employees who care about everything they do in all facets of their lives.



PEOPLE AND COMMUNITY (CONTINUED)

The leadership of Hazen Paper has always been very active in the community, especially in Holyoke. In 2004 Hazen started to sponsor The World Is Our Classroom. This is a public/partnership whereby every fifth-grade classroom in the Holyoke Public School system comes to Hazen's Holographic Studio in the North Plant for a day long field trip. Hazen employees participate in the presentations which include discussions of various jobs at Hazen, a plant tour, a hands-on paper making project and "The Career" game. Science teachers from local colleges teach lessons on the life cycle. Since 2004, more than 250 classrooms have taken place and more than four thousand 5th graders have spent a day at Hazen Paper. The amazing thing is that Hazen now employs graduates of the World Is Our Classroom. The cycle has come full circle. Today's student is tomorrow's leader.



Employee Name: World Is Our Classroom Graduates – Gabriel Diaz, Bridget Higgins and Giovanny Pagan

Position: Maintenance, Human Resources and Manufacturing

Age: 22-24

School (HS and/or College): Holyoke High School and Westfield State University


Years at Company: 3 -10 years





Thank You

 240 S Water St. Holyoke, MA 01040

 (413) 538-8204

 customerservice@hazen.com

 www.hazen.com

