



# 2019 SUSTAINABILITY REPORT

**CHIA**

July 2020



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Responsibly  
Improving the  
World We Live In

2019 Sustainability Report  
CHA Consulting, Inc.





# Message from the CEO

## Message from the CEO About CHA Consulting

### Introduction

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*Responsibly Improving the World We Live In* is what we do every day to inspire our employees, elate our clients and create value for our employees, clients, business partners, and communities. This long-term value creation enables a growing and sustainable company now and into the future. CHA is committed to doing business in a way that meets the needs of the present while contributing to an environmentally, socially, and economically sustainable future. Sustainability is at the core of how we conduct our business. We are pleased to share with you CHA's first comprehensive sustainability report.

As we publish this report in July 2020, the world continues to face the COVID-19 pandemic—a public health crisis unlike any experienced in our lifetimes. It is a reminder of the interconnectedness of our planetary health, public health, and economic well-being. We are proud to help our clients navigate through this unprecedented time and unite to support the needs of our communities. CHA has characteristically risen to this challenge with innovation, commitment and compassion.

We are proud that these attributes underpin our sustainability efforts. CHA focuses our sustainability efforts in the areas where we believe we can have the greatest impact:

- Using our expertise and experience to advance the sustainability of our clients;
- Incorporating sustainability into all service offerings; and
- Marketing and selling sustainable development services across all sectors.



*"Sustainability is at the core of how we conduct our business. We are pleased to share with you CHA's first comprehensive sustainability report."*

## CHA's sustainability initiative stands on four strategic pillars:



These four pillars form a foundation for CHA to respond in a nimble and meaningful way at a time when the markets and sectors in which we operate are changing at a rapid pace. There are many drivers for the transformations unfolding, including societal and consumer demand that businesses work shoulder-to-shoulder with the government and not-for-profit sectors to tackle society's biggest challenges—challenges surrounding our water and energy supplies, how we efficiently move and protect people and goods, how we build our communities as our climate changes, the need for sustainable and resilient infrastructure, and focusing on public health as a key driver in how we work and how we use innovation to deliver services.

CHA's first comprehensive sustainability report positions us on solid ground for these changing markets and the tremendous growth opportunities they offer—examining our environmental and societal impacts and infusing sustainability into our business strategy. It will guide every aspect of our business going forward. I am thankful to our colleagues whose efforts have carried us this far on our sustainability journey.

Looking to the future, this report contains sustainability goals which span across our four strategic pillars. We are pleased to share these goals publicly for the first time in this report. We remain committed to being transparent and sharing our progress along the way. This is an important new stage for our company, and we welcome your feedback as we strive to advance our goals.

Sincerely,

Jim Stephenson  
President and CEO

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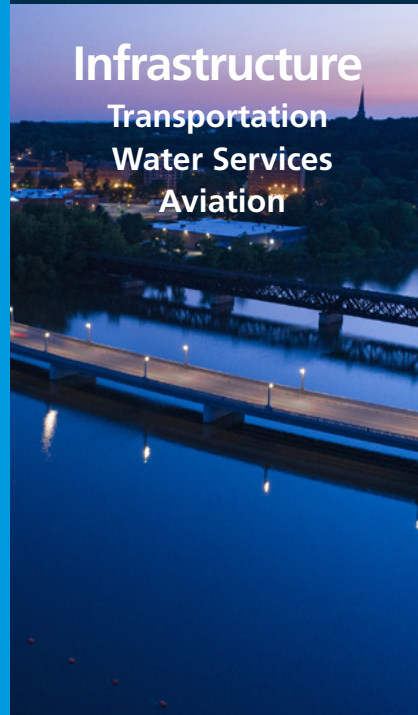
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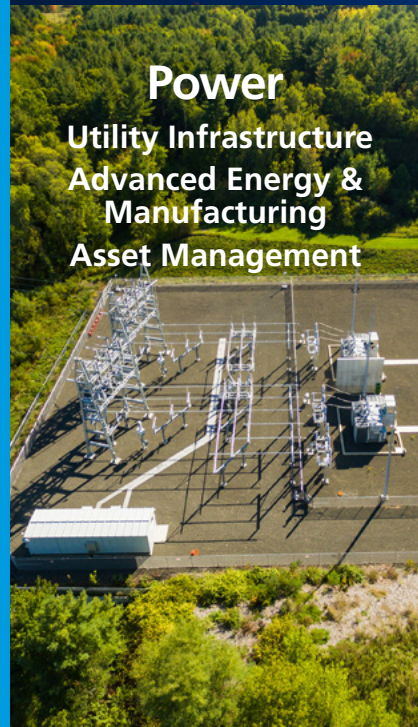
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**Infrastructure**  
Transportation  
Water Services  
Aviation



**Power**  
Utility Infrastructure  
Advanced Energy &  
Manufacturing  
Asset Management



## About CHA Consulting

CHA partners  
with its clients  
to create a more  
sustainable world.

We are a highly  
diversified, full-service  
engineering consulting  
firm providing  
a wide range of  
technology-enhanced  
planning, design, and  
construction services  
to public, private and  
institutional clients.

**Buildings**

Building Design  
Land Development  
Project Management  
Construction Management  
Sports



**Fire Protection  
Services**

Engineering, Procurement  
& Construction



We work in five of the economy's largest markets:

Government | Industry | Utilities | Education | Commercial Development



CHA was ranked the 50th largest design firm in the US by Engineering New Record's (ENR) 2020 rankings with an annual gross revenue of \$330.5 million. CHA is also #35 of the Top 100 Pure Design firms and #6 of the Top 20 Manufacturing firms on the 2020 ENR rankings.

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## Introduction

We know that we most positively impact the world through the services we deliver to clients. Sustainability is at the epicenter of all that we do for our clients, communities and employees. Helping to make a difference in the world is powerful and meaningful work.

We incorporate sustainability in our work because it aligns with our values, it's good for the environment, it's good for our communities, and it's good for business. The markets and sectors in which we operate are changing at a swift pace. We are, right now, providing essential consulting services to improve our communities—whether roads or transit, power or utility infrastructure, water plants or buildings—our work is at the heart of these complex and interconnected challenges.

On the following pages we share our sustainability journey with you—our expertise, experience, and commitment to *Responsibly Improving the World We Live In*.

This is CHA's first comprehensive corporate sustainability report. We report on data and activities related to our sustainability strategy for our fiscal 2019 year, covering the period January 1 to December 31, 2019 (except where indicated otherwise) and spanning across our operations. We intend to provide an annual update on our sustainability initiative, including our progress in meeting the goals set in this report.

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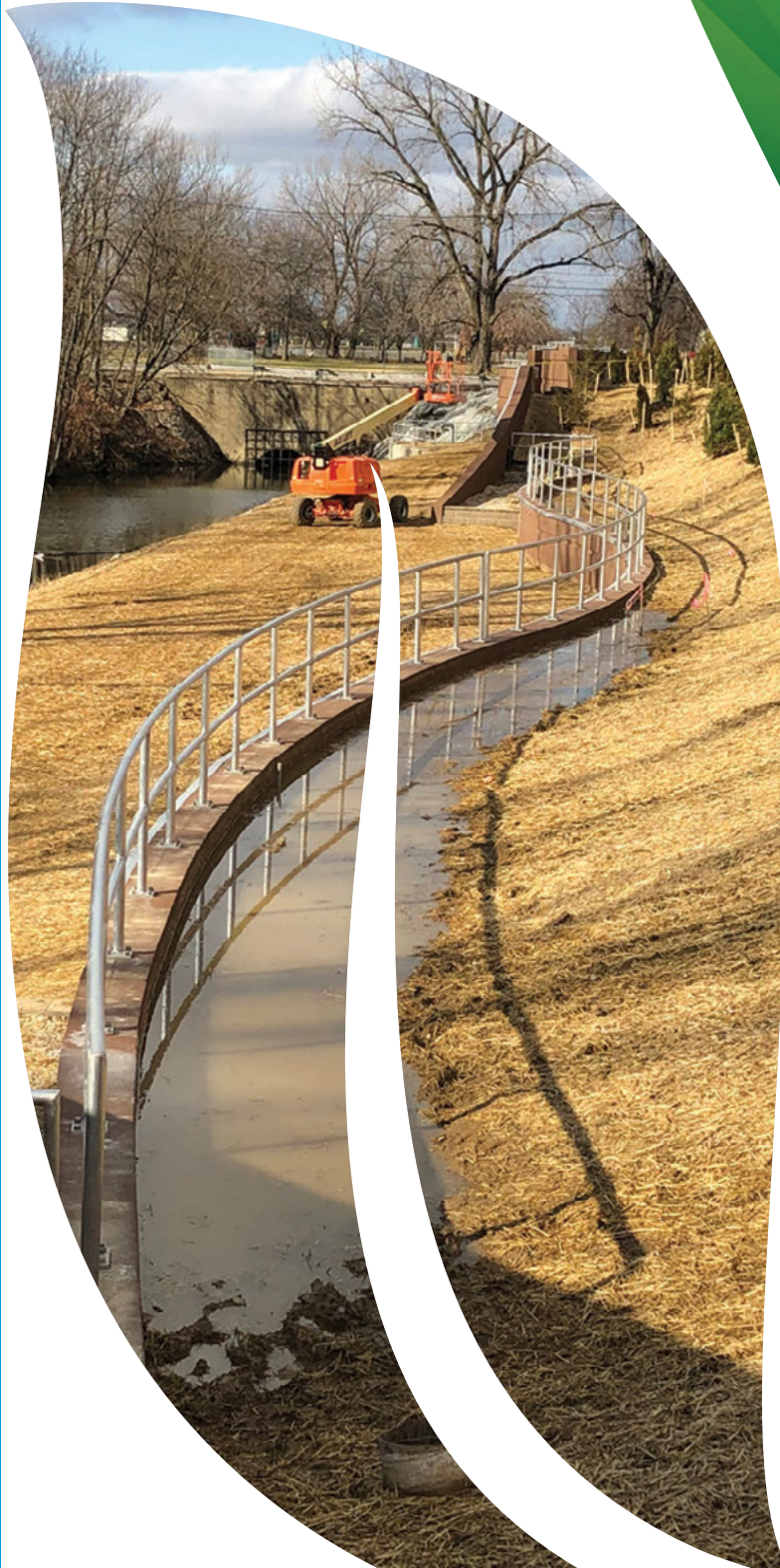
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## Sustainable Services and Clients



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# Sustainable Services and Clients

## Introduction

At CHA, we support a more sustainable future and we most positively impact the world through the services we deliver to clients. We walk the path with them, identifying and capturing ways to make their projects more sustainable through architecture, engineering, planning, project management, construction management, and environmental services.

We are proud to highlight projects throughout this report that enable a more sustainable future and share our impressive catalogue of sustainability expertise.

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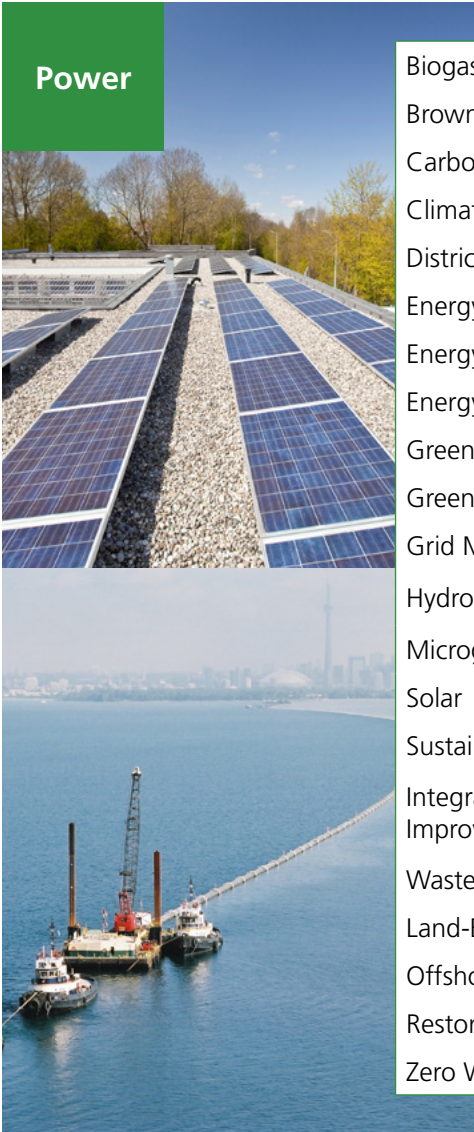


Experts in Sustainability Services



Buildings

- Sustainability Rating Systems
- Sustainability in Planning
- Zero Carbon, Zero Energy &/or Carbon Net Neutral
- Whole Building Energy Analysis
- Sustainable Construction Practices
- Passive House Building Design Principals
- Sustainable Building Design Principals
- Biogas High Performance Building Design



Power

- Biogas Production
- Brownfield Redevelopment
- Carbon Capture and/or Sequestration
- Climate Plan Development & Implementation
- District Energy Systems
- Energy Modeling
- Energy Plan Development & Implementation
- Energy Storage
- Greenhouse Gas Inventory
- Greenhouse Gas Validation & Verification
- Grid Modernization
- Hydropower
- Microgrids
- Solar
- Sustainability Plan Development
- Integration/use of Technology Resulting in Energy Reduction, Improved Energy Efficiency
- Waste to Energy
- Land-Based Wind
- Offshore Wind
- Restoration
- Zero Waste or Waste Reduction Strategies



Infrastructure

- Intelligent Transportation Systems
- Autonomous Vehicles
- Green Infrastructure
- Improving a Transportation System's or Project's Effectiveness or Efficiency
- Sustainable Stormwater Management
- Aviation & Transportation Sustainability Infrastructure Planning & Design
- Smart Cities
- Wastewater Treatment
- Water Replenishment
- Water Resource Management
- Water Supply
- Water Reuse
- Watershed Management
- Wet Weather Management & Control



Accredited Sustainability Professionals

- LEED Green Associate
- LEED AP Building Design & Construction
- LEED AP Neighborhood Development
- LEED AP
- Envision Sustainability Professional (ENV SP)

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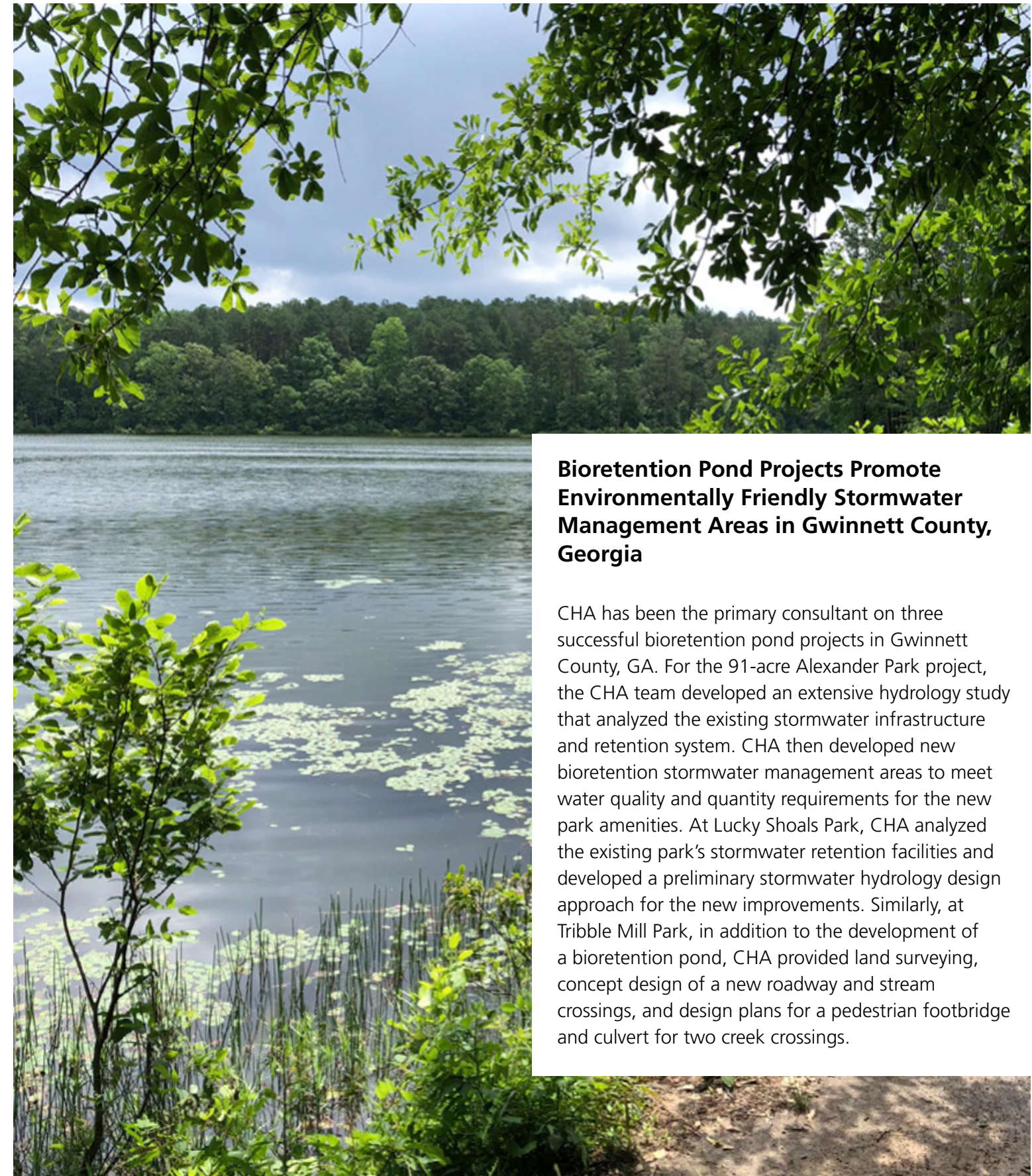
### CHA Helps Create Smart Infrastructure in Albany, New York

CHA partnered with the City of Albany, NY to address water flow issues in its Beaver Creek District, the largest sewershed within the city's combined collection system which discharges to the Hudson River. CHA's solution provided a smart infrastructure network that uses a continuous monitoring and adaptive control platform to proactively predict and manage wet weather flows.

The project's flow management practices will serve to re-establish natural floodplain storage to address challenges within the urban CSO environment to abate street flooding, sewage backups into building basements, and sanitary sewer surface discharges to improve the city's infrastructure and support the sustainability of important city neighborhoods.



This project received the Smart Water Award in the IDC Smart Cities North America 2019 and the Platinum Award in the Waste and Storm Water Category in the 2019 ACEC New York Engineering Excellence Awards.



### Bioretention Pond Projects Promote Environmentally Friendly Stormwater Management Areas in Gwinnett County, Georgia

CHA has been the primary consultant on three successful bioretention pond projects in Gwinnett County, GA. For the 91-acre Alexander Park project, the CHA team developed an extensive hydrology study that analyzed the existing stormwater infrastructure and retention system. CHA then developed new bioretention stormwater management areas to meet water quality and quantity requirements for the new park amenities. At Lucky Shoals Park, CHA analyzed the existing park's stormwater retention facilities and developed a preliminary stormwater hydrology design approach for the new improvements. Similarly, at Tribble Mill Park, in addition to the development of a bioretention pond, CHA provided land surveying, concept design of a new roadway and stream crossings, and design plans for a pedestrian footbridge and culvert for two creek crossings.

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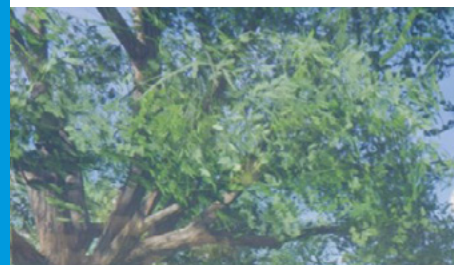
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### Creative Solutions Key to Net Zero Building Project in Lincoln, Massachusetts

CHA is the owner's project manager for the renovation and addition to an elementary school. This \$94 million project is designed to meet Net Zero class B sustainability standards in a public school renovation. Our team has worked closely with the Town to find the solutions that have the lowest possible energy use intensity while remaining within budget. The school is anticipated to generate as much electricity as it consumes and will be the first community in the Commonwealth to achieve this level of sustainability in a public school renovation project.



#### Project: Flow Chelsea 211 West 29th Street

Developed by: 211 Sea Foam Properties, LLC

Designed by: ZH Architects



#### Project: 511 East 86th Street

Developed by: Carrera RS, LLC

Designed by: Arquitectonica New York P.C.

### Energy Efficient CHA Projects Win Prize in New York City

The New York State Energy Research and Development Authority (NYSERDA) announced its first Buildings of Excellence winners in the fall of 2019. The competition is intended to stimulate the design, construction, and operation of very low or zero carbon emitting buildings.

Among the winning developers and design teams are two CHA project management projects. Each of these projects took home \$500,000 for creating superior sustainability and demonstrating that a low carbon future is achievable.

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## Highlighted Projects



### Rochester, New York Airport Lands National Environmental Award



The Greater Rochester International Airport received the 2019 Airports Going Green Award from the American Association of Airport Executives (AAAE) and the Chicago Department of Aviation (CDA). CHA provided engineering, design and construction administration services during the recently completed large-scale, \$79 million terminal renovation program to improve and revitalize its airport terminal.

The program included a stunning new entrance canopy, an expanded terminal building and concession area, and implemented communication technology for the hearing impaired. Energy efficiency goals were met through intelligent HVAC energy management and lighting systems. Other sustainability measures include solar panels, recycled materials, rain garden landscaping, and energy-efficient LED lighting.



## Our Commitment to Sustainable Design

Our goal on all our projects is to lower utility and operating costs for our clients and to create comfortable, healthy spaces for the occupants. Our architecture and MEP teams design buildings that save our clients money by incorporating high-performance envelope and mechanical systems, energy-efficient lighting systems and controls, maximum daylighting, and alternative energy systems. Our careful attention to non-toxic material selection, fresh air supply, and plentiful natural daylight facilitates healthy buildings.

### Mt. Blue Campus | LEED for Schools Certified Efficiency Maine High Performance School

This major overhaul of the Mt. Blue High School/Foster Technical Center incorporates multiple alternative energy technologies such as wood chips, geothermal, solar hot water heating, electrical wind generators, and photovoltaic panels. All of the alternative energy technologies have been designed to be monitored as part of the school curriculum.

- **Energy conservation:** high-performance envelope, heat recovery, high albedo roof, exterior shading devices, commissioning.
- **Alternative energy:** closed-loop ground-source heat pump, biomass boiler, solar domestic hot water, photovoltaics, wind turbines.



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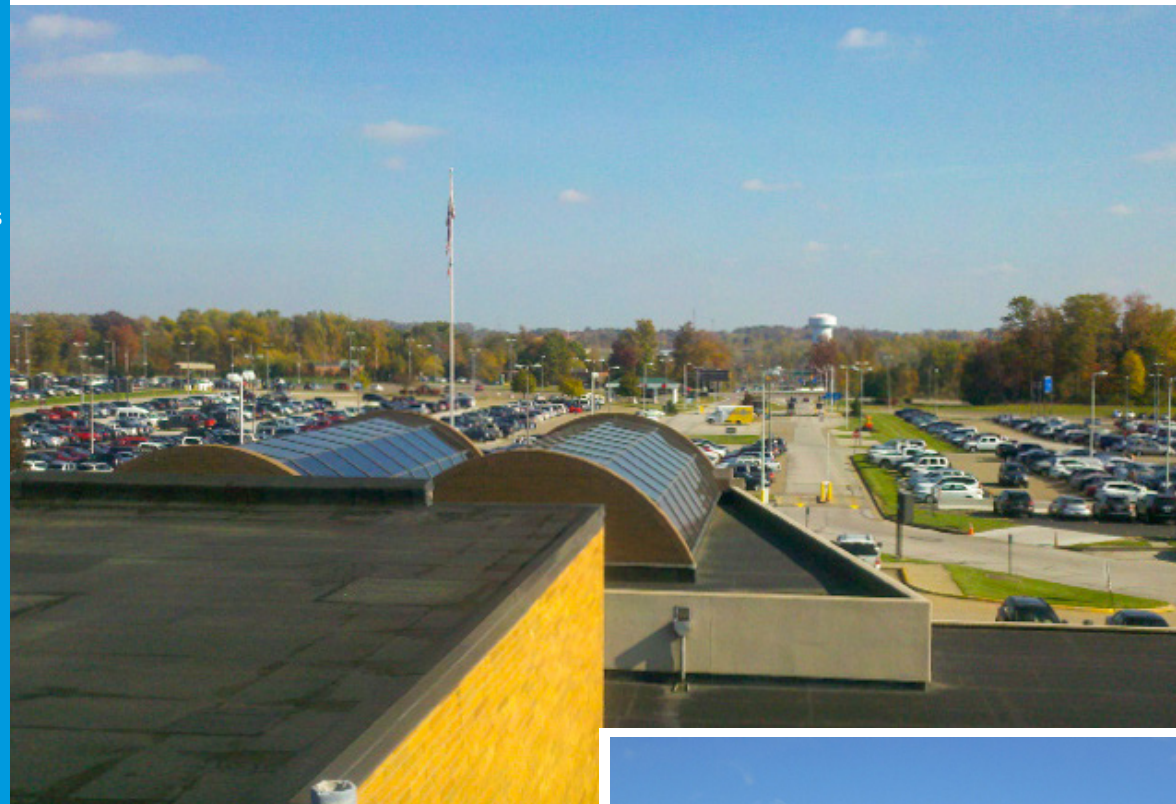
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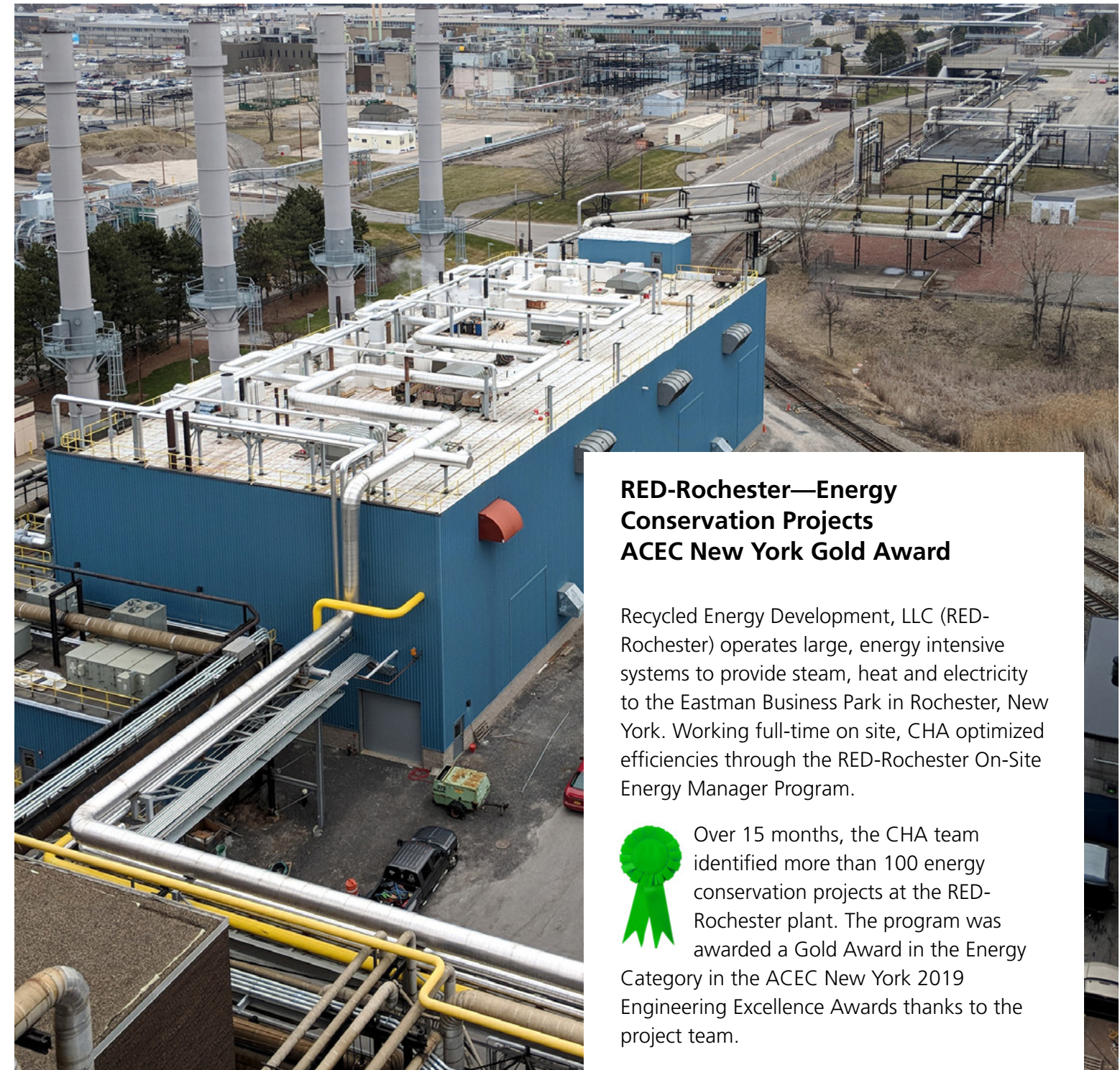
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### **Sustainable Management Plan: Akron-Canton, Ohio Regional Airport**

CHA led the development of a sustainable management plan as part of an FAA pilot program at the Akron-Canton Regional Airport. This effort focused on energy and natural resource conservation measures that effectively reduced operating expenses while improving the region's quality of life.



### **RED-Rochester—Energy Conservation Projects ACEC New York Gold Award**

Recycled Energy Development, LLC (RED-Rochester) operates large, energy intensive systems to provide steam, heat and electricity to the Eastman Business Park in Rochester, New York. Working full-time on site, CHA optimized efficiencies through the RED-Rochester On-Site Energy Manager Program.



Over 15 months, the CHA team identified more than 100 energy conservation projects at the RED-Rochester plant. The program was awarded a Gold Award in the Energy Category in the ACEC New York 2019 Engineering Excellence Awards thanks to the project team.

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# Sustainable Communities



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# Sustainable Communities

## Introduction

CHA's commitment to people extends to the communities in which we work and live. Our corporate philanthropy, employee volunteerism and giving is focused on three strategic areas:

01

**Education**—Focusing on science, technology, engineering, arts, and math (STEAM)

02

**Environment**—Focusing on efforts to improve our natural resources

03

**Health & Wellness**—Focusing on improving the health and wellness of our communities and people

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CHACares

With a broad wingspan, CHA employees were involved in dozens of programs and fundraising events to benefit our communities, our shared environment, and the education of the next generation.

CHA donated to many worthy organizations whose missions support youth programs, food security, STEM, education and community clean up, as well as many others.

CHA’s employees are granted four hours off annually to volunteer in their communities. **In 2019, nearly 36 full work days were dedicated to worthy causes throughout our communities.**



- 01

In 2020, we will strive to have 100% office participation in corporate giving and/or employee volunteer event(s).
- 02

In 2021, we will launch a **CHA in the Community Week** to encourage employees to take part in initiatives that support our strategic areas during a specific week of giving back.

Indianapolis Team Takes to the Streets for Downtown Cleanup

CHA Indianapolis is doing something extraordinary for their community with the simple act of committing to keep litter off the streets and the storm drains clean. The team adopted the 300 block of S. Meridian St (where CHA’s office is located) for the entire year of 2020 through a local non-profit, Keep Indianapolis Beautiful.

By the end of the first clean-up, we were proud to have collected 51 lbs of trash, of which 17 lbs came from cleaning the storm drains. This is not the final number for this initiative—more garbage will be added to this impressive haul in the coming months as the team sustains its efforts throughout 2020.



Sustainability Challenge Uncovers History in Richmond, Virginia

A recent CHA office challenge focused on sustainability, charging teams to identify a related charitable organization for their office to support and encouraging each office to make a meaningful contribution. The Richmond team decided on volunteer service with the Capital Region Land Conservancy (CRLC). The CRLC is central Virginia’s only land trust with a mission to conserve and protect the natural and historic land and water resources for the benefit of current and future generations.

CHA staff joined CLRC volunteers to clean up along the Capital Trail, a 51.7-mile multi-use trail that runs from Richmond to the Jamestown Settlement. The cleanup supported CRLC’s acquisition of Malvern Hill Farm, and part of the Capital Trail traverses the property. Malvern Hill is the only place in the U.S to see troop activity during the revolutionary War, the War of 1812 and the Civil War.



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### CHA Proudly Supports Future City Competitions in New York & Georgia

Hundreds of middle school students compete each year in Future City Competitions in Albany, NY and Atlanta, GA. These competitions are among dozens of regional competitions around the country and internationally. The Future City Competition is recognized as one of the nation's leading programs for enabling students to make the connection to engineering through its real-world applications and inspire the next generation of engineers.

CHA is a proud major sponsor in both cities. In Albany, the second-place winner in 2019 was the Broadalbin-Perth Middle School team's "Terraqua", which was sponsored by CHA. Dozens of CHA employees volunteer their time each year as judges.



### Norwell, Massachusetts Office Raises \$7,000 in Donations—Translating into 2,456 Meals for Local Families

As in years past, our Norwell based team selected a charity to support for the 2019 holiday season—The Weymouth Food Pantry which serves families in the area.

The food pantry volunteers were astounded and grateful for the donated items and shared it was the largest donation that the food pantry had received that season!

### CHA Canada Joins Niagara Community for Cancer Run

The CHA Canada team regularly takes part in the Annual Rankin Cancer Run in Niagara, Canada. In 2019, there was a record number of teams including the CHA team which raised \$860. Overall, the event raised more than \$1,000,000.

**2,456 Meals for  
Local Families**



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## CHACares



### Inspiring the Next Generation of Engineers and Architects in Virginia

CHA Landscape Architect Joel Mieses had the opportunity recently to take part in “Career Day” at A.M. Davis Elementary School in North Chesterfield, VA (just outside of Richmond). He spoke to two classes of very energized Pre-K and first graders about engineering and architecture careers and shared details of some notable CHA projects. Joel guided the students through a learning activity to build “houses” out of construction paper. The students were delighted and the faculty very grateful for Joel’s time in helping inspire some future CHA engineers and architects.



### CHA “Lights the Night” for Cancer Treatment, Advocacy, and Research in Indianapolis

CHA’s Indianapolis based team took to the streets of downtown as part of the Leukemia & Lymphoma Society’s Light The Night Walk. The twelve-person team (plus three babies!) had a goal of raising \$1,000 in donations, but due to generous gifts from CHA employees and their family members, they raised more than \$1,500.



### Hiking the Adirondacks to Raise Awareness about Suicide Prevention

Inspired by CHA engineer Kolby Ziemendorf, more than 630 people—including several CHA team members—hiked to raise money for the American Foundation for Suicide Prevention as part of the 46Climbs annual fundraiser. An organization Kolby and his wife Catherine founded in 2014, 46Climbs aims to raise awareness and support for research, education, and advocacy around suicide. This year’s event raised \$90,000—surpassing their goal by \$20,000.



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## Sustainable Workforce



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# Sustainable Workforce

## Introduction

We are in the business of creating a more sustainable world. Our highly skilled workforce partners with clients to address some of the biggest challenges of our society, including improving water quality, designing more efficient buildings, and deploying renewable energy. People want to work for us because we focus on solving complex, challenging problems.

We operate in a competitive industry where top talent — particularly with STEM expertise and experience — is in very high demand. As we continue to grow, we are making investments to attract, engage, develop, and maintain the workforce we require to be the best company in the industry.



## The CHAway

We think building a career should be exciting, challenging, and rewarding. We encourage collaboration and provide opportunities for our employees to develop their careers while enjoying their work environment.

CHA deploys dozens of innovative, peer-leading programs and activities to make us one of the leading employers in the engineering industry:



### Talent Attraction & Retention

- Our revamped orientation program enables every new employee the ability to assimilate and contribute quickly.
- We created our Accelerator Program to match new employees with employees with more longevity to provide the new employee with a point of contact for general questions regarding day-to-day operational issues and to help the new employee integrate into CHA.
- Our Mentor Program provides meaningful mentor-mentee matches to drive rich learning and development for both mentees and mentors.



### Employee Engagement

We also share information about our company and strategy through events such as:

- All Hands Forums which are companywide and hosted regularly by our leaders.
- Management Team Meetings which occur each year to connect managers within the company focused on strategy, service delivery, professional development, and relationship building.
- Regular employee electronic communication on important issues.

### Employee Growth & Development

- CHA has a robust Technical Excellence Program designed to inspire employees through opportunities to increase their knowledge and technical skills, learn from practice area experts, work on challenging projects, and expand their responsibilities as part of a successful team. Program components strive to foster and nurture the natural intellectual curiosity of our staff and help develop, support and advocate for technical experts who are the most knowledgeable in the industry, the most qualified as recognized by their clients and peers, and the most engaged in their work and professional development. Some program components include:
  - Communities of Practice—CoPs provide technical learning opportunities for our staff to fuel their interest, knowledge, and passion in their careers and in CHA.
  - Technical writing guides, quality documents, technical bulletins, lessons learned and quality manuals designed to enhance quality and promote best practices and successes.
  - Technical Training, including a robust online training platform and licensure exams.
  - New Ideas for Tomorrow to promote intellectual curiosity focused on identifying, anticipating, and evaluating changes in technology, changes in society, and changes in the delivery of engineering services.
  - Publish and Prosper Program to promote the excellent work we do by publishing and presenting in a variety of forums. Thirty-eight papers and presentations were accomplished in 2019 under this program.





## The CHAway

- Our Principals of Management Program is designed to build upon and strengthen the skills necessary for leading highly effective teams at CHA.
- The CHA Office Leader Program creates an opportunity for selected employees to help lead the organization's efforts to create an environment in which everyone feels valued, connected and motivated to do their best.

### Recognition & Rewards

- Through our Recognition by Design Awards program we celebrate our employees' accomplishments, whether it's an individual effort or a team win on a project. The program includes three opportunities for recognition—between peers; by leaders and managers to individual contributors or teams; and by project managers to project teams.
- We recognize employees for reaching service milestones, receiving their professional licenses, and retiring from the company.
- In 2019, CHA provided employees with 257 Excellence Awards, 139 Illumination Awards, and 14 Synergy Awards.
- Ten outside organizations recognized the accomplishments of individual CHA employees.
- 19 projects were recognized for excellence by outside organizations, including ACEC and ENR.



### Engaging the Next Generation of STEM Leaders

- CHA hosts a summer Internship Program where college students join the CHA team in several office locations. This program allows students to get real work experience and be part of a program offering technical talks, field trips, and both group and individual projects. The group projects are presented in front of CHA's leadership and CEO.
- CHA has partnered with a number of colleges and universities to provide co-op opportunities to college students who are completing a degree in engineering or technical field.
- CHA's Emerging Professionals Program is a two-day immersive orientation event for new employees at the beginning of their professional careers to discover and learn about CHA's programs, systems, and career opportunities.

# 01

### FLEXIBLE WORK SCHEDULE

Reasonable accommodation is made for working a flexible schedule and work location on a regular basis based on group staffing requirements, workload, communication abilities, and individual circumstances.

At the onset of the COVID-19 pandemic, CHA invested in technology and processes to allow for a seamless transition to a remote work environment. Our staff was immediately able to communicate effectively with clients and colleagues and demonstrated our team's agility and adaptability in the face of adversity.

# 02

### INTERPERSONAL CONNECTIONS (DISC ASSESSMENT)

Our business is a team sport! Our teams are more effective if they

know each other better and can work together in a more dynamic and confident manner. CHA will use DiSC Assessment as a way for team members to get to know not just the technical or professional credentials of colleagues, but also a bit about what makes them tick as a person.

# 03

### INCLUSION & DIVERSITY

Achieving an inclusive workforce that values diversity. Diversity yields a wider range of skills, better decision-

making, and fosters empowerment. CHA continues to expand our efforts to attract diverse candidates to our open requisitions, to promote diversity as part of our internal promotion process, and to offer a variety of training to our employees on topics such as unconscious bias.



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Sustainable Practices Take Center Stage for CHA’s Emerging Professionals

In January 2020, CHA hosted nearly one hundred recently hired early-career CHA employees for the inaugural Emerging Professionals Forum. The two-day immersive event engaged new employees at the beginning of their professional careers.

In line with CHA’s sustainability commitment, the forum was paperless with an event app, a seed paper airplane activity, and giveaways that included reusable water bottles and metal straws.



The Emerging Professionals Team Challenge entailed developing an action plan on how CHA can reduce or eliminate an environmental impact of a present company practice. The winning team’s action plan related to employee commuting, a large portion of our total carbon emissions.



‘Recognition by Design’ Awards Recognize Excellence

CHA’s Recognition by Design program is developed to create a culture of recognition through providing both formal and informal avenues to celebrate contributions, hard work and successes; while also encouraging continued dialogue about the importance of recognition throughout the company.

During 2019, CHA recognized over 400 colleagues for their contributions towards our shared success and becoming the best in the industry!





## The CHAway

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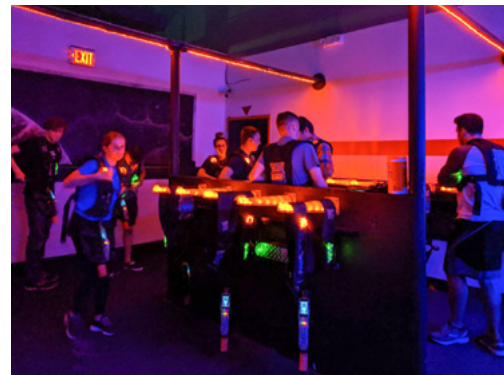
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### Intern Program Fuels Career Success

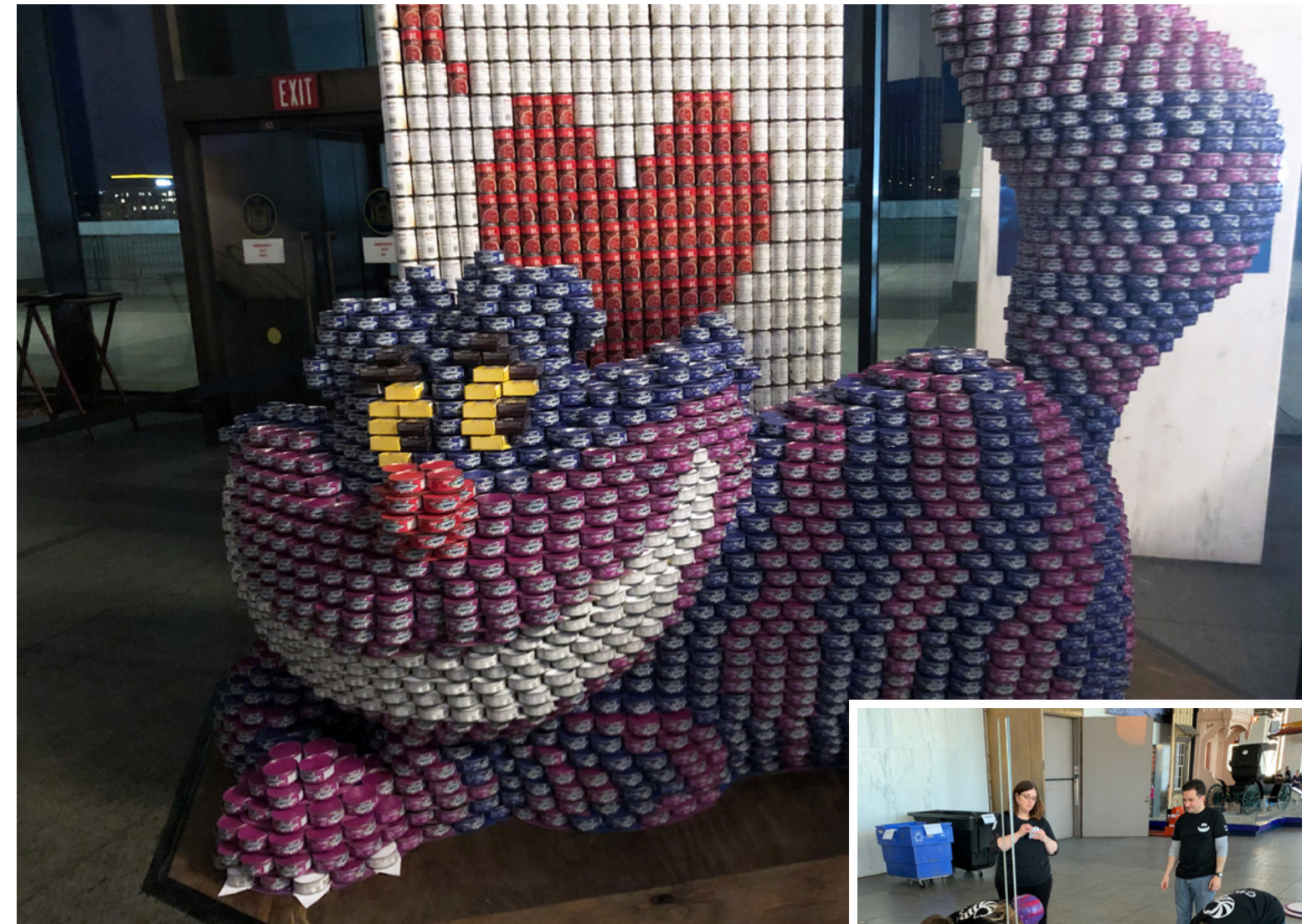
CHA has an extensive and competitive Summer Internship Program. Each summer, CHA employs interns throughout our offices. Over the 8- to 12-week program, our interns participate in authentic learning experiences that help them improve upon and develop new skills.



These opportunities include:

- Real hands-on experience; performance of entry-level responsibilities
- Teamwork among fellow interns and technical team members
- Technical presentations
- Project site visits
- Research project and presentation participation
- Social outings and community outreach opportunities
- Field work

Our internship program aims to prepare students for an entry-level working environment and provides them with the best resources to be successful in their future careers.



### CHA CANstruction Team WOWS with Cheshire Cat

Team CHA in Albany, NY each year creates magic at CANstruction, an annual exhibit and design competition that connects talented architects, engineers, contractors and students to imagine and create colossal structures built entirely out of canned food items. CHA's Alice in Wonderland Cheshire Cat, designed for 2019's Disney theme, was created out of 5,169 cans and had 54 distinct layers. In addition to being featured in local news, the design was awarded the Structural Ingenuity Award. CANstruction competitions are held in cities across the U.S. and internationally. At the end of the exhibit, all the cans, totaling more than 100,000 pounds of food, are donated to the Food Pantries for the Capital District. CHA has participated in CANstruction as a builder and/or fundraiser for nine years.



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### Mentoring Program Boosts Success

CHA has a robust mentor program. Whether an employee is looking to learn a new skill, expand their professional network or simply get more organized, a mentoring relationship can be a powerful tool.

Participants in the program tell the story best. Here are two testimonials:

**Mentee:** “My mentor and I have been meeting as part of the program for more than a year and I have been so thankful to see our professional relationship grow over that time. As an operations leader, my mentor’s calendar is always full but he has been faithful in taking time to meet with me each and every month. From our formal mentorship, I have been able to learn about project management, finance, making tough decisions and what defines good business practices. He has openly invited me to attend project management trainings outside my organization and is a listening ear, providing meaningful feedback when I need to practice presentations for conferences. My mentor’s consistent and solid guidance, along with his sense of humor, have helped in immeasurable ways when I have run into disappointing or complicated work situations. I am deeply grateful for our mentoring relationship and look forward to it continuing for the foreseeable future.”

**Mentor:** “We have been meeting monthly now for over a year as part of CHA’s Mentor Program. We are in separate groups—in our case Transportation and Water, respectively—but we share many similarities in our educational backgrounds, life experiences, and our approach to the consulting engineering business. Our discussions are open, sharing and as I’ve stated to her—I self admittedly do not have all the answers but I’m always willing to listen and provide insight where I can. I myself am in a continual state of learning and improving too and I get as much from our discussions as my mentee does. It’s a great program and everyone should seize the opportunity to connect with a colleague in this way.”



**CHA’s mentoring program provides enriching development opportunities to participants.**



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# Sustainable Operations

## Introduction

As a leading provider of consulting services, CHA is acutely aware of our responsibility to reduce our environmental footprint. We work to minimize the impact of our operations by conserving resources on client projects and incorporating environmentally friendly practices in our corporate programs to engage and motivate employees.

Annually we will track our environmental footprint and provide a scorecard of our progress in meeting our goals and implementing the reduction programs outlined in this section.

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## Sustainable Operations

### Energy & Emissions

To calculate the carbon emissions from our operations, we used the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. The metric that we will use to measure progress on meeting carbon reduction targets will be the carbon dioxide (CO<sub>2</sub>) equivalent per employee. We are using this metric because CHA’s corporate strategy includes growth in employees and geographic locations. Therefore, absolute emissions and energy consumption will increase. To measure the success of our conservation measures, we will normalize emissions and energy consumption use by employee.

In 2019, we generated a total of 5,990 Total Metric Tons of CO<sub>2</sub> Equivalent which equates to 4.78 Metric Tons of CO<sub>2</sub> Equivalent per Employee.

**CHA’s Scope 1 emissions consist of emissions from CHA Fleet Vehicles.**

Total Metric Tons of CO<sub>2</sub> Equivalent = **215.6**  
Metric Tons of CO<sub>2</sub> Equivalent per Employee = **0.2**

**CHA’s Scope 2 emissions consists of emissions from the energy used by our offices.**

Total Metric Tons of CO<sub>2</sub> Equivalent = **1,900**  
Metric Tons of CO<sub>2</sub> Equivalent per Employee = **1.5**

**CHA’s Scope 3 emissions consist primarily of emissions associated with business travel, including travel to and from work.**

Total Metric Tons of CO<sub>2</sub> Equivalent = **3,874**  
Metric Tons of CO<sub>2</sub> Equivalent per Employee = **3.08**

**Totals**

**Total Metric Tons of CO<sub>2</sub> Equivalent = 5,990**  
**Metric Tons of CO<sub>2</sub> Equivalent per Employee 4.78**

### Carbon Reduction Targets

Carbon Reduction Targets	Reduction Target	Baseline Year	Target Year
Scope 1 - Direct Emissions from CHA Vehicle Fleet	20%	2019	2025
Scope 2 - Indirect Emissions from Purchased Energy	20%	2019	2025
Scope 3 - Indirect Emissions primarily associated with business travel, including travel to and from work	20%	2019	2025

How will we get there?

By reducing our own carbon emissions

By purchasing renewable energy, where/if possible

CO<sub>2</sub>

We will reduce our carbon emissions by implementing the following:  
Carbon Emission Source:

**Scope 1  
Direct –  
Fleet Vehicles**

By 2021, We will develop a Green Procurement Policy that provides preference to purchase or lease more efficient, hybrid or all electric vehicles, where possible.

**Scope 2  
Indirect –  
Office Energy Use**

We will continue to Implement Energy Efficiency Projects/ Measures, when renewing our office space.

**Scope 3  
Indirect –  
Business Travel**

We will continue to promote CHA’s existing carpooling and mass transit incentive programs and develop program metrics. We will collaborate with our travel company and identify opportunities to Green our Business Travel. We will continue to use electronic platforms to encourage collaboration instead of travel, where possible.





## Sustainable Operations

### Waste

- CHA estimates that its offices generate 451,000 lbs. of solid waste annually. Since most of our office space is leased and solid waste disposal and recycling are incorporated into our leases, we have estimated the amount of solid waste generated per employee based on a US Environmental Protection Agency metric.
- We used 5.5 million sheets (8 ½" x 11") of paper, some of which has recycled content.
- We presently use technology to do electronic markups of documents as much as possible.
- We presently use electronic distribution of company communications.
- We purchased 483 new computers.

### Goals

We are instituting a number of programs intended to reduce the amount of waste generated and increase recycling at our offices. We will set more specific waste reduction goals in 2021 once we have a more accurate waste generation baseline, institute tracking mechanisms, and tee-up the programs shown to the right (pg. 55) for implementation.

01

#### PILOT STUDY

To get a more accurate baseline, we will conduct a pilot study to get a more representative volume of waste generated and recycled by CHA offices.

02

#### REDUCE WASTE & INCREASE RECYCLING

The Green Team developed a suite of alternatives that will reduce waste and increase recycling of many office supplies, including coffee, plastic, and single use products. Over the remainder of 2020, we will be working with our office supply partner to migrate these more sustainable products into the offerings that our offices can choose from. We will also develop reporting metrics.

03

#### REDUCE SINGLE USE

We have adopted a hierarchy to reduce single use products:

- Encourage employees to bring their own cup, plate, and utensils for office use;
- Provide a small number of washables for each office; and
- If single use products are needed, the products must be 100% biodegradable.

04

#### EDUCATION

We will launch a comprehensive Education & Awareness Program to ensure our employees are recycling effectively.

05

#### PRINTING

We will ensure all printers default to 2-sided printing and in black and white.

06

#### ELECTRONIC DELIVERABLES

We will continue to provide clients electronic deliverables, where possible.

07

#### RECYCLED PAPER

By 2021, we will develop a Green Procurement Policy that gives a preference for recycled content paper that is totally chlorine free (TCF) or process chlorine free (PCF) and made with renewable energy—if possible.

08

#### GREEN ELECTRONICS

By 2021, we will determine the feasibility of including in the Green Procurement Policy a commitment to purchase Energy Star-rated computers, laptops, and printers, and if we can, recycle our e-waste for leased and owned electronic equipment.

09

#### GREEN MEETINGS

By 2021, we will develop recommendations on how to green business meetings, events, corporate outings, tradeshow, and give-aways.



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### Water

We estimate that 2.6 million gallons of water is consumed at CHA's offices annually; the majority of which is consumed is within restrooms.

Many of our offices supply bottled water in single use plastic bottles and coolers with large plastic bottles that multiple people use.



01

#### NO SINGLE USE

By 2021, we will discontinue offering single use plastic water bottles to our employees and guests and have them removed from vending machine offerings. We will donate existing inventory to regional Food Banks or other worthy organizations.

02

#### WATER STATIONS

Over time, we will migrate away from hot/cold water dispensers that use bottled water and replace them with filtration systems attached to tap water supplies and/or provide water refilling stations at water fountains.

03

#### REDUCE WATER USE

We will continue to Implement Water Conservation Measures, when renovating our office space.



### Office Renovations Feature Sustainable Solutions, Complement Green Office Operations

Renovations in several CHA locations—including Colonie and Syracuse, New York and Boston and Norwell, Massachusetts—have featured sustainable practices and materials, including **vacancy sensors**, a **daylight harvesting system**, LED fixtures, energy efficient heat pumps, and water bottle fill stations.

Office renovations have also offered the ideal time to shift from paper filing to **electronic filing** of project and office records. If deemed reusable, used **office furniture and fixtures were donated** to local charity organizations. Additionally, the new office furniture is **GREENGUARD Indoor Air Quality Certified®**. This means that building materials meet certain standards for recycled content, use clean manufacturing technologies, are harvested in an environmentally responsible way, and reduce the use of furniture assemblies that may release indoor air contaminants.

These aspects of the renovations complement standard green practices within CHA's office operations, including hybrid and **electric car charging stations** at the Colonie office parking lot and standard **double-sided printing**.

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In addition, in the Colonie office, collaboration with our building owner has resulted in several green initiatives.

### HVAC:

Nearly all heat pumps within the building are or will be replaced with high efficiency heat pumps. HVAC controls are also being replaced with controls that connect to our building management software, allowing us to monitor the building conditions and equipment performance remotely and adjust as required to maintain optimal thermal conditions.

### Lighting:

All lighting in the common areas (corridors, stairwells, bathrooms, lobbies) and CHA suites is being converted to LED lighting to reduce the electrical load of the building. The remaining tenant spaces will be upgraded to LED lighting when applicable by their leases.

### Building Improvements:

A new vestibule / air lock is included in the common area construction project. This building component will add to the efficiency of the HVAC system controlling the building common core areas.

The existing fountain is being removed, thereby improving the building's humidity levels and adding to the efficiency of the HVAC system controlling the building common core areas.

The performance of the masonry veneer on the building's envelope is being improved through repointing, repairing expansion joints, and sealing the face. These measures will control moisture infiltration that could impact the insulation performance.

### Operations:

Daily janitorial services include recycling of paper waste from all tenant and common areas, as well as the use of environmentally friendly cleaners.

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# Sustainability Governance

## Leadership

The Board of Directors has formal oversight of the sustainability initiative and annually reviews progress against our sustainability strategy. At the operational level, CHA's head of Operations & Innovation, **Joe Macrina**, is accountable for relevant goals and metrics and reports directly to our President and CEO, **Jim Stephenson**. The Green Team Chair and Government National Market Director, **Erin Crotty**, reports to Joe on sustainability issues. The Board has adopted a corporate Sustainability Policy.



Jim Stephenson



Joe Macrina, PE



Erin Crotty



## The Green Team

We convened a Green Team in January 2020 to develop sustainability recommendations aligned with the four strategic pillars which formed the basis of this report. Our Green Team is comprised of over 20 colleagues from throughout the organization. The responsibilities of the Green Team include developing our sustainability goals, measuring progress on meeting metrics, and assisting with sustainability reporting. In addition, we intend to have a Green Ambassador in each office by 2021 to assist with sustainability program implementation.

## Transparency and Reporting

This is CHA's first comprehensive corporate sustainability report. We report on data and activities related to our sustainability strategy for our fiscal 2019 year, covering the period January 1 to December 31, 2019 (except where indicated otherwise) and spanning across our operations. We intend to provide an annual update on our sustainability initiative, including our progress in meeting our sustainability goals.

In addition to this report, we disclose select environmental, social and governance (ESG) information to relevant third parties that produce ESG ratings and rankings, including CDP, a global environmental disclosure non-profit organization. We have participated in CDP's Climate program since 2017.

## Feedback Is Important

On behalf of the Green Team and all those who have had a part in developing CHA's 2020 Sustainability Report, we welcome your feedback at [sustainability@chacompanies.com](mailto:sustainability@chacompanies.com).

## Do You Need Our Sustainability Services?

CHA's sustainability initiative, including the development of this report was done entirely by our talented and expert colleagues. If your business would like to engage our services on your sustainability efforts, please contact us at [sustainability@chacompanies.com](mailto:sustainability@chacompanies.com).

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