

progressive|ae



SUSTAINABILITY ACTION PLAN

Progressive AE's Commitment
to Sustainable Design



Vertical Growing Rack #2



Aquaponics System Control Panel



Target Environmental Parameters

Daytime Air	65F-75F
Nighttime Air	55F-65F
RH (Relative Humidity)	55%-70%
WPD (Water Pressure/Delta)	0.80-0.95
DLI (Daily Light Integral)	12-16

Target Water Quality Parameters

pH	6.5-7.2
Dissolved Oxygen	>5ppm
Water Temperature	70F-80F
Ammonia	<2ppm
Nitrite	<2ppm
Nitrate	<20ppm
EC (Electrical Conductivity)	400ppm-1000ppm
	0.5-1.5

The Innovation Barn - Charlotte, NC



The Innovation Barn - Charlotte, NC

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Firm Overview

Progressive AE's workforce is a unique blend of creative people who think strategically, and strategic people who work creatively. The firm is guided by Performance Based Design, a fundamental and forward-thinking philosophy. Through Performance Based Design, we commit to optimizing performance for clients and validating results post-occupancy.

FULL SERVICE ARCHITECTURE & ENGINEERING FIRM		60 YEARS OF EXPERIENCE	
ACTIVE IN 48 STATES	10 MARKETS	140+	DESIGN AWARDS
230+ SKILLED PROFESSIONALS		LOCATIONS= 2	

Full Service Expertise

One thing we know is each client faces unique needs that must be met, while keeping the future in mind. This is exciting to us. No challenge is too great, thanks to our comprehensive range of services. Whatever discipline is required, we have subject matter experts on hand to find the right solution.

Our Areas of Expertise Include:

- Architecture
- Design-build
- Engineering
- Interior Design
- Landscape Architecture
- Planning and Consulting
- Procurement
- Universal Design
- Urban Planning
- Water Resources

Our Goal: Driving Performance Through Design

We seek purposeful solutions to drive your organization's performance. To this end, we work in a wide range of industries — from industrial plants to retail stores. Each is home to a dedicated, multi-disciplinary team whose talents are marked by fresh design, technical precision and productive spaces. Having experts who specialize in your industry brings you a tremendous experiential advantage and a deep knowledge base of what you do, current trends and critical elements of success.

Where We Work:

- Community
- Healthcare
- Housing
- Industrial
- Learning
- Retail
- Senior Living
- Sports
- Workplace
- Worship

Progressive AE'S Commitment

We acknowledge the impact that the built environment has on climate change and the natural environment. We are passionate about engaging with communities to create positive change which will benefit people, places, and our planet. We hold ourselves accountable in the work we do together, and we take pride and ownership in the unique solutions, tools, and knowledge we offer to our stakeholders. We strive to continually improve as we share in the success of our clients and the communities they serve.



History of Sustainable Design at Progressive AE

Progressive AE became a corporate member of the U.S. Green Building Council in 2000. As early advocates for sustainable design, and with over 50 LEED accredited professionals, we have guided hundreds of projects through LEED certification; including our corporate headquarters in Grand Rapids, MI. Building on these commitments, beginning in 2020, firm leadership encouraged employees to seek accreditation through the WELL building standard. We currently have 25 professionals influencing design through the WELL standard framework. Additional opportunities we're engaging with include Green Infrastructure (NGICP) for Communities within our Planning and Civil Engineering disciplines, as well as PassivHaus and Living Building Challenge strategies for multi-family projects, medical office buildings, and other building types. Most recently in 2021, Progressive AE has become a signatory of the AIA 2030 Commitment, further enhancing the company's commitment to reduce carbon emissions and aid in the fight against the impacts of climate change.



Future-focused Design

You cannot have sustainable design without resiliency. Resilient design looks to the future, and plans and prepares projects and communities to be adaptable to climate change. To do this, we acknowledge and incorporate the AIA Framework for Design Excellence. We understand and implement standard and optimization features from various green metrics throughout our design process. We strive to go beyond code minimum and engage stakeholders and community members to provide equitable, sustainable and resilient design.

Sustainability Advocates & Change Management

Progressive AE's Sustainability Green Team provides a consistent message through our various internal and external communication channels. We introduce sustainable design as part of our company culture, evident in our proposal from the initial project meeting with stakeholders, and it is promoted throughout each phase of the design-construction process with sustainable champions from various practice disciplines. We continually educate our staff, from leadership to interns, as well as our clients and the community at large.

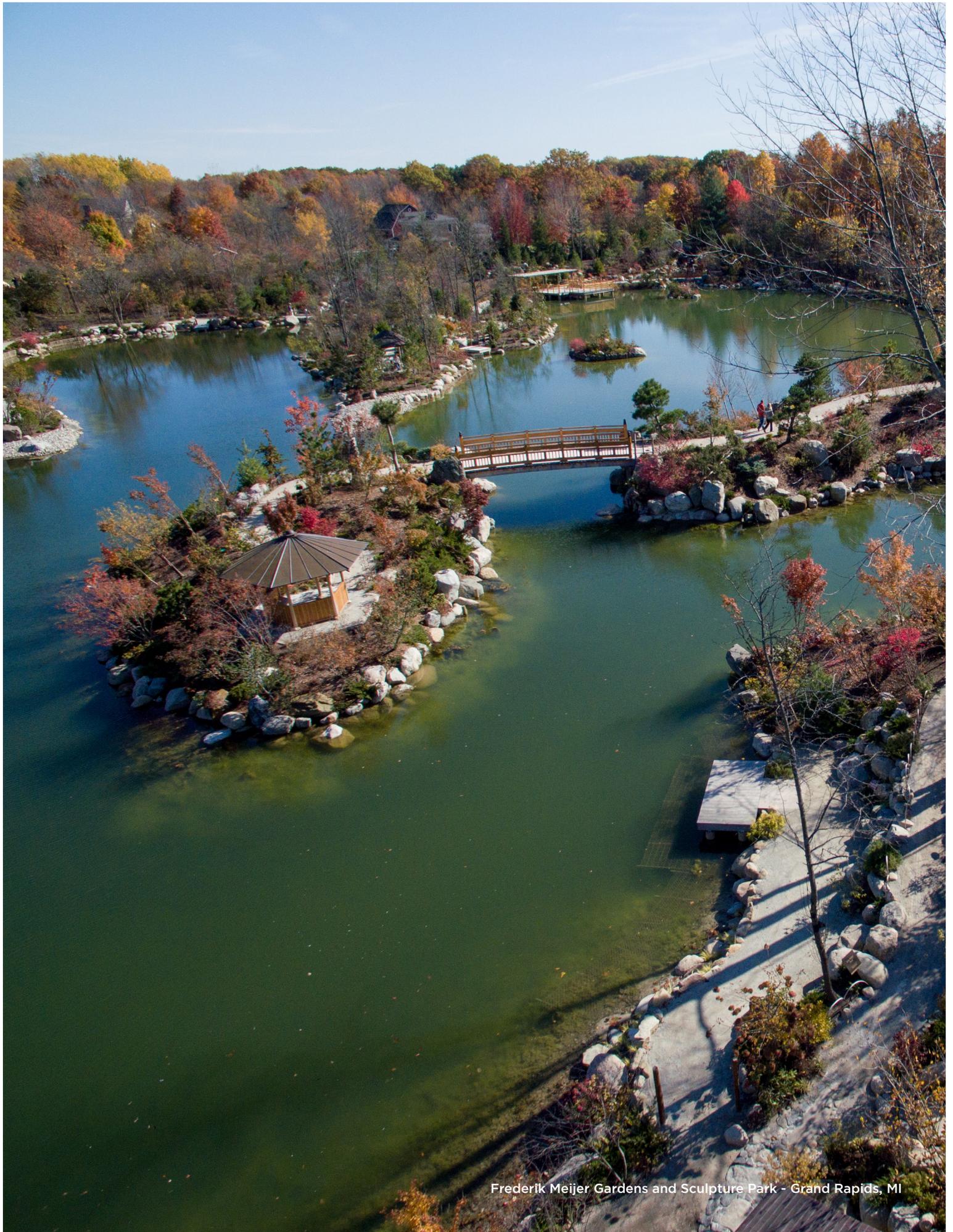
We celebrate project successes both big and small to create momentum and opportunities to learn from those successes and identify opportunities where we can improve. As our project teams realize energy and carbon reduction in all project types, we raise the baseline for our projects over time. Sharing our success, we foster a company culture that believes in affecting positive, equitable, and inclusive change in addressing the impact of climate change.

Progressive AE is actively engaged with change management within our team structure to create integrated project teams within our multi-disciplinary company. This allows seamless integration of the AIA 2030 Commitment into company culture.

We will employ seven strategies for change:

1. Active and visible executive sponsorship
2. Dedicated change management resources
3. Structured change management approach
4. Employee engagement and participation
5. Frequent and open communication about the change and purpose for change
6. Engagement and integration with project management
7. Engagement and support from Practice, Team & Technical Leaders and aid in the fight against the impacts of climate change.





Frederik Meijer Gardens and Sculpture Park - Grand Rapids, MI

Design & Approach

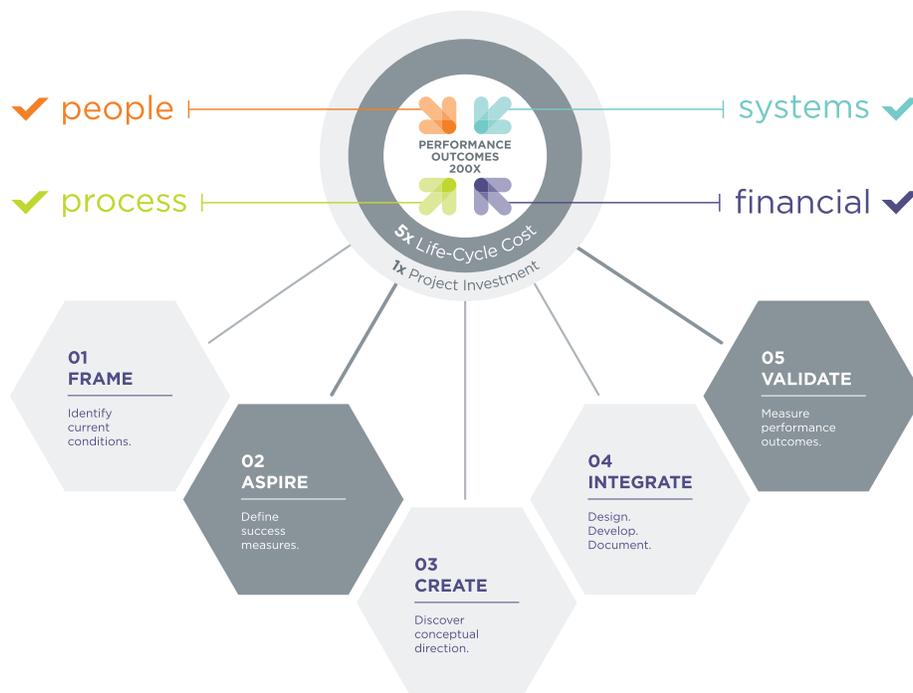
Progressive AE integrates the AIA Framework for Design Excellence into our existing Performance Based Design (PBD) process. This integration helps frame our perspective and keep the 2030 Commitment central as we engage clients, stakeholders, and project partners, including our diverse professional staff and consultants. Our design process ensures curiosity, empathy, and emotional intelligence.

We embrace human-centered design, Universal Design (UD), and a heightened awareness of the benefits of a more diverse, inclusive, and equitable design process. We set targets for each market we serve, in recognition that our multidisciplinary practice offers different matrices of opportunity. Performance targets established as a company define what success looks like for us, our client’s projects, and the communities we serve. Collectively these targets help us measure how the firm is upholding our commitment.

Performance Based Design

Progressive AE lives by the fundamental philosophy that design drives performance. It’s the idea that design is not simply about beauty, it is about improving organizational outcomes. We know our clients have key drivers that help motivate decisions and set their course of action. Together, we will work to frame where they are today, aspire to where they want to be tomorrow, and create a course to make that happen. There is nothing left to chance in our relationship with them. Performance-based design allows us to develop key performance measures, with our clients, that will stay top-of-mind during the design process. In fact, they drive each and every decision we make as we develop exceptional solutions that tie-back to their strategic vision and aspirations for the future.

We are a design-oriented firm, and we believe all design needs to incorporate sustainable and resilient design and inclusion of the community at large. We strive to make the business case for our clients and position them for a better future, improving their bottom line and increasing positive community impact while also reaching our company’s AIA 2030 goals. By being leaders and good stewards of our environment at all levels, we not only position ourselves as leaders within our industry, we create a culture that attracts and retains top talent.



Sustainable Design Strategies

Broadly, we:

- Embed Universal Design strategies and solutions within each of our projects.
- Include whole building life cycle assessment (wbLCA) within our planning, specification, evaluation, and submittal and substitution review processes.
- Seek information related to embodied and operational carbon as we recommend and vet systems, materials, and assemblies for our projects.
- Develop energy modeling early in projects, following ANSI/ASHRAE's Standard 209, Energy Simulation Aided Design for Buildings Except Low-Rise Residential.
- Utilize design modeling software, such as cove.tool, to ensure multi-disciplinary engagement and analysis of massing, orientation, envelope, and systems opportunities to reach our performance targets.
- Identify characteristics not currently considered when analyzing potential solutions.



Design, Delivery, & Engineering

Progressive AE engages primarily in traditional project delivery methods where programming, planning, and design is provided by our multi-disciplinary team through standard phases of the design-construction process. A minimum level of sustainable design shall be established and implemented on all projects to affect positive movement in carbon reduction. These delivery methods afford us the opportunity to research, analyze, and recommend integrated systems aligned with client project goals and measures. Additionally, when we seek to understand our clients' sustainability commitments, we can align them with our 2030 commitment and propose solutions within our projects that support our client's commitments as an organizational whole.



Energy modeling is a multi-disciplinary process for Progressive AE. Following ASHRAE 209, we can measure multiple potential solutions during each phase of design. Software such as cove.tool allows our teams to learn from and educate our project teams as to why we are recommending solutions; telling the story of what it means for the project and for the stakeholders who are affected by the project decisions. We also challenge the requirements of authorities having jurisdiction (AHJ) regarding which standards and measures we recommend in an effort to advocate positive change, reduce long-term operational



costs, and increase the effectiveness of our building codes.

As a multidisciplinary firm, Progressive AE has a unique advantage of engaging engineers at the initial phases of projects during programming, planning, and scoping of potential solutions. In this integrated approach, we consider strategies for energy capture and distribution, in addition to optimizing a project's systems, massing, orientation, and building envelope.

As more sustainable energy capture increases through solar and windfarm construction, we are interested in the electrification of buildings to eliminate dependence on fossil fuels for clients. At a minimum, we plan space for future infrastructure such as localized power capture and generation, and photovoltaic integration into building envelopes.

We educate ourselves and our clients of available incentives and feasibility for renewable energy integration into their projects. These opportunities may include green financing, rebates, grants, and leasing of equipment. Incentives for not-for-profit clients could be bolstered by connecting funding for them through philanthropic organizations interested in supporting renewable energy projects.

Whole building life cycle assessment (wbLCA) improves a project team's decision making during the design and specification of a project. We educate ourselves regarding wbLCA as a new process on pilot projects. Tools such as Tally/EC3 and Kaleidoscope are commonly used within the AE industry and will plug into our current design and documentation software, REVIT. Additionally, we seek out manufacturers who support wbLCA by providing our project teams with wbLCA documentation we can include in synthesis of design recommendations.

Goal Setting & Evaluation

Market Research

Progressive AE includes two teams with a market-centric approach to delivery: Program Delivery and Project Delivery. Our Program Delivery team specializes in prototype design and delivery, while Project Delivery focuses on market-specific projects. The most relevant data for both teams

centers around efficiency of fee management, client satisfaction, and quality control and assurance in our documentation.

The firm's markets are led by Practice Leaders, and we lean on them to educate the benefits of integrating the AIA 2030 commitment into our PBD process. Alongside Practice Leaders, we identify clients within our markets who have climate commitments and goals to reduce their carbon footprint and resource consumption.

Targets & Measures

Incremental targets include performing energy modeling to determine Predicted Energy Use Intensity (pEUI), whole building life cycle assessment (wbLCA), embodied and operational carbon measurement, and green infrastructure. pilot projects for implementing these strategies and invest in the effort outside of normal project budget requirements to ensure we work in tandem with project schedule requirements. We also collect site and building-specific data during early phases on projects tied to goals and measures which are verified during operations and maintenance. This effort will realize graduating targets for the various markets our teams perform in, with the understanding some markets garner increased targets faster than others.

The Sustainability Green Team works with Practice Leaders and Senior Technical Leaders to identify projects they would like to see uploaded to the Design Data Exchange (DDx) platform. We upload several recently constructed projects to DDx for the benefit of comparing with other similar projects. We target to upload ten projects to the DDx by May 2022.

We collect information from our clients to directly validate planning and design principles committed to within the "Aspire" phase of PBD. Additionally, we set a target to collect the necessary information to measure Energy Use Intensity (EUI) for comparison against our Predicted EUI (pEUI). We synthesize and learn from the realized impact our projects have on achieving our 2030 commitment through informational graphics.

Progressive AE has developed a minimum performance level to be achieved on all projects to pursue a target of 20% energy efficiency over code baseline. Alternate strategies and technologies will be employed as learning actions to understand where additional efficiencies and cost savings can strike a balance.

Post-Occupancy Evaluation

Within our Performance Based Design process, we establish planning and design principles including performance measures. These not only focus on business and human-centered outcomes, but also include environmentally focused goals and metrics. Project data across phases includes development and analysis of a building through the cove.tool platform, with the plan to increase our use of the tool within all markets. The PBD process concludes with a “Validate” phase, which provides our project teams and clients with a post-occupancy review of the project.

For our clients, we are interested in outcomes resulting from occupancy and operation of their project. In addition to energy efficiency and carbon reduction, we are interested in understanding the impact the project has had on talent attraction, retention, and growth.

Governance & Reporting

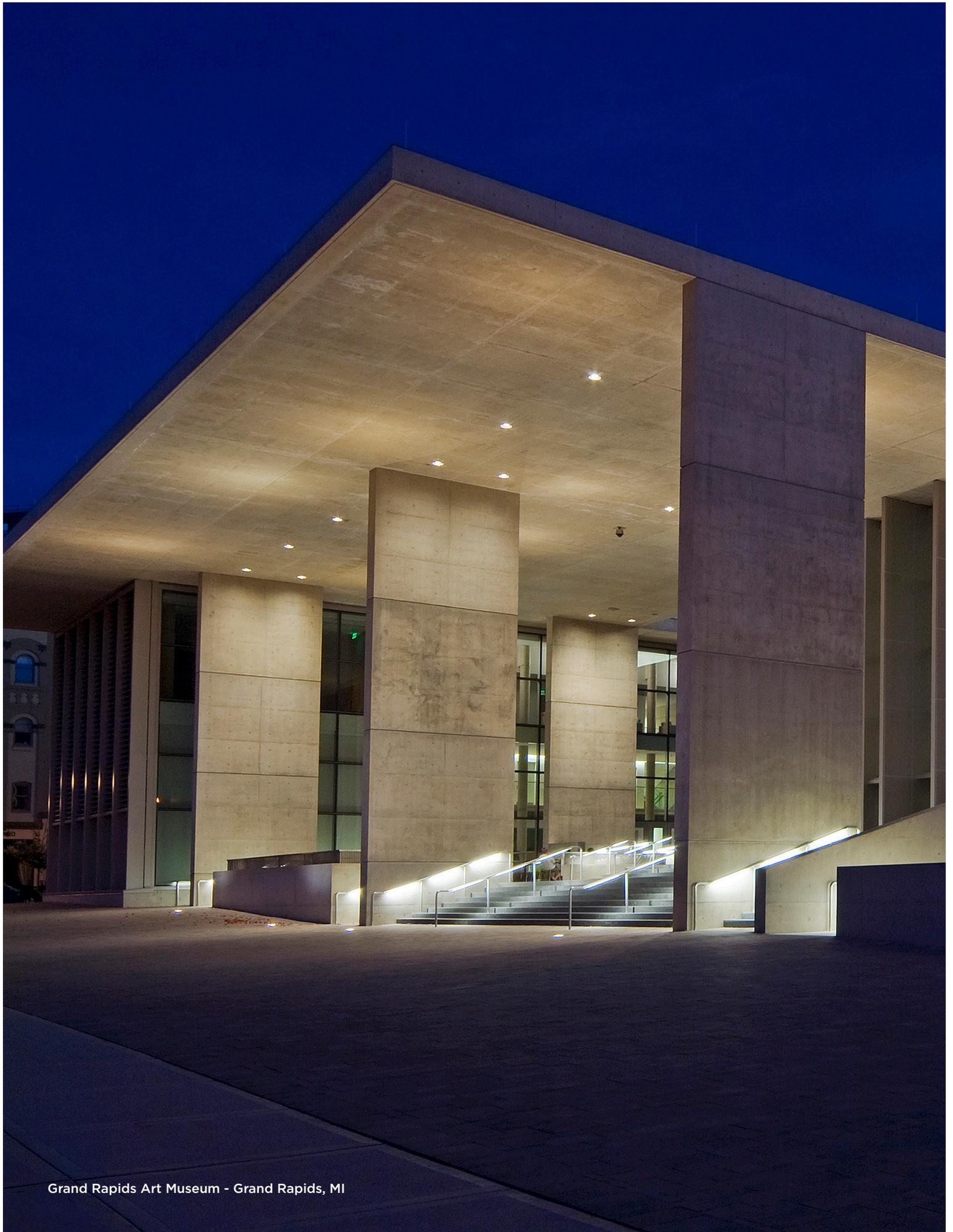
We establish a working group to develop, vet, and upload data to the DDx. Project evaluation will include utilizing cove.tool and other tools or available programs for energy modeling and analysis early on in identified projects.

DDx champions for each project will collect data from project engineers, designers, and architects. Data will be added to the DDx once the working group has reviewed the outcomes and confirmed the data is correct and viable for upload at the end of milestone phases of a project e.g., Schematic Design, Design Development, Construction Documentation. Data may be added by project team members at the discretion of the working group.

We plan to use multiple sources to share data with leadership and staff. In addition to posting the data on the company intranet, we will share projects within our project teams, in our townhall and other company-wide meetings.

Cornerstone University Jack & Mary DeWitt Center for Science & Technology - Grand Rapids, MI





Grand Rapids Art Museum - Grand Rapids, MI

Internal Training & Education

Progressive AE fully supports the development and growth around sustainable, equitable and resilient design principles and has proven that support in several ways:

- The Sustainability Green Team, a group of multidisciplinary employees, guides company efforts toward sustainability and resiliency. The team collaborates with other culture-based committees such as Diversity Equity and Inclusion (DEI), to inform a more holistic approach to sustainable and equitable design.
- Significant financial contributions towards procuring, testing, researching, investing in design and modeling software and the training needed to implement the software into the design process.
- A culture of continuing education creates many opportunities for professional development through professional organizations, local committee involvement, office presentations, and conferences.

Progressive AE is well staffed with exceptional talent in every department. As the company pursues AIA 2030, there are additional skills that may be needed to advance our capabilities in sustainable design. Some of these skills both hard and soft include:

- Complete our Validate process within PBD
- Energy modeling
- Experience with DDX and the AIA 2030 reporting software
- Sustainable design principles
- Sustainable specifications
- Understanding embodied carbon and how to design to minimize it
- Being able to market sustainability
- Passion for sustainability
- Consulting – market development of sustainability services

Progressive AE's is committed to and supports employee development and has created several policies to facilitate growth. Below are some ways we educate our employees to successfully participate in AIA 2030:

- Engaging with industry experts for in-office training
- Giving access to online educational series such as AIA 2030 online series
- Experienced staff to conduct educational sessions where they can share lessons learned and best practices
- Encouraging employees to attend conferences and programs that focus on Sustainability
- Providing opportunities to learn software/ tools that are critical in tracking 2030 challenge. Currently, we are training employees in Cove.Tool.

In our industry, the role of networking can be an asset for both information sharing and project acquisition. Professional memberships are a vital part of our network and should be fully engaged in our effort towards carbon neutral projects by 2030. Some benefits include:

- Sharing information about AIA 2030 and getting more firms involved
- Learning what other organizations are involved in regarding sustainability
- Making connections that could lead to sustainable projects

Progressive AE is currently involved in several organizations including leadership roles and will continue to make efforts to increase involvement in more organizations. In doing so we will learn from these communities and play a role in advancing our industry towards sustainable practices. Here is a list of organizations identified for their involvement in sustainability and opportunities for greater education and involvement:

- West Michigan Sustainable Business Forum
- AIA Committee on the Environment (COTE)
- AIA Sustainability Round Table
- West Michigan Environmental Action Council

- Michigan Environmental Council
- West Michigan Conservation Network
- Michigan Climate Action Network
- Michigan Society of Professional Engineers (MSPE)
- American Society of Civil Engineers (ASCE)
- American Council of Engineering Companies (ACEC)
- American Society of Plumbing Engineers (ASPE)
- American Society of Electrical Engineers (AIEE)
- American Society of Mechanical Engineers (ASME)
- Construction Specifications Institute (CSI)

Administration Staff, Senior Technical Leaders, and Team Leaders will ensure everyone is up to date with their training and professional development.

Outreach & Advocacy

Progressive AE uses the following media outlets to communicate with existing and potential clients:

- Progressive AE website; Sustainable design webpage highlighting our commitment, approach, and services:
 - Featured projects that are either third party certified or have other unique sustainability features
 - Thought-leadership blog posts on sustainable design, universal design, adaptive reuse, and more
 - Whitepapers
 - Podcast episodes
- Press releases
- Social media posts highlighting projects, AIA 2030 updates, and thought leadership
- Direct emails to clients including videos and information about sustainable design
- Live presentations and networking with local professional, sustainable and other types of groups and organizations

Our business development team and leadership emphasize sustainable design strategies and experience when they interact one-on-one with clients, whether through written proposals or word of mouth. We use past projects to demonstrate what we can do for the client and provide educational materials about our successful sustainable design opportunities. Once we are awarded a project, these considerations become a natural part of the Performance Based Design (PBD) process with the client.

Our firm also participates in conferences and local sustainability groups in both the Grand Rapids and Charlotte offices and supports their work through sponsorships and paid memberships. Some firm members have also served on the board of these organizations. We advocate on the local and national level for policies regarding the advancement of all disciplines including sustainable design. We have a history of participation and engagement with the Construction Specifications Institute (CSI) with membership in the CSI Class of Fellow and we hope to increase our advocacy towards sustainable specifications. We participate in the local AIA 2030 Roundtable, Climate Action Committee and Committee on the Environment. We lobby through our professional organizations in support of a more sustainable, less harmful built environment.

Operations & Outlook

In 2009 Progressive AE became the first architecture and engineering firm in North America to earn CarbonNeutral® company status. To earn this certification, the firm measured its corporate carbon footprint using an independent third party, quantifying all six Kyoto greenhouse gases and measured in units of Carbon Dioxide equivalent, or Co2e. The finding was that Progressive AE produces 626 metric tons of Co2e - most of it from the operations of buildings. Those emissions were reduced to net zero through a combination of internal reductions (e.g., improving operational efficiencies) and external reductions in the form of high-quality carbon offsets. As a company we are interested in reinstating our status as Carbon Neutral. Through CarbonNeutral® or an equal metric that is aligned with our mission.

Internal reductions included:

- Installing new building HVAC controls and monitoring
- Recommissioning lighting, HVAC systems, domestic hot water systems, and all associated controls.
- Creating a list of recommended efficiency improvements with associated Return on Investment (ROI) estimates.
- Discontinuing mechanical snowmelt systems except for special circumstances.
- Upgrading lighting replacement fixtures, lamps, and ballasts.
- Increasing materials recycled to include plastics, metals, glass, and other operational incidentals.
- Replacing old two-stroke boat motors for the water resources department with low emission four-stroke motors.
- Selling and not replacing inefficient cargo van.

Much has changed since 2009, but our commitment has not. We are committed to re-calculating our carbon footprint across our two offices in Grand Rapids, MI and Charlotte, NC. We will scope what we measure and will include determining the Energy Use Intensity (EUI) of each office, embodied carbon of daily operations, travel footprint to and from work, and work travel by car and plane.

We are also working on programs to would reduce our carbon footprint. Here are some of the ideas we are considering:

- Offering EV charging stations
- Upgrading building controls
- Upgrade all lighting to LED
- Using renewables for building's energy use
- Offering incentives for using alternate transportation
- Offering year end distributions that are tied to individuals' or company's carbon reduction
- Implementing compost & recycling program



Intentional Company Culture

Diversity, Equity, and Inclusion (DEI) are an integral part of our culture. We believe DEI are essential elements of innovative design, where everyone's background, knowledge, ability, and experience contribute to strengthening the team and the organization. Guided by trust and respect, we aspire to sustain a culture that values everyone's voice.

Our DEI committee organizes various community engagement opportunities that involve professionals across all generations. We have completed the first round of firmwide DEI training and continues to train employees as we move forward.

Our professionals also participate in the ACE Mentor Program as mentors and board directors. This program focuses on sharing career paths in Architecture, Construction Management, and Engineering for high school students and those who are working toward a GED certificate. A focus of ACE National is to bridge the gap between talent and access to these careers in under-represented communities.

We are a relationship-based firm and we couldn't do what we do without the loyalty and trust of our employees, clients, vendors and community partners. But building these relationships doesn't happen overnight - it takes intentional effort and continual cultivation. Trust allows us to do what we do and is a powerful tool in advancing the goals and objectives of our own firm, as well as those of our clients.

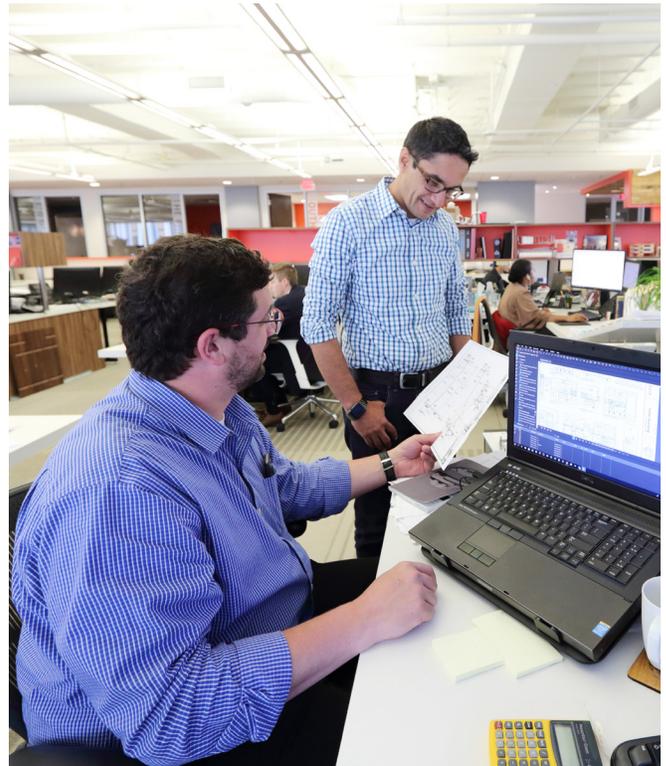
Our company-wide Wellness Program includes an active Wellness Committee. This committee along with our Human Resources department sponsors an annual Health Week offering health tips for eating, working out and mental health options. The committee also hosts financial planning informational events throughout the year. Fitness programming including yoga, a run club, an onsite wellness room, and quarterly wellness challenges all support a culture of health and wellness. For mental health, we offer confidential employee assistance through a managed service and regular webinars.

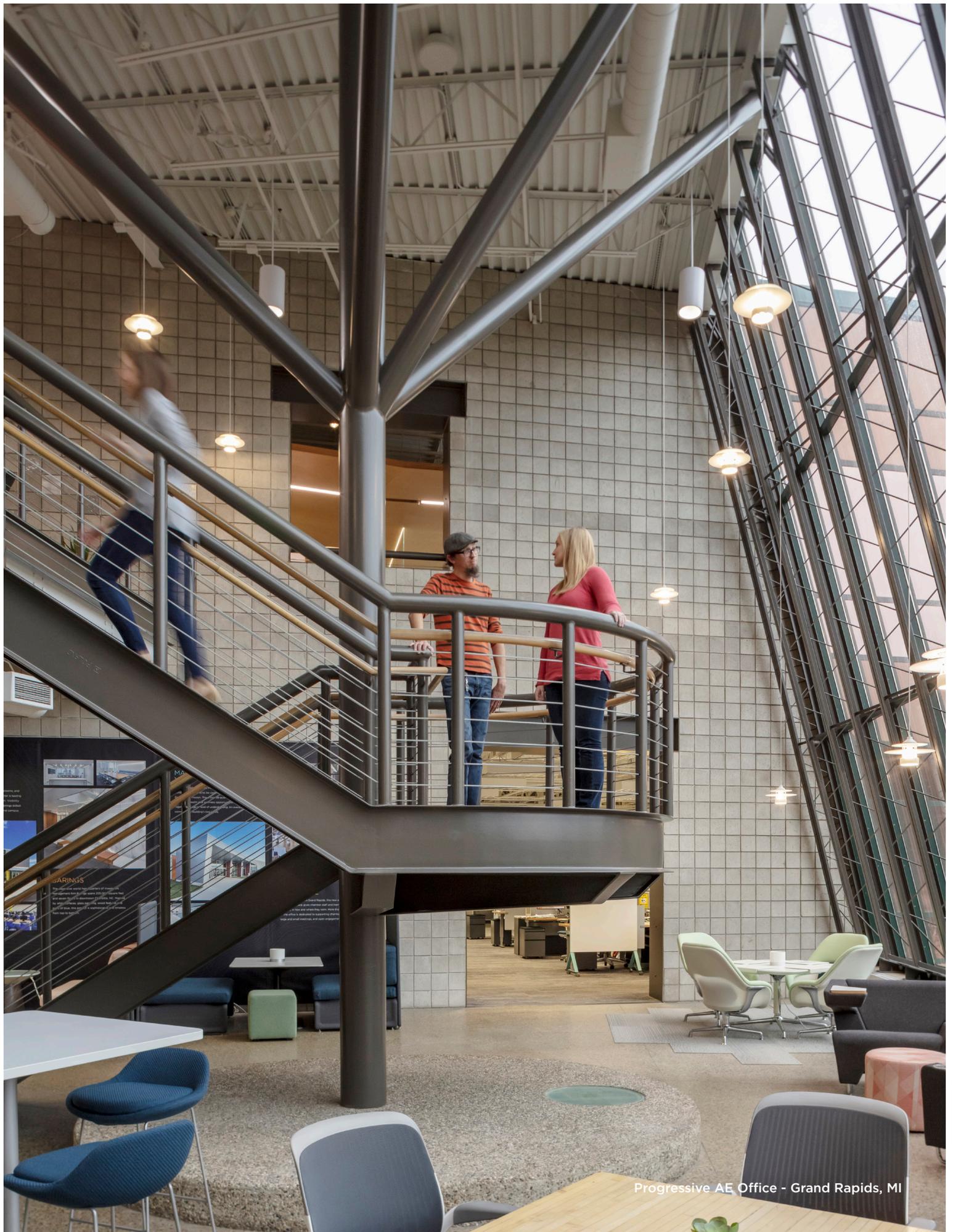
Progressive AE has been recognized by the State of Michigan and the City of Charlotte for its Wellness Program as a Healthiest Employer, and as a Best and Brightest award winner for 17 years.

Our Community Involvement Committee focuses specifically on providing support, volunteer, and paid service-learning opportunities for our employees and, at times, their families. We have invested over 900 hours in the past 2 years to our communities in Mecklenburg County and the Charlotte Metropolitan area and West Michigan and Grand Rapids Metropolitan area.

Employee Ownership

Progressive AE is an employee-owned company. Every employee is an owner and participates in our employee stock ownership plan (ESOP). With that ownership comes a culture of entrepreneurship, which informs our employees how our business performs. Those metrics can include our AIA 2030 commitment goals. Annually, employees complete professional development planning with their mentors and this commitment is included and supported in those plans.





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