



2020

**SUSTAINABILITY  
+ CORPORATE  
RESPONSIBILITY**

**HDR**



# Sustainability & Resiliency at HDR

In 2019, we saw a definitive shift in the focus of sustainability conversation with our clients and peers. Net-zero, regenerative design and resiliency became more than buzzwords as our clients started thinking even deeper about how their actions and projects impact the natural world and how climate-related issues are increasingly impacting their projects. Climate events vary by geography, but it seems that all of our clients are finding a need to determine what their biggest climate risks are and which of their assets are most vulnerable.

Some of the things I'm most proud of in this past year:

- We completed a multiyear study of how the design of our own office spaces contributed to the health and wellness of our staff. This was conducted by HDR's Research Team.
- We engaged our sustainability and resiliency professionals in a Net Zero Community Feasibility Study for Hamilton, Washington. The residents of Hamilton are impacted when the Skagit River crests its banks each spring. This study looked at creating a new town center, further uphill, connected with nature and using sustainable infrastructure.
- Our global headquarters, designed to achieve a LEED Gold and a Fitwel 3-Star Rating, received the American Council of Engineering Companies Nebraska Grand Award.
- The Los Angeles Department of Public Works, West LA Power Yard and the Orange County Sanitation District Headquarters Complex won IAI-LA COTE NEXT merit awards.

- We helped the West Sacramento Flood Control Agency achieve an Envision Platinum Verification for the Southport Levee Improvement Project. The California Department of Water Resources offers a cost-share incentive for projects rated Envision Gold and Platinum. For this client, that meant millions more in cost-share benefits.
- HDR's Foundation gave more than \$932,000 in grants to our communities. The environment is a key pillar in the Foundation's program. This year's recipients included the Land Trust of the Treasure Valley in Boise, Idaho, which received a grant to support building a new greenhouse for an environmental education school program. It will serve 500 youth a year, teaching them how to propagate, plant and maintain 10,000 native plants for local wetlands restoration efforts in the greater Boise area. Once plants are propagated, they will be used for local restoration projects. We also supported Engineers Without Borders in the implementation of modifications to an existing water supply system in a town of 480 residents in Los Churuneles, Guatemala. The project included installation of a new water storage tank, water distribution piping and a water treatment system.

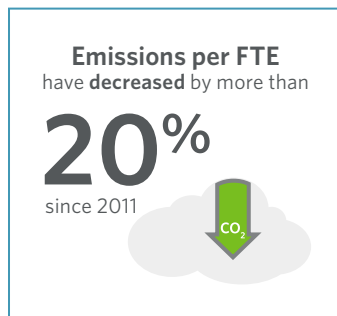
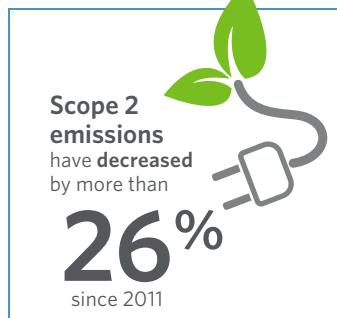
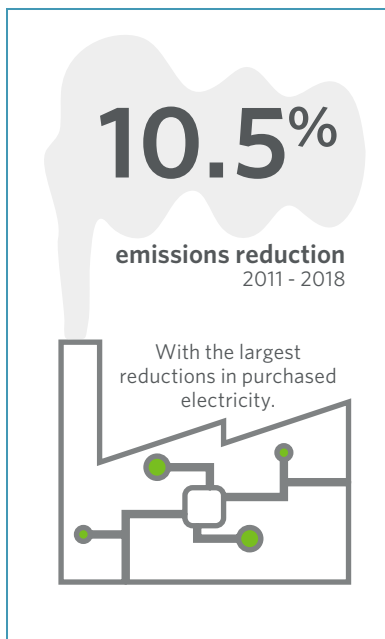
I see many great things on the horizon for 2020 and beyond, and I look forward to working toward a more sustainable and resilient future with our employee and client partners.

*Michaela Wittmann*

LEED Fellow, ENV SP, Fitwel Ambassador  
Director, Sustainability and Resiliency  
HDR

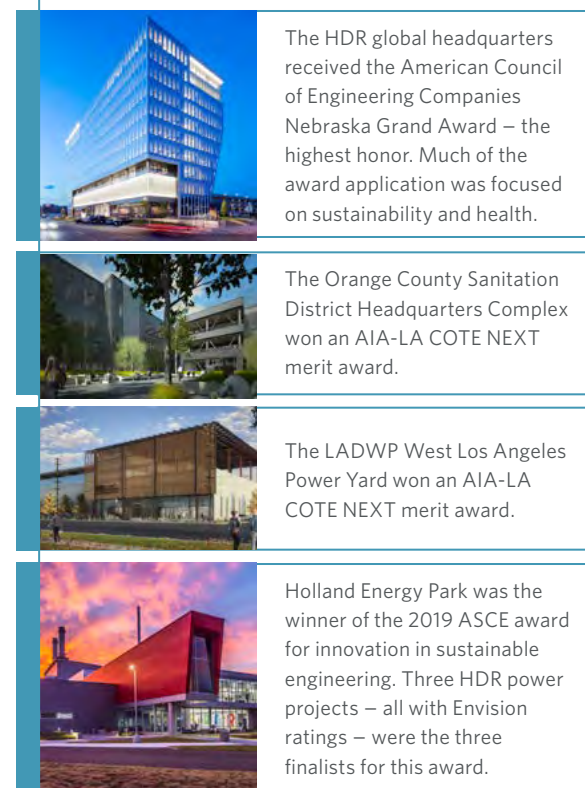
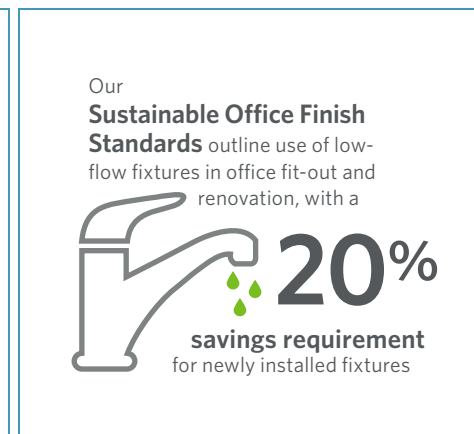
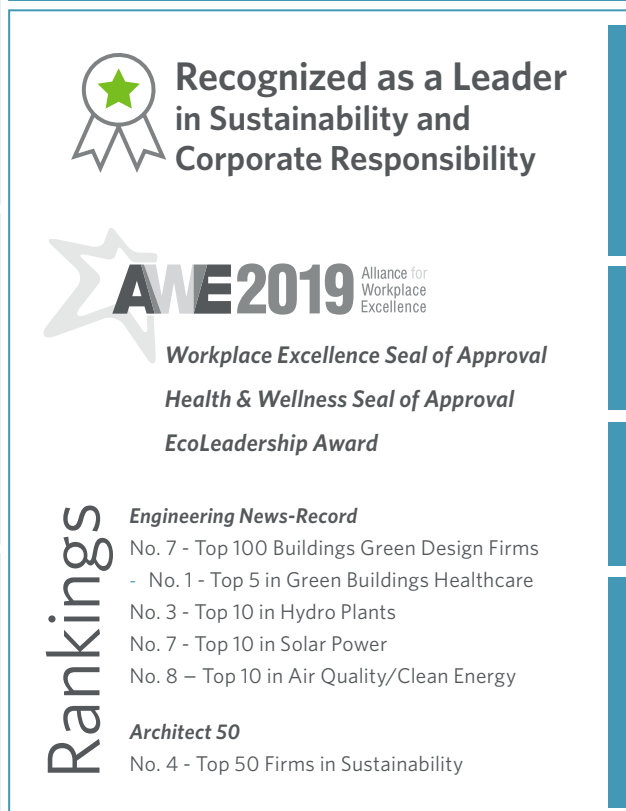
“Net-zero, regenerative design and resiliency became more than buzzwords as our clients started thinking even deeper about how their actions and projects impact the natural world.”

# 2019 Highlights



**fitwel**<sup>SM</sup>

In 2018, HDR started using Fitwel, a global building certification system that promotes health, signing on as a Fitwel Champion, and certified our first office in Arlington, Virginia. In 2019, we certified our Seattle office (1 star) and the new global headquarters in Omaha, Nebraska (3 stars).





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## MATERIALITY

# What's important to us?

We've built our Sustainability + Corporate Responsibility strategy based on what has the most impact on our business and to exceed the expectations of our external stakeholders. By completing an objective and inclusive materiality assessment process, we focused on the issues that matter most to our employees, clients, and the industries and communities we serve.



# Materiality Assessment Process



The content of this report is informed by the outcomes of our first comprehensive materiality assessment, completed internally in 2016. Previously, we relied on insight from other company-wide efforts, such as strategic planning and research accompanying rebranding activities, to identify topics to include in our report.

## Approach

We began the materiality assessment process in March 2016 by convening staff from diverse functional areas throughout the company. Each brought forward a unique perspective as we evaluated 35 environmental, social and governance (ESG) aspects that are relevant to our business and the clients we serve. After gathering initial feedback using a survey, the group met in-person to share insight on specific issues and align the relative impact of each ESG aspect. The result was a prioritized list of issues based on the potential impact to HDR, considering both risks and opportunities. The outcome of this effort is represented by the horizontal placement of each theme on our materiality matrix.

Upon completion of the internal assessment, we identified key external stakeholder groups, ranging from clients to industry associations and government agencies to competitors. Next, before engaging stakeholders, we determined a weighting methodology that represented the amount of influence each stakeholder has on HDR's business. Finally, we evaluated the relative importance of ESG aspects through online surveys and desktop research. The outcome of this effort is represented by the vertical placement of each theme on our materiality matrix.

The combined results provide a visual representation of the relative importance of each ESG theme when considering both internal and external perspectives. The results were also applied to inform the content of our 2016 report, as well as this report. For most aspects, we have had management programs in place for many years, and our approach is included in this report.



The Global Reporting Initiative defines materiality as information that “may

reasonably be considered important for reflecting the organization's economic, environmental and social impacts, or influencing the decisions of stakeholders.”

# Material Themes, Aspects & Boundaries

## Project Delivery

Technical Integrity • Community Impact/  
Acceptance • Sustainable Design • Ethical  
Procurement

## Safety, Health & Environment

Injuries/Safety Incidents

## Ethics, Integrity & Human Rights

Living Wage • Equal Remuneration •  
Anti-Discrimination • Anti-Corruption & Bribery •  
Client Privacy/Security • Regulatory Compliance

## Water Stewardship

Water Scarcity • Water Quality

## Workplace Culture

Diversity & Inclusion • Recruitment and  
Retention • Training & Development •  
Compensation • Benefit Coverage • Wellness

## Sustainable Business Practices

Greenhouse Gas Emissions • Energy Use •  
Water Use • Waste Generation

## Climate Change

Greenhouse Gas Emissions • Climate Shocks &  
Stress

## Corporate Citizenship

Local Community Engagement • Political  
Accountability

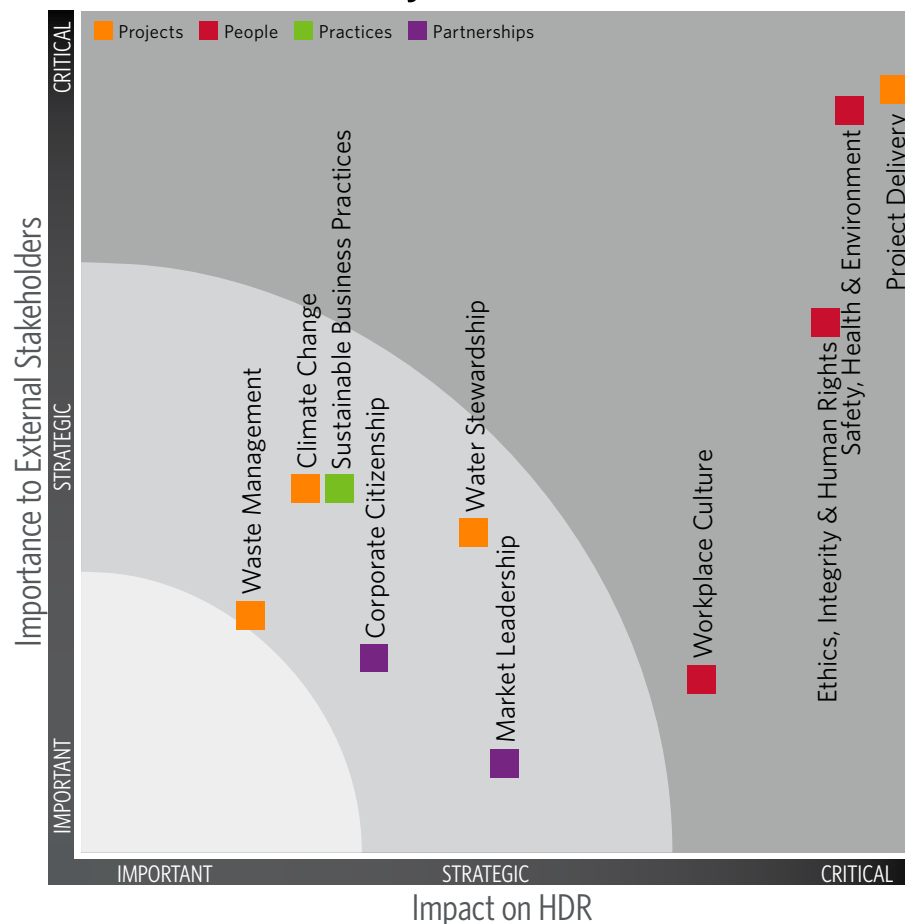
## Market Leadership

Industry/Technical Community Engagement

## Waste Management

Landfills • Material Recovery

## Materiality Matrix – Themes



The primary result of our materiality assessment was identification of the ESG aspects highlighted throughout this report. Due to a much more thorough and focused materiality assessment process, in 2016 we added a number of aspects that were not significantly included in previous reports. The relevant scope has not changed from previous reporting periods.

# Stakeholder Engagement

Our success depends on the successful engagement of stakeholders. We engage identified stakeholders in different ways, depending on their needs and the geographical areas where we work. It is essential for us to listen and learn from stakeholders who live with the results of our work on a daily basis, including our employees. Our employees' opinions are vitally important, and we engage them in many different ways—through internal meetings, organizations, career programs, online (internally and externally), through social media and in one-on-one meetings. Every decision we make involves people, systems and services, and this all feeds into the way we work with and serve our clients.

Because stakeholder engagement is so important to us, we continue to evolve and change the way we engage our stakeholders to make sure we have high acceptance of what we do within our organization, as well as within our clients' markets. We want to connect what we do with community stewardship each and every day. This makes a difference in our work, and makes us more conscientious environmental stewards. We continue to involve and engage stakeholders as necessary to support our goals. Groups engaged on a regular basis and the frequency of engagement include:

- **Clients**—Engaged in regular client meetings. When we are not engaged with our clients on projects, we meet with them monthly on average. When working on projects, the frequency of our visits may be daily. We also engage our clients through our client report card program, administered quarterly.
- **Educational leaders and organizations**—Engaged at regular intervals. Minimum contact would occur annually; however, numerous opportunities are presented when we participate as guest speakers. Speaking engagements are generally not recurring with individual organizations, but in our locations across the country and abroad, quarterly activity is expected and/or exceeded.
- **Competitors and teaming partners**—We work with and team with competitors on many projects. Because of this and our interaction with them in professional organizations,

these interactions occur quarterly and often monthly and/or even weekly, depending on the topics and events.

- **Civic organizations**—Quarterly, biannually and annually, depending on activities and events
- **All staff**—Daily. Our intranet is updated daily.
- **Professional organizations**—Monthly.
- **Young professionals**—Monthly.
- **Retirees**—Quarterly.

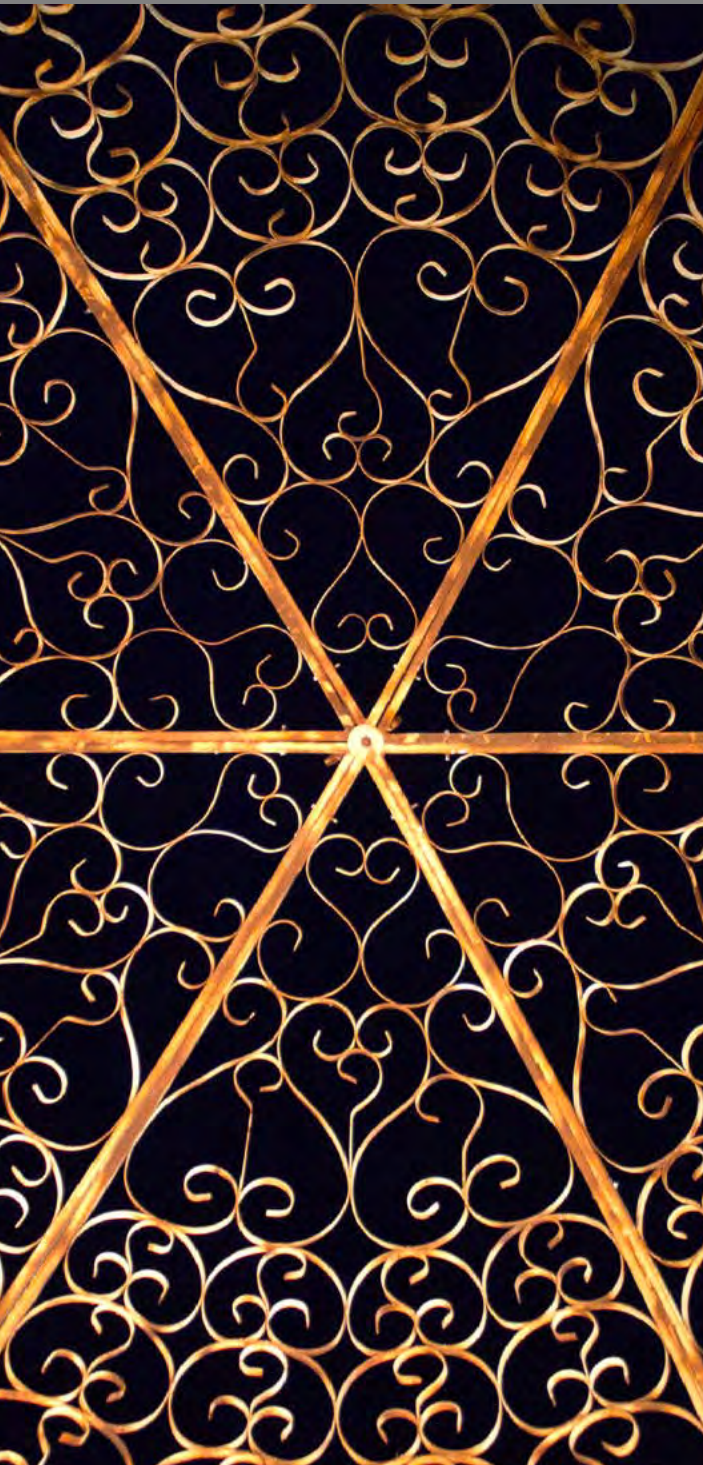
There are numerous ways to engage stakeholders. Our preferred method is to engage individuals as a regular part of doing business, through public meetings, surveys, facilitated sessions, written communications, social networking and other means. Some of our greatest accomplishments have been built on relationships we have developed with individuals around the world. We value their input and use the information they provide as we frame our business activities. Our employees actively engage in their communities by participating in focus groups, community panels, nonprofit boards, professional organization leadership positions and panels. We have regular feedback mechanisms within our company for our employees, including our annual meeting, monthly management meetings, quarterly leadership meetings, biannual retreats, company-sponsored trainings, web-based interactive tools such as Yammer and Microsoft Teams, surveys and more.

HDR is a fairly transparent organization, and how key topics and areas of concern are addressed is dependent on where the concern surfaces. If it is with our external stakeholders, we work with our clients and organizations to put plans and tactics in place to address and alleviate concerns. Internally, the topics and concerns are addressed through our regular leadership meetings that include town-hall atmospheres. Employees may raise topics/concerns to be addressed during the event. To continue the conversation, FAQs and follow-up information are posted on our internal website for future reference. All of our reporting is available to employees on a regular basis.



Because stakeholder engagement is so important to us, we continue to evolve and change the way we engage our stakeholders to make sure we have high acceptance of what we do within our organization, as well as within our clients' markets.





# Management Approach

Our strategic planning process determined our overall management approach, which is based on the four objectives that form the foundation of our business and culture.

1. Culture of Connection
2. Meaningful Experiences
3. Best All-Around
4. Global Perspectives

In addition, five brand values drive our business and allow us to continually reevaluate our progress toward meeting our objectives:

- 1. Live the network.**  
We think global and act local, and as a result we learn from each other. We bring together the right people for each individual client and engagement, ensuring the right skills, expertise, experience and the highest level of teamwork. Every time.
- 2. Listen first.**  
To find the best answer, we need to understand the root and complexity of the problem. We start by listening.
- 3. Hold ourselves accountable.**  
We are empowered to find the best solutions for our clients and for our own company. We do the right things for the right reasons. And we take personal responsibility to see things through.
- 4. Push boundaries.**  
We strive to do things better and stretch further. From our internal processes to the work we deliver, and from the projects we do to the careers we enable.
- 5. Design smart.**  
We have the skills and ability to tailor our approach to each situation, whether it's tried and tested, or something more cutting edge. We deliver our best work by designing smart.

We are empowered to find the best solutions for our clients and for our own company.



# PROJECTS

**We believe in an approach that is relevant,  
responsible and accountable.**

We are committed to delivering inspired solutions—improving the quality of life for our employees and the people who are ultimately impacted by the professional services we provide.





# Investing in Work That Matters

Every day we come to work knowing that what we do matters. We design safe roads and bridges that take people past the facilities we've designed—facilities that deliver clean water and reliable energy. We design academic institutions to accommodate a growing diversity of programs, people and pedagogies. We clean up beaches and shorelines and help restore ecosystems. Our professionals design the facilities where scientists may someday discover a cure for cancer; the healthcare spaces that help heal mind, body and spirit; and the civic, social and cultural architecture that makes a community's citizens proud of who they are and what they value.

## Architecture

Our architects and engineers are world-renowned for award-winning designs for urban environments, campuses and buildings. We continually set the standards for design excellence, and are committed to the practice of designing intelligent and inspiring architecture that expresses our clients' missions and values.

- Civic
- Education
- Health
- Justice
- Environmental Science and Advanced Technology (ESAT)

## Federal

Defense and intelligence and federal markets.

- Transportation
- Resources
- Water

## Resources

When clients need resilient resource management solutions that address the interdependent social-ecological elements driving our world today, we offer proven experience. Our risk-based approach to project implementation helps keep budgets in check and tight schedules on track.

- Industrial
- Power and Energy
- Waste

## Transportation

Our clients' goals are to keep people and freight moving safely and efficiently, whether by land, sea or air. Our goal is to develop customized and comprehensive mobility programs that improve overall performance.

- Aviation
- Freight Rail
- Highways and Roads
- Ports and Maritime
- Transit

## Water

We combine the latest technical innovations with practical solutions. Our water consulting services are comprehensive and range from source water development, system master planning and regulatory compliance services to infrastructure design, management and sustainable operation.

- Conveyance
- Drinking Water
- Water Resource Management
- Fisheries
- Wastewater

## Field Services

- Construction Management
- Construction Engineering and Inspection
- Construction Administration
- Environmental Monitoring
- On-site Field Work

## Building Engineering Services

- Commercial and Corporate
- Finance
- Hospitality (Hotels and Restaurants)
- Tech/Media/Telecom and Data

## Specialized Services

- Architecture
- Asset Management
- Commissioning & Operations
- Economics & Finance
- Engineering
- Environmental Sciences
- Finance
- Planning & Consulting
- Project Delivery
- Real Estate
- Research
- Sustainability & Resiliency

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## Project Locations

We have earned a strong reputation with clients on six continents. Our familiarity with cultural, aesthetic and technical differences gives our clients around the globe confidence in our ability to carry out their most important projects. Recently, our staff have worked on projects in more than 60 countries, including:

<a href="#">Afghanistan</a>	Israel*	South Africa
Austria	Italy*	South Korea
<a href="#">Australia</a> *	Japan	Spain
<a href="#">Canada</a> *	Kuwait*	Switzerland
Chile	Mexico	Tanzania
<a href="#">China</a> *	Netherlands	Trinidad and Tobago
Denmark	<a href="#">Norway</a>	<a href="#">Turkey</a>
Djibouti	Panama	<a href="#">United Arab Emirates</a> *
Egypt	Poland	<a href="#">United Kingdom</a> *
<a href="#">Germany</a> *	<a href="#">Qatar</a> *	<a href="#">United States</a> *
Hong Kong	Romania	
Honduras	<a href="#">Saudi Arabia</a> *	
India	Singapore*	Vietnam
Ireland		

Our work in U.S. territories includes the U.S. Virgin Islands, Puerto Rico, Guam, and Commonwealth of Northern Mariana Islands.

\* Countries with office(s) and/or employees.





# Global Issues, Impacts and Opportunities

## Climate Change Action

Government leaders and private companies have accelerated progress toward decarbonization with science-based targets intended to limit global warming to less than 1.5 degrees Celsius and avoid the worst impacts of climate change. Federal action in the United States will bolster voluntary GHG reduction commitments and complement the leadership of organizations such as C40, the Global Covenant of Mayors for Climate and Energy, RE100, Science Based Targets Initiative, and the Task Force on Climate-related Financial Disclosures. Climate change is increasingly being recognized as a global crisis, requiring urgent action and transformative change over the next decade. To help our clients take strategic action with meaningful impact, we have identified the following opportunities:

- Develop actionable plans to transition to low-carbon economies, decoupling growth from GHG emissions
- Support scalable decarbonization across the energy, transportation and building sectors
- Apply latest data and scientific techniques to assess climate risk for communities and critical infrastructure
- Provide innovative design and engineering solutions to adapt to impacts already occurring due to climate change

## Social Equity

Social impacts and implications have been one component of the "triple bottom line" that defines sustainability since the term was created in 1994. Recently, social equity/environmental justice topics have become more prominent, and related considerations have become even more critical drivers of sustainable development. To help our clients work toward more equitable projects and services, we:

- Use tools to identify stakeholders and create an inclusive and effective equity-focused engagement approach
- Partner with clients and communities to understand their issues, perceptions and perspectives
- Consider the issues that could adversely and disproportionately affect historically disadvantaged populations
- Collaborate to develop solutions that mitigate negative impacts and provide benefits equitably throughout affected communities

## Urbanization

By 2050, the United Nations predicts that 66 percent of the population will be living in urban areas—more than 7 billion people. This means that not just the largest cities in the world are driving global growth. McKinsey Global Institute believes that half of worldwide gross domestic product (GDP) comes from cities with populations from 150,000 to 10 million. The result is an increasingly mobile population with a marked rise in capacity needs, including transportation, water and healthcare. Increasingly concentrated cities will also cause sustainable development challenges. Risks of unchecked development could include poor water and air quality, pathogens in our food supply, and urban sprawl and congestion. We have identified multiple opportunities to assist our clients in dealing with the rise in urbanization, including:

- Planning wisely for urban growth
- Offering specialized expertise in the areas of sustainable transit, freight rail, energy and healthcare
- Planning a sustainable energy future
- Providing regional solutions to regional challenges

## U.N. Sustainable Development Goals



Together, these goals aim to end poverty, protect the planet and ensure prosperity for all.

Source: [sustainabledevelopment.un.org/sdgs](https://sustainabledevelopment.un.org/sdgs)

# Global Issues, Impacts and Opportunities

## Sustainable Development Goals (SDGs)

In September 2015, the United Nations announced a global Sustainable Development strategy comprised of 17 goals and 169 targets, designed to stimulate action over the next 15 years in areas of critical importance for humanity and the planet. Together, these goals aim to end poverty, protect the planet and ensure prosperity for all. Achieving them will require collaboration between the public and private sectors, as well as a big-picture view of how decisions today will impact the future. There's significant overlap with this global agenda and HDR's core service areas, positioning us to help clients integrate sustainability principles in the SDG areas of:

- Clean Water & Sanitation: Ensure access to water and sanitation for all
- Affordable & Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all
- Industry, Innovation & Infrastructure: Build resilient infrastructure, promote sustainable industrialization and foster innovation
- Sustainable Cities & Communities: Make cities inclusive, safe, resilient and sustainable

- Responsible Consumption & Production: Ensure sustainable consumption and production patterns
- Climate Action: Take urgent action to combat climate change and its impacts
- Life Below Water: Conserve and sustainably use the oceans, seas and marine resources
- Life on Land: Sustainably manage forests, combat desertification, halt and reverse land degradation, halt biodiversity loss

Achieving the SDGs will require collaboration between the public and private sectors, as well as a big-picture view of how decisions today will impact the future.

## Influence on Our Services and Operations

We recognize that industry trends and external drivers influence our service offerings and our internal operations, including:

- Increased interest in GHG reporting and sustainability planning by our clients
- EPA regulations under the Clean Air Act to monitor GHG emissions
- Net-zero energy, waste and water initiatives set forth by the federal government
- Executive orders regarding sustainability and resiliency
- International commitments to reduce GHG emissions
- Rating systems, such as LEED for the building sector, and Envision for horizontal infrastructure
- The importance of corporate sustainability to our clients and our staff



## CASE STUDY

*Anticipating the future of emergency healthcare delivery.*



# HDR Awarded Top Prize for Futuristic Mobile Hospital Design

An Australian-based multinational team from HDR took home the 2019 "Breaking Through" prize at the Healthcare Design Expo and Conference held in Phoenix, Arizona.

In August 2019, an elite jury of industry professionals short-listed the team's Mobile Acute Services Hospital (MASH) project from among 43 entries.

MASH design team member Romina Triboli Pisi said, "We had a strong concept from the beginning, and we all believed as a team that we wanted to create a flying hospital."

Described by MASH design team member Ben Belson as "a beacon of hope," the team's winning design envisions a system of pods that can be deployed in response to natural or human-made catastrophic events.

In their design approach, the team embraced current and future technologies with the aim of improving humanitarian assistance. The result was an efficient and highly mobile system that has the ability to grow and assemble in the different ways required to respond as quickly and as flexibly as possible to different catastrophes across a variety of settings.

"Technology and architecture can help respond to different types of emergencies," said MASH design team member Margot Cougul. "MASH is an example of a solution that can quickly help people in need. And we don't have something like that now."

HDR Principal and National Director of Health in Australia Ronald Hicks commended the team on this achievement, emphasizing the importance of providing upcoming talents with opportunities to tap into their creativity. "I am proud of all the members of the MASH team and hope this recognition inspires them to further explore innovative ideas for such timely and important issues."

“

I have always asked myself how I can contribute more as an architect. And that's why I am really glad that I was part of the MASH team because we all wanted to find a way to do things better and help save lives.

**Mira Ebaf**, Sr. Architectural Coordinator,  
MASH design team



”

## CASE STUDY

*Taking on a critical societal challenge.*



# HDR Leading Design Effort to Demonstrate Value of 3D Printed Homes as Response to Housing Crisis in LA County

“

This project is taking on a critical societal challenge—how to deliver housing smarter, cheaper and faster to combat homelessness through innovative engineering solutions.



**Vartan Chilingaryan**, Director of Structural Engineering

”

HDR's design expertise was recruited to help tackle the affordable housing crisis in California.

The Los Angeles County Development Authority selected Contour Crafting Corporation, in collaboration with HDR and the supportive services provider Volunteers of America, to design and build 3D printed modular homes in the county.

The county's open competition solicited proposals for a demonstration project to study several different delivery methods for permanent housing for the homeless faster and more cost effectively than with traditional construction.

The proposed design comprises four 3D printed housing units, each with small private patios to further expand the living area, all clustered around a shared courtyard. CC Corps' customizable 3D printer allows each unit's exterior to be unique in form and color, while maintaining the efficiency and modularity of the interior elements like the kitchen and bathroom layouts. By leveraging the insulated thermal mass of the 3D printed building envelope, the proposed design also delivers high levels of human comfort. This is demonstrated through lower energy consumption, such that the overall project can achieve net-zero energy with only a limited number of photovoltaic roof panels.

Another benefit of using 3D technology on this project rests in the curved design. Curvature does not add to construction costs and actually strengthens the performance of the concrete printed shell. It also maximizes efficiency by aligning the printing of pairs of units in the north/south orientation, such that the printer rails only need to be moved once. This tactic will shorten the construction delivery time. Given the flexibility inherent in 3D printing, this concept is highly scalable and could be adapted to meet several housing or community needs.

“In Los Angeles County, far, far too many people find themselves homeless,” said Kate Diamond, HDR's civic design director. “It really doesn't matter whether they were simply priced out of their homes by gentrification or they are veterans coping with PTSD. For those coping with homelessness, living on the streets threatens their very survival. Our innovative approach of fast, cost-effective and deeply sustainable 3D printed housing is a way to help serve the most vulnerable populations.”

Through the incorporation of sustainable design strategies, the proposed design targets LEED Gold and would be likely to achieve LEED Platinum.



## INTEGRATED BUSINESS FOCUS

Through an integrated system approach to quality, we focus on the stability and efficiency of feedback loops, and evaluate mechanisms to make sure our internal processes are meeting our business and client needs. Benefits include:

- Consistent client delivery
- Higher client satisfaction rates
- Financial stability and integrity
- Employee empowerment
- Continuous system improvement

# Project Delivery

How staff interact with our Quality Management System (QMS) paves the way for positive results for our clients and our business. To say that we work on “projects” doesn’t accurately convey the importance of what our architects, engineers, scientists and other professionals do every day. We understand the responsibility that comes with being a trusted advisor to designing buildings and critical infrastructure around the world. Whether designing a new hospital, bridge or water supply system, the technical integrity of our work is critical to our clients, local communities and our business.

## Management Approach

Our goal is to set the industry benchmark for excellence in services we provide to our clients. To do so, we have developed a QMS based on the fundamental principles and guidelines set forth by the ISO 9001:2015 series of international standards for quality management. Our Quality Office professionals report directly to executive management and are responsible for the development, implementation, monitoring, support and auditing of our QMS.

Our QMS provides an important framework to guide our teams to produce products and services of quality—both for our clients and for ourselves. We remain focused on continual opportunities for improvement throughout our daily activities to achieve client satisfaction and meet or exceed performance expectations. The QMS includes programs, policies and business processes, and has four key elements:

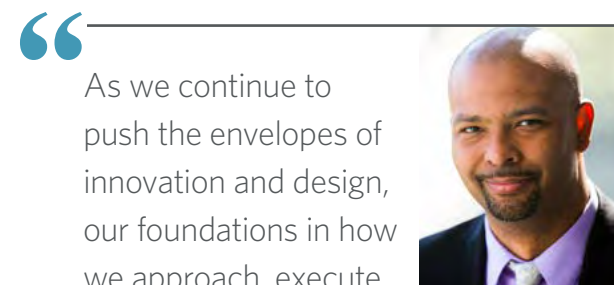
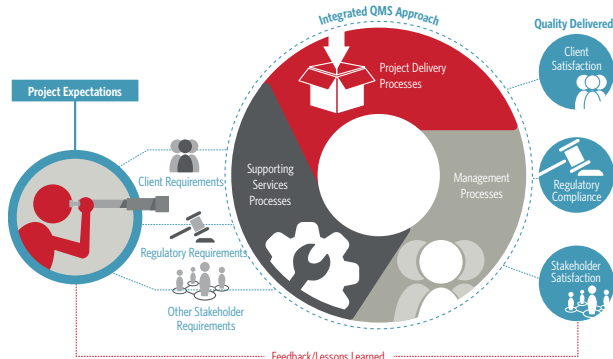
- **Management Responsibility.** Management actively promotes quality in our business activities and defines responsibilities for maintaining our focus on quality, and engages with project teams at routine intervals.
- **Resource Management.** Resources are trained, available and committed to providing quality services.
- **Professional Service Delivery.** Processes and procedures are in place that promote quality in the delivery of our products and services.

## Measurement, Analysis and Improvement.

Continual improvement is achieved through performance measurement and identification of areas for improvement.

## Looking Forward—2020 and Beyond

As the work our project teams generate varies both by discipline and geography, we need to remain flexible with our quality approach and implementation, but consistent with our overall culture. Our continued focus is to develop and implement strategies to manage organizational risk, position our company to consistently provide quality services to our clients, and support our staff in working efficiently and effectively. We do this through the monitoring of the implementation and effectiveness of the QMS, as well as collection of client and staff feedback. This in turn results in the development and refinement of our training, procedures, standards and practices. We work closely with local and regional leadership to improve their QMS implementation strategies as well as the local culture of quality.



As we continue to push the envelopes of innovation and design, our foundations in how we approach, execute and manage our work sets us on firm foundations, enabling us to deliver exceptional projects that improve the communities we serve.

**Jerome Brown**, CMQ/OE, Vice President,  
Quality Office Director

# Staff Reflect During Quality Month



Throughout the past year our corporate quality professionals have focused on reaching out to and engaging with the various professionals across the company. During World Quality Month, we were able to hear from young professionals, our project managers, local office quality leaders, and executive leadership.

We asked a few of our Young Professionals about what HDR's quality culture means to them.

**Megan Dierks**, a Bridge EIT, said, "Quality is such a high priority for everyone at HDR. Our staff is so willing to share all their knowledge and resources. It helps you become better at your job, making us stronger as a company. I am very grateful for our quality culture because I think it's what makes HDR such a great place to work."

**Bryan Zundel**, a Land Planner/Landscape Coordinator, added, "I think HDR's culture is driven by our employee ownership. We're all invested in what we're doing and moving toward the same goals, even if they're slightly different from person to person. We take ownership of this company, and we're part of the successes and failures together as a collective, as a team and as a family. So, for me, having a quality culture inspired by employee ownership is one of the things that I'm most thankful for. It makes us more familial in the way that we treat each other and the way we communicate, which helps us produce quality service and products."

Trust plays a big role in how our QMS functions. **Tracy Randazzo** talked about trust internally and externally. Tracy began the conversation with, "Trust impacts quality internally to a very high degree. Our teams are more apt to provide a quality product when they have a project manager that they trust and respect. Having great relationships among our internal team helps us deliver because everyone wants to produce something they can be proud of." She also considered a different perspective, "Quality impacts trust more from the client perspective. Our clients trust us because we've consistently provided them quality products in the past. The minute that we don't provide a quality product, we lose their trust and we could lose the client."

Our local quality professionals are committed to driving the right conversations around quality and engaging the right people.

In **Teresa Hanson's** role as Quality and Records Coordinator (QRC), she is committed to providing mentoring to PMs and project coordinators, answering questions about procedural updates and assessing where training is needed. "All of my responsibilities are aimed at achieving zero project service failures by making sure that we're providing quality services and deliverables, and managing our risk along the way."

Teresa has learned that "we need to have a quality mindset all of the time" and she sees firsthand how HDR's leadership embraces quality as a daily habit. "When I first started in the QRC role, it was so focused on the project deliverables; now our QMS looks at every aspect of our business and has a much wider focus being driven down by top management."

An executive leader was asked about the value of quality and how it can impact our company and our people. **Tom Sanders**, Corporate Programs and Policy Director, reminds us of this: "Our quality goal is to set the industry benchmark for excellence in services we provide our clients and, consistent with the 2022 Strategic Plan, to strive for zero service or delivery failures. We accomplish this through work well done, exercising discipline, staying true to our brand promise and by continuing to strengthen a quality culture."

Tom continues, "At a basic level, quality helps us sell, helps us deliver and helps our profitability. It makes us successful at winning work, doing work and then repeating. But beyond that, our quality culture is about self-worth. All of the HDR professionals I know expect their company to support quality practices and have a reputation of quality. They come to work expecting to deliver quality, and doing so is central to their belief that they are doing important work and doing it correctly. That creates a feeling of self-worth that attracts and retains the best professionals in the industry. That's a really powerful thing."

## CASE STUDY

*Providing much-needed mobility along the city's southwest quadrant.*



# Loop 202 South Mountain Freeway

Arizona Department of Transportation

PHOENIX, AZ, USA

The largest single freeway project in Arizona history, the \$1.7 billion South Mountain Freeway relieves urban traffic congestion in the United States' fifth-largest city and improves mobility in one of the nation's fastest growing regions. The Arizona Department of Transportation (ADOT) chose HDR to serve as the General Engineering Consultant (GEC) for the project, ADOT's first to use a Design-Build-Maintain agreement. The approach allowed the freeway to open three years earlier than if it had been built using a traditional approach, with a cost savings of more than \$100 million.

The Loop 202 South Mountain Freeway connects the east and west valleys of the Phoenix metropolitan area and offers much-needed, greater mobility along the city's southwest quadrant. The highway extends 22 miles with eight lanes (three general purpose lanes and one high-occupancy vehicle lane in each direction), and opened to the public on December 21, 2019. The project includes 13 service (crossroad) traffic interchanges and one system-to-system traffic interchange with Interstate 10. There are 40 bridges, including five multi-use (wildlife) crossings, plus a pedestrian bridge and a 6-mile-long, shared-use path for pedestrians and cyclists.

The state-of-the-art freeway emerged in well-orchestrated sequences as builders methodically constructed a complex rolling-profile freeway with elevated, at-grade, or partially

depressed road levels. The goal of this type of design is to optimize safety and efficiency while minimizing environmental damage.

Since 2001, we've provided a series of consulting services for ADOT to help steer a project of this magnitude forward. For example, we produced the environmental impact statement, refined design concepts and fine-tuned P3 initiatives. Our expertise in lining up P3 delivery formats meant ADOT could deliver the project three years ahead of schedule, saving at least \$100 million. Such preparatory efforts laid the groundwork for ADOT to select us in 2015 as the GEC for the project with our winning strategy of "Continuity, Innovation, Capacity, Locally Delivered."

We advised ADOT and oversaw design and construction work by the developer, Connect 202 Partners (Fluor, Granite and Ames). The project involved staff from across our service offerings, including strategic communications and public outreach professionals; roadway, drainage, structural, geotechnical, and traffic engineers; environmental scientists (biology, hazardous materials, cultural); utility coordinators; project controls, scheduling and document control professionals; labor compliance managers; administrative staff; construction inspectors; and materials and quality managers.



Our entire project staff strategically and creatively collaborated to share findings and best practices that could improve and augment project delivery methods. When our project controls team implemented the first fully integrated, enterprise Project Management Information System for ADOT, they coordinated their data-gathering requirements with HDR project colleagues from other disciplines. That way, they could develop a more-targeted data treasure trove and strengthen our overall capabilities to monitor and manage project operations.



# Technical Integrity

We can only say, “Together, we make great things possible” if we are working the right way and producing quality projects. To meet this goal we establish the proper processes and ensure we have the right people with the right tools to do their best work. This alignment produces superior projects that meet our clients’ goals and needs.

## Management Approach

### ASSESSING AND MANAGING RISK

Our overall quality management system helps us identify critical projects. If a project is identified as critical, a risk assessment must be conducted. The process for determining a project’s risk profile follows:

- The area manager, with input from an area business group (BG) representative and project manager (PM), conducts a risk assessment that evaluates whether the following factors exist:
  - High level of risk in achieving desired project results with respect to quality, profitability and client satisfaction
  - Significant schedule limitations
  - High level of technical complexity
  - Part of a key pursuit
  - Critical to future business growth
  - Very large project as determined by BG thresholds
  - Adherence to risk assessment results and critical project process

When a project is designated as critical, a risk management plan (RMP) will be developed.

- Roles and responsibilities are assigned:
  - PM is responsible for RMP development; regional BG director (or designee) is responsible for working with the PM in achieving development and acceptance of RMP
  - RMPs are continually monitored and managed
  - Ideal opportunities for risk reduction are identified during the project approach and resource review (PARR) and management review process

### ASSESSING SUSTAINABILITY PERFORMANCE

Sustainability performance is measured regularly. With the varied projects and clients that we serve, our philosophy of “sustainability is a way of doing business” impacts what we do on a daily basis. We monitor our progress toward achievement of the corporate commitments we have made, and the measurements we have developed for our own business. These commitments can be found in the Appendix under “Commitments and Partnerships.” We also report and update our sustainability statements biannually.

### ENSURING PROFESSIONAL MARKETING STANDARDS

As a global professional services firm, HDR undertakes significant business-to-business marketing activities. Beyond the scope of specific and targeted marketing activities designed to help our firm win work, we also engage in a wide variety of other marketing activities, including advertising and public relations in both traditional and social media. We adhere to the code of ethics espoused by the Society of Marketing Professional Services (SMPS), which requires marketing professionals to strive to maintain and advance their knowledge of professional services marketing, respect the body of marketing knowledge, and contribute to its growth, while also continually seeking to raise the standards of excellence in professional services marketing.

### COMPLIANCE

In today’s legal environment, fines and non-monetary sanctions for noncompliance with laws and regulations can arise. If HDR encounters any concerns around this topic, we seek to be proactive and cooperate with our client in reaching a resolution that is fair and reasonable to all. We also value the confidences of our clients, as well as our contractual commitments to confidentiality, and do not discuss with third parties the circumstances involving our projects. HDR handles all issues swiftly and has not incurred any sanctions for noncompliance.



### MEASURING CLIENT SATISFACTION

Our Client Satisfaction Program (Client Report Card) is designed to evaluate project performance and aid in client retention. This program is a powerful tool in identifying strengths and weaknesses and recognizing potential problems that could damage long-term client relationships and ultimately result in company losses. The program fosters improved communications and helps keep us client-focused.

To complete a Client Report Card, an independent research company conducts a telephone survey with a client. During the survey, clients are made aware that the information collected will be provided to HDR’s leadership, which will then be shared with team members associated with the client/project. Clients are asked to rate HDR in areas of project-related attributes, project personnel, return on investment, and overall satisfaction. Clients are also asked to rate their relationships with HDR and the likelihood of rehiring and recommending HDR. We see this overall effort as an opportunity to improve our service and relationships with our clients.

Surveys that receive a rating of two or less (less than satisfactory) on any question are directed to the appropriate HDR project team member who is instructed to complete an Action Plan with intent to resolve issues with the client/project within 30 days.





## CASE STUDY

*Increasing value, improving outcomes  
and engaging stakeholders.*

## HDR Wins Evidence-Based Design Touchstone Award for Third Consecutive Year

HDR, in a multi-firm partnership, has won The Center for Health Design's Evidence-based Design Touchstone Award at the Gold Level for research at New Parkland Hospital in Dallas.

The Touchstone Award recognizes the use of an evidence-based design (EBD) process in the pursuit of increasing value, improving outcomes and engaging stakeholders. Awards were presented to projects that showed exemplary achievement across the touchstones of the EBD process: collaboration, evaluation and sharing.

"This is a remarkable team in terms of its depth and breadth," a juror stated. "Members of the team cover almost every conceivable key stakeholder from planning all the way through to the creation and dissemination of research related to the Parkland Hospital project. Given that strength, I would expect to see quite a few research papers created and shared over the next few years."

HDR in 2018 also won a Gold Level Touchstone Award for work with Great Plains Health, and in 2017 a Silver Level Touchstone Award for work with the Virginia Center for Behavioral Rehabilitation.

“

I'm particularly proud of this year's Touchstone Award because of the collaborative team



that came together and stuck together over several years while crossing disciplines and ostensibly competitive organizations to earn it, and because we deliberately engaged the most rigorous methods possible to mitigate the potential for bias. More attention to study limitations and bias is needed in the industry, and we strove to set an example.

**Dr. Jeri Brittin**, Director of Research

”



LEED BD&C v2009  
Gold Certified

## CASE STUDY

*Acting as a Small Business Advocate.*

### HDR Receives Large Business Award at 2018 SAME Small Business Conference

At the Society of American Military Engineers' (SAME) Small Business Conference held in New Orleans, Louisiana, HDR received recognition as the 2018 Large Business Award recipient for outstanding support to small business programs.

HDR was an exhibitor, sponsor and presenter at the conference. In addition, a large contingent of HDR federal architecture, engineering and environmental professionals attended this event, which drew more than 4,000 attendees.

### HDR Receives J.W. Morris Sustaining Member Award at 2019 SAME JETC

At this year's Society of American Military Engineers' Joint Engineer Training Conference (JETC) and Expo held in Tampa, Florida, HDR received the J.W. Morris Sustaining Member Award for eminent contributions to SAME. A large contingent of HDR federal engineering and environmental professionals attended the conference this year as exhibitors and sponsors.

The J.W. Morris Award recognizes the large business member firm that best demonstrated involvement in its local post; involvement with local, regional and national leadership positions; support of students interested in science, technology, engineering and math; and support of SAME conferences and publications.

"HDR is the perfect example of a company who understands the value and benefits SAME offers," said Lt. Col. Scott Prosuch, USA (Ret.), chair of the STEM Committee. "They are committed to supporting the society at every level."

SAME unites public and private sector individuals and organizations from across the architecture, engineering, construction, environmental and facility management industry. HDR's affiliation with SAME represents more than 49 consecutive years as a sustaining member firm. It includes nearly 200 employees in 39 posts around the world, where they are actively engaged as leaders and members.

“HDR's long tradition of working with small businesses, along with the recognition by SAME and our clients, is a proud achievement for our company. Small businesses and the terrific support they provide are a key component to our day-to-day commitment and success we strive for with our global clients.”



**Doug McAneny**, Group President, Federal



# Community Impact

As a global firm, we understand that the entire world is our community and our imperative is to improve the places where we live and work. We carry great responsibility for the change that our projects create within communities around the world. From hospitals to roadways, rivers to bikeways, our work shapes rural, suburban and urban environments. We have a vested interest in project success because our teams live and play in those same communities. We take to heart our role in making the world a better, safer place for all.

## Management Approach

In many projects, our teams partner with clients and others to solve the complex problems our communities face, such as issues of health and wellness, social equity, environmental justice, mobility and access, aging infrastructure, and disaster recovery. Many struggle with inadequate access to transportation, healthy food, air and water.

We realize that a variety of perspectives make our project solutions stronger. As a multidisciplinary firm, we have the ability to create solutions that consider multiple perspectives and possibilities, including unexpected spatial designs, new policies, hybrid programs, or new funding strategies. By working together with our clients and communities, we form collaborations that add meaning and value to the human experience. We listen first to clients and communities themselves through stakeholder engagement and data analytics.

We still have much work to do. But as problem-solvers, planners and designers, we are passionate about improving the conditions in our communities to create the greatest impact.



## CASE STUDY

*Triple Net-Zero Design Uses Sustainable Infrastructure to Rebuild a Resilient Town*

# Hamilton Net-Zero Community Feasibility Study

HAMILTON, WA, USA

Every fall, the residents of Hamilton, Washington, wonder the same thing—will the Skagit River crest its banks and pour water into their homes and businesses? The answer to that question has been “yes” 25 times in the last century, resulting in Federal Emergency Management Agency flood recovery costs of more than \$10 million.

Regional sustainability nonprofit Forterra had a big idea: create a new Hamilton Center in concert with nature using highly sustainable infrastructure. After securing an option to purchase an urban growth area above the floodplain, Forterra brought HDR on board to conduct a feasibility study and conceptual master plan for infrastructure, land planning and net-zero analysis centered on a stunningly resilient town center surrounded by attainable homes. With leadership from our community designers backed by input from our engineers, environmental scientists, sustainability experts and architects, the outcome is a plan for a triple net-zero community that provides residents an option to affordably move to higher ground.

## SUSTAINABLE INFRASTRUCTURE SUPPORTS A CIRCULAR ECONOMY

Triple net-zero focuses on achieving net-zero energy, net-zero water and net-zero carbon within a circular economy framework. The feasibility study imagines features like rooftop solar panels for energy, anaerobic biodigesters

to process food waste into fertilizer, and a community greenhouse to contribute to the resilient, sustainable approach. Using Hamilton’s rainy climate to support the circular economy, rain and other wastewater could be reclaimed and reused.

## TRIPLE NET-ZERO DESIGN LOWERS DEVELOPMENT IMPACT AND BUILDS CONNECTION WITH NATURE

By minimizing resource use, the plan for Hamilton improves viability of land development. More than half of the development area is protected as natural land, using design elements that help to recover the ecosystem. The plan maximizes efficiency to make triple net-zero design a feasible part of an affordable housing project.

The sustainable design also protects Hamilton’s neighboring sea life and environment. A collection of agencies coming together to buy out residents who choose to move is also committed to cleaning up flood sites to protect the river’s salmon. The river is the passage to and from the Salish Sea for more than half of Puget Sound’s Chinook salmon—the primary source of food for the region’s struggling Orca whale population. Options for the development include creating a connection with nature through boardwalks across the landscape buffers to wetlands and a nearby stream, as well as habitat passages for elk to pass through the community.

## CASE STUDY

*Designing mixed-use development as a collaborative response to community crisis.*



# East Vancouver Integrated Health and Social Housing

*BC Housing, Vancouver Coastal Health, and the City of Vancouver*

**VANCOUVER, BC, CANADA**

HDR is working with BC Housing, the City of Vancouver and Vancouver Coastal Health to build approximately 100 affordable rental homes, as well as a new withdrawal management center for people seeking treatment for addictions.

The goal of the project is to address both the urgent housing needs of British Columbians and the health needs of people living with addiction issues. Through a mixed-use development, the project will provide homes for the people who need it most while also reaching out to the larger community with essential addiction services, resulting in long-term and comprehensive solutions for people in Vancouver.

A new evidence-based withdrawal management center within the planned complex will replace Vancouver Coastal Health's current withdrawal management services facility on East 2<sup>nd</sup> Avenue. It will include a range of enhanced services such as inpatient and outpatient withdrawal management, and sobering and at-home withdrawal management, which are trauma-informed and culturally appropriate.

Approximately 20 new spaces of short-term transitional housing are also included in the plans for people who have completed detox, so they can continue receiving access to support and health services while they transition into longer-term housing and treatment for substance use.

The proposed mixed-use redevelopment is a collaborative response to the housing crisis and the healthcare needs of the community. It will serve those with low to moderate incomes and include a social enterprise space for local residents, focusing on Indigenous healing and wellness through employment and alignment with culturally informed treatment.

HDR is working with BC Housing, Vancouver Coastal Health and the City of Vancouver to explore site opportunities and prepare conceptual plan options, facilitate community consultation, and assist in obtaining development permits with the City of Vancouver.



**Recognized by Fast Company's World Changing Ideas Awards.** Honorable mention in Health & Wellness and Spaces, Places, and Cities Categories.

[Read more about the award >](#)





## CASE STUDY

*Connecting communities  
through bus rapid transit.*



## METRO C Line

*Metro Transit*

**HENNEPIN COUNTY, MN, USA**

Metro Transit had an ambitious vision to build a new \$37 million, 8.4-mile bus rapid transit (BRT) line between the downtown area, North Minneapolis, and Brooklyn Center. The METRO C Line was conceived to advance the agency's network buildout of fast, frequent, high-amenity transit and bring together the communities.

HDR came in as the lead design firm for the C Line. The project consisted of designing 23 new suburban and urban stations, redesigning eight intersections and adding half a mile of new roadway. The entire line was completed on schedule and on budget.

### State-of-the Art, Unifying Design

Our team was challenged to find a unifying design that was easily identifiable yet representative of both the urban and suburban areas that the buses pass through. In residential areas, transit space is delineated from the sidewalks and front yards by lean rails, bike racks and benches. Downtown, where there are more riders and differing aesthetics, our team designed longer stations with more open space and less delineation between the buildings and the transit areas. Common amenities, branding and architecture unified the stations.

The new stations feature premium BRT amenities and security features such as cameras, enhanced lighting and emergency telephones. They're each linked to the operations center in real-time through fiber-optic cables.

To avoid impacting utilities below each station, the design team turned to a unique spread footing that connects the pylon to the shelter. The design required a 12-inch concrete pour to spread loads over a greater distance but eliminated a 6-foot-deep footing that would have been required. The pylons also were designed to fit all communications systems—eliminating the need for a secondary electrical cabinet and saving up to \$20,000 per shelter.

The C Line also serves as a pilot project for electric buses, which will be a testing ground for projects across the U.S.

### Impacting the Community

The C Line is more than just a way to get around—it's intended to boost the local economy and enhance livability along the corridor. The unemployment rate in North Minneapolis is 89 percent higher than in Minneapolis and 143 percent higher than Hennepin County overall. This route was built to improve access to jobs outside the corridor, connect residents to transit and transportation infrastructure jobs, and increase resident spending power with transportation options that reduce automobile dependence.

The C Line corridor is projected to carry 9,300 people per day by 2030. It's already seen a 30% increase from pre-construction ridership. The line hit one million rides in November 2019, five months after it opened.

As a result of the success on this project, we continue to support Metro Transit's buildout of their Bus Rapid Transit network as the prime consultant for the design of the METRO D Line and architecture/transit systems lead for the METRO Gold Line.

## PARTNERSHIPS SUPPORTING OUR EMPHASIS ON SUSTAINABLE DESIGN

- Continued engagement with **USGBC** regarding the **LEED** rating systems.
- Continued engagement with **ISI** related to the **Envision** rating system.
- Renewed commitment as a **Fitwel** Champion.
- Proud endorser of the **Architecture 2030 Challenge**, an initiative designed to dramatically reduce GHG emissions by changing the way buildings are planned, designed and constructed.
- A founding endorser of the **Health Product Declaration Open Standard**, a format for reporting the content and associated health impacts of building products.
- An Enterprising Sponsor of **International Living Futures Institute (ILFI)**. We act as an ambassador and member of the ambassador advisory panel, helping recruit and train future ambassadors for the advocacy of the Living Building Challenge.
- Formed a strategic partnership with **Delos**, creators of the **WELL Building Standard**.
- Joint committee member for the development of the **American Contract Textiles (ACT)** Sustainable Textile Standards.
- Member of the **Business and Institutional Furniture Manufacturers Association (BIFMA)** e3 Sustainable Furniture Standards joint committee.

# Sustainable & Resilient Design

For more than 25 years, we've championed the belief that sustainability and resiliency are not about achieving a solitary target or end goal, but about changing values, culture and processes. Using a holistic approach to design, we have adopted high-performance requirements for all of our projects and have endorsed the Architecture 2030 Challenge to achieve dramatic reductions in GHG emissions. We continually explore and challenge long-held assumptions to find new ways to reduce energy demand, reduce or reuse water, reduce emissions, etc.

## Management Approach

Every project has an opportunity to incorporate some level of sustainability and resiliency. While there are some design solutions appropriate for all projects, most are project-specific. We work to integrate solutions that make sense for the environment, geography, and users, while balancing long- and short-term goals. Our first step on every project is to identify the project's sustainability and resiliency goals, so we can focus on solutions that will achieve those goals.

## INTEGRATED DESIGN

Our integrated approach involves project team members, client(s), users and other stakeholders, and our holistic approach considers all systems interdependently. We use a number of tools to stay focused on the goals that were identified early in project design, including working with many global assessment systems to rate the environmental impact and performance of buildings, including:

- |  |                             |
|--|-----------------------------|
| • BREEAM (BRE Environmental Assessment Method) | • Green Star                |
| • Envision                                     | • INVEST                    |
| • Fitwel                                       | • Labs21                    |
| • GBCI Guiding Principles                      | • Living Building Challenge |
| • Greenroads                                   | • LEED                      |
| • Green Globes                                 | • SITES                     |
|  | • WELL                      |

## SUSTAINABLE VALUE ANALYSIS

Our process includes Sustainable Value Analysis (SVA) that accounts for a project's triple bottom line—its full range of environmental, social and economic impacts. The process uses a suite of proven sustainability valuation methods that can be applied depending on the client and project context. SVA provides a business case for making sustainable project choices, identifying initiatives that will accomplish project goals, optimizing the total project value, and positioning projects for approval or funding.

## TOOLS

We are dedicated to developing tools and improving processes that empower our colleagues and clients. We have created a number of tools and resources to facilitate the integration of sustainability and resiliency into every project. From the development and maintenance of an extensive product database, to development of risk assessment tools, our clients benefit from our investment in integrating sustainability and resiliency into our overall design and project delivery culture.

## PARTNERSHIPS

Developing sustainable, resilient solutions means knowing the industry and understanding the dynamics of integrated design. We are committed to working in partnership with other sustainable design industry leaders and organizations.

## HEALTH & WELLNESS DESIGN & MEASUREMENT

Whether designing buildings or infrastructure, we use a holistic, outcomes-focused design approach that goes beyond resource conservation to encompass promoting the health and wellness of individuals and communities. We actively work with our on-staff researchers and public health experts to understand and document how our design interventions impact the health and wellness outcomes that our clients and communities care about. We are also evolving our practices to promote positive outcomes in our own spaces, using our own sustainability standards alongside healthy building rating systems.

# Sustainable & Resilient Design

## REGENERATIVE DESIGN

The term “regenerative” describes a process that mimics nature itself by restoring or renewing its own sources of energy and materials. At HDR, our architecture practice views regenerative design as design that reconnects humans and nature through the continuous renewal of evolving socio-ecological systems. Regenerative design moves beyond basic high-performance design toward renewal-focused impacts and metric-driven targets for carbon, water, nutrients, air, biodiversity, social and health categories. Our regenerative design framework provides a holistic view of performance metrics that should be at the center of design. Bringing these focus areas forward as key design goals allows us to explore “net positive” impacts for carbon, water, nutrients, air, biodiversity, social, and health, set achievable goals against existing benchmarks, and consider the project in its broader context.

## NET-ZERO EFFORTS

Many clients are seeking solutions that balance the project's impact on the environment. We are implementing these net-zero solutions for a number of projects. This includes providing a path to achieve net-zero carbon through a combination of passive and active design strategies to significantly reduce energy consumption, as well as incorporating strategies to achieve net-zero embodied carbon through a combination of local, renewable, and innovative carbon sequestering materials. Net-zero projects include:

- Georgia Institute of Technology, Carbon-Neutral Energy Solutions Laboratory (LEED Platinum Certified)
- Jim Pattison Centre of Excellence—Net Zero goal, achieved 98%
- Fort Carson Combat Aviation Brigade Barracks—Net Zero goal, achieved 98%
- National Geospatial Intelligence Agency
- Los Angeles Department of Water and Power, Multiple Projects

- Orange County Sanitation District Administration Building
- California Department of Corrections and Rehab, CMC SP4 and SP6
- RISE Costa Rica Wellness Community, Prototype 1, 2 & 3
- King County Maintenance Facility
- University of Montana, Frank College of Forestry & Conservation
- Hamilton Center—Currently in construction and expected to achieve Net Zero

## Looking Forward

We work to ensure that sustainability and resiliency are part of each project conversation. We continue to evolve our approach to match client and market needs. Recent trends involve integrating design for health, well-being and equity into the sustainability and resiliency conversations. With this in mind, we continue to evolve our processes to incorporate these trends into our project work and our office spaces.

80+ million SF of **sustainable** projects

63.7 million SF of **LEED** projects

215 **LEED Certified** projects—  
15 Platinum | 93 Gold | 80 Silver | 27 Certified

166 **LEED Registered** projects

13 **Envision Verified** projects—  
6 Platinum | 2 Gold | 3 Silver | 2 Bronze

10.5 million SF of BREEAM, CalGreen, Germany Energy Saving Ordinance (EnEV), GBCI HPSB, Green Globes, Green Star, Living Building Challenge or NetZero Water/Energy projects

900,000 SF of **WELL** projects—  
1 WELL Certified | 4 WELL Assessments

556,100 SF of **Fitwel** projects—  
2 Fitwel Certified | 10 Fitwel Registered

523 **LEED** Accredited Professionals

125+ **Envision** Sustainability Professionals

18 **Green Globes** Professionals

21 **WELL** Accredited Professionals

12 **BREEAM** Accredited Professionals

9 **Fitwel** Ambassadors

2 Certified **Passive House** Designers

2 **Living Future** Accredited Professionals



## CASE STUDY

*Using a holistic health journey to blend Eastern and Western medicine in new path.*



# Ambitious Everbright Life Center in China Short-listed for WAN Award

The HDR-designed Everbright Life Center in Hainan, China, was short-listed as one of three finalists for the World Architecture News (WAN) 2018 Award in the category of Future Projects: Healthcare.

At Life Center, a holistic health journey blends Eastern and Western medicine to define a new path toward total wellness. Working with China Everbright Bank, HDR conducted benchmarking and comparative studies to find a unique way to design a futuristic destination for health and wellness that could match the client's tremendous ambition. The new facility on Hainan will offer visitors and patients a spa-like destination with an advanced health program designed for rejuvenation and prevention.

Known for its silky sand, palm-fringed beaches and year-round tropical climate, Hainan is not only referred to as "China's Hawaii," but also was named "World Longevity Island" by the International Expert Committee on Population Aging and Longevity. It has emerged as one of Asia's most popular getaways for tourists from around the globe. Building upon the getaway concept, the facility will promote medical and wellness tourism in harmony with nature.

## A Rejuvenating Destination

A secluded world of beauty and serenity nestled up to the beachfront of a seaside village in Yalong Bay on Hainan Island, the 2.1M-square-foot Everbright Life Center is a lifestyle health and wellness destination designed under the concept, "Fountain of Rejuvenation." The hotel-like facility—

focused on new trends in holistic care, prevention and hospitality—will provide highly personalized, comprehensive services for prevention, treatment and management of the three pillars of health and wellness: mind, body and spirit.

Water, a source of vitality and serenity, informs the organic design vernacular that celebrates openness and an abundance of light. A veil-like smart enclosure allows most of the sun's light into the facility, while blocking near-infrared radiation, cutting energy costs and reducing carbon emissions in this tropical setting where air conditioning is the largest component of a building's energy requirements.

Natural ventilation, porous paving, photovoltaic glass, and a green roof contribute to a healthy design. A number of components comprise the resort-style destination:

- The welcome center features a gently undulating façade visible from afar, creating a graceful, luminous and welcoming image inspired by the natural flow and rejuvenating quality of water—a concept carried throughout the entire site.
- Private villas enhance the spa-like resort experience in contrast to a more traditional healthcare construct.
- Passing the anti-aging center, medical spa and long-term stay building, visitors and patients are guided into a circular courtyard surrounded by a medical checkup center with an attached retail and commercial gallery, a healing hotel and a Chinese Medicine branch that also includes an agricultural farm.

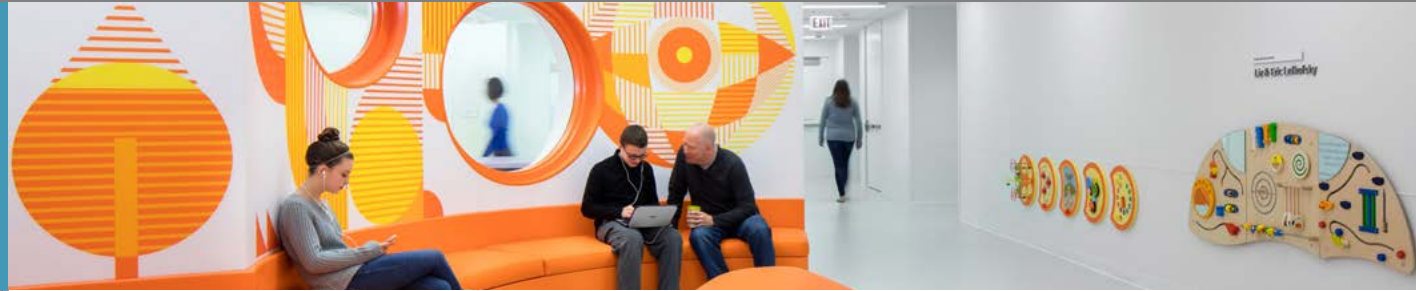


- Behind the medical checkup center, a senior housing unit attached to a rehabilitation center eases access to services for elderly guests and patients.
- Furthest from the entrance are a mom & baby center for the purpose of maintaining the health and happiness of new mothers and infants, and an orbicular conference center for events.

Every building curves and stretches around the circular center courtyard for easy navigation. Pathways and green space encourage recreation and exercise and bring nature deep into the entire health and wellness experience.

## CASE STUDY

*Translating research in real-time.*



## Shirley Ryan AbilityLab

*Shirley Ryan AbilityLab*

**CHICAGO, IL, USA**

The Shirley Ryan AbilityLab (formerly Rehabilitation Institute of Chicago) is the top rehabilitation destination for adults and children with the most severe, complex conditions—from traumatic brain and spinal cord injury to stroke, amputation and cancer.

We designed the 1.2 million-square-foot facility, in partnership with Gensler and in association with Clive Wilkinson Architects and EGG Office, as the first-ever “translational” research hospital in which clinicians, scientists, innovators and technologists work together in the same space—surrounding patients, discovering new approaches and applying (or “translating”) research in real-time. This translational approach means patients have 24/7 access to the brightest minds, the latest research, and the best opportunity for recovery.

As an innovator in the healthcare industry, we were responsible for the design and programming of healthcare and research environments and all translational planning concepts.

### Key Features

- Each of five ability labs—Think + Speak Lab, Legs + Walking Lab, Arms + Hands Lab, Strength + Endurance Lab, and Pediatric Lab—provides for both active and visible “front stage” patient work with clinicians and researchers, as well as private, heads-down “back stage” space for analysis and planning.

- An innovative “wet” lab allows researchers to study diseases, conditions and injuries that can only be solved at the cellular level. Scientists are able to increase the number and speed of discoveries because they are co-located with clinical teams and patients.
- Design elements play a vital role in patients’ therapy and recovery. Curved walls, for example, allow for more natural and “frictionless” movement, especially for people with physical disabilities and those who use wheelchairs for mobility.
- The 10<sup>th</sup> floor Sky Lobby is the welcome center and communal hub with beautiful therapy gardens. The floor’s vertical volume is accented by a tapered ceiling plane that rises as it moves toward the transparent curtain wall that wraps the floor, maximizing daylight and expansive views.
- The thoughtful design of space unites with bold and motivating interior graphics and wayfinding to support Shirley Ryan AbilityLab’s brand.
- With an average stay of 24 days, inpatient rooms were designed to provide visual access to restrooms, places for personal keepsakes and sweeping views of the city oriented to encourage movement and progress.
- Extensive landscaping and green space at both the street level and throughout the upper spaces afford access to gardens. A green roof system tops the building. These features promote a healing environment and provide practical benefits such as the absorption of heat at the roof and the diversion of rainwater from entering the city sewers.





## CASE STUDY

*Re-engineering a home for salamanders through aquatic ecosystem restoration.*



# Eliza Springs Stream Restoration

*City of Austin*

**AUSTIN, TX, USA**

For the first time in nearly a century, endangered Barton Springs salamanders have a surface stream at Eliza Spring that allows aquifer flow to revitalized habitat. The complex geotechnical and structural design provides a stable site for in-stream habitat enhancement, native riparian landscaping, and improved water quality with hydraulic control. This project uses a sophisticated engineering design to support natural and beneficial ecological functions.

Barton Springs has been an oasis for visitors for thousands of years. Today, it is a gathering place for more than 1 million annual visitors and is referred to as the crown jewel of Austin. By the time Andrew Zilker deeded the land to Austin in 1918, construction had changed the character of the site and, eventually, the spring-fed stream was enclosed within a buried concrete pipe.

This proved consequential for the habitat of the highest known density of endangered Barton Springs salamanders that call the Eliza Spring home. Once propagating the spring, the concrete pipe severed the natural connection to Barton Creek, resulting in loss and fragmentation of surface habitat by eliminating hydraulic surface connections and degradation of aquatic habitat quality.

Working with HDR, the City of Austin removed the pipe, restored the stream, and reduced the anthropogenic flow regime and habitat modifications of the past. Public forums, meetings and signage both during and after construction informed residents about the endangered salamanders, the history of the site, natural resource protection, historical and current construction methods, and the salamanders' status as an indicator species for water quality in the Edwards Aquifer, the drinking source for over 1.5 million Texans.

The revitalized Eliza Spring supports long-term species recovery and offers the community a highly visible place to view and learn about Austin's unique environment and two of its iconic endangered species. By daylighting the historic spring, this aquatic ecosystem restoration project changed the perception of engineering solutions through the incorporation of multiple objectives and environmental sustainability.





## CASE STUDY

*Bolstering resiliency, increasing efficiency.*



# LADWP West Los Angeles Power Yard

*Los Angeles Department of Water and Power*

**LOS ANGELES, CA, USA**

LADWP is the largest municipal water and power utility in the nation and is committed to delivering reliable, safe water and electricity at competitive prices while moving forward with a comprehensive plan to green the grid. LADWP plays a pivotal role in achieving many of Los Angeles' Green New Deal goals, including but not limited to phasing out natural gas operations at three existing power plants within the LA Basin while providing enough power to support the electrification of transportation.

Our HDR design team, in collaboration with LADWP, is using a net-zero approach to design the West Los Angeles District Yard to replace aging infrastructure and consolidate all emergency supplies and materials currently stored at the site that do not have dedicated, secured space. A three-story mixed-use building houses a service planning center, fleet maintenance, supply-chain services, offices, supporting amenities and yard operations. The proposed new yard will significantly increase the number of crews with the necessary supporting functions to better serve the entire west side.

The West Los Angeles Power Yard and the Hoover Street District Power Yard are intended to create a model for all future yards and to demonstrate to the public that there is a viable pathway to a green future.

## Sustainable, Resilient Design

The new yard meets the criteria for an essential services facility, allowing it to survive a major seismic event and remain operational—ensuring that power service is quickly restored to Los Angeles. In alignment with the city's ambitious sustainability goals, the project is designed to achieve Net-Zero Energy certification and LEED Gold with a pathway to Platinum.

### Sustainable design features include:

- On-site renewable energy photovoltaic array produces 100% of modeled building EUI
- Electrochromic glazing reduces heat gain and glare
- Solatubes provide daylight to achieve LEED credit level of glare-free daylight
- Thermally broken, insulated precast concrete panels enhance human comfort
- Hybrid natural ventilation and displacement HVAC mechanical system gives users control and reduces energy consumption in the offices
- Solar chimneys with fan assist and radiant heating result in code-compliant air changes and support worker comfort
- Landscape and toilets utilize shower and sink grey water treated on-site

- Site design manages 85<sup>th</sup>-percentile storm event and the 25-year, 24-hour peak underground system flow
- Off-site runoff from the street is treated in the parkway bioswale to reduce pollution
- Utilizing 100% concrete paving and extensive shading with photovoltaic arrays reduces heat island effect
- Public and staff parking contributes to the electrification of transportation and the reduction of GHG emissions through the use of electric vehicle chargers for 60% of fleet vehicles
- Healthy materials eliminate harmful chemicals and minimize adverse impacts to human health

## Sensitivity to Neighborhood Context

The building is sited to shield the residential neighborhood from potential acoustical disruptions from yard activity. Careful stepping and screening of the building mass responds to the neighborhood context. Taller elements of the design are set back from the property line. On the top floor, a green roof setback in front of the offices further reduces the impact of the taller building and prevents office workers from having a line of sight into any of the private residential yards. Additionally, a second floor assembly area is intended as a community resource when not in use by LADWP.



## CASE STUDY

*Creating multi-benefit, flood risk reduction and ecosystem enhancement.*

## Southport Levee Improvement Project

West Sacramento Area Flood Control Agency

### WEST SACRAMENTO, CA, USA

Surrounded by water during the winter months, the City of West Sacramento depends on levees for its residents' safety. A failure at any location in the levee system during a 50-year or greater flood event results in an inundation of more than 90% of the entire city, with floodwater up to 20 feet deep. Evacuation routes, including freeway on/off-ramps, would be compromised in as little as two hours, impacting the ability to get to higher ground. The West Sacramento Area Flood Control Agency (WSAFCA) moved to address this risk proactively through the Southport Levee Improvement Project, a program consisting of several flood risk management projects.

The \$180 million project, financed and constructed by the WSAFCA, is its largest capital improvement to date. Levee improvements along this 5.6-mile section include renovating the existing levee structure and constructing a new setback levee.

We provided engineering services and facilitated the Envision process for SLIP, WSAFCA's first Envision-verified project and the first flood control project to receive Platinum recognition. WSAFCA's goal is to achieve a minimum 200-year level of levee performance for the entire West Sacramento levee system. The project brings the levee into compliance with federal and state levee design criteria, as well as providing opportunities for ecosystem restoration and public recreation.

SLIP is a three-phase, multi-benefit, flood risk reduction and ecosystem enhancement project. Measures included 1.8 miles of fix-in-place levee improvements and a new 3.8-mile-long setback levee with cutoff walls, seepage berms, demolition, rock slope protection, utility relocation and the use of borrow sites. Project transportation improvements included realigned roadways, new access roads and driveways, turnouts, cul-de-sacs and maintenance corridors.

The project is relatively unique for an urban area in that it returns several hundred acres of land to riparian and oak savanna habitat. This project was constructed as part of the federal West Sacramento Project, a partnership with the U.S. Army Corps of Engineers, WSAFCA and the Central Valley Flood Protection Board acting through the Department of Water Resources Division of Flood Management.

Restoration design increases river-floodplain connectivity and restores ecologically functional floodplain habitat consistent with the flood risk reduction goals of the project. The project is restoring 212 acres of habitat, with a net increase of 114 acres of habitat that did not exist before the project. This includes new wetland habitat developed on the water side of the new levee to expand much-needed protected habitat for local biodiversity.







# Climate Change

Communities, public agencies and businesses alike are taking action on climate change by developing long-term strategies to drastically reduce GHG emissions and adapt to a changing natural environment. It's a challenge that affects every city, agency and business, requiring transformative changes in sectors such as energy, transportation, buildings, water and waste. Layered on top of aging infrastructure and the need to prioritize equity and environmental justice, our clients are faced with solving a complex web of interlocking issues requiring urgent action and innovative solutions.

Climate change presents both risks and opportunities to our clients, with the potential for significant economic, environmental and social implications. At the same time, many are proactively working to seize opportunities in the transition to a green economy, reducing long-term cost through adoption of resilient, low-carbon technologies.

## Management Approach

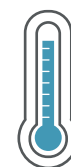
As a professional services firm, the most significant impact of climate change to our business is our own ability to meet the rapidly changing needs of the markets we service. Our teams must be prepared to help our clients respond to the physical, regulatory and other market-based risks and opportunities. This might include assessing and mitigating physical risks or developing a climate adaptation plan that meets stakeholder concerns. Our capacity to address these challenges is directly linked to our competitiveness in a growing market and our ability to meet clients' expectations.

Because we serve a wide range of clients across diverse sectors—from healthcare and transportation to energy and water—it is important that we understand each client's unique risks and opportunities. And while there's no one-size-fits-all approach to taking action on climate change, we aim to help each client develop a robust, data-driven strategy informed by stakeholder input. This enables a greater understanding of the potential impact, financial implications, and alternatives to address specific risks or capitalize on opportunities.

To do so, we bring together cross-functional teams with diverse perspectives and the right mix of technical expertise. For some projects this may include hydro-meteorologists and asset management professionals, while for others it includes architects, energy modelers and renewable energy experts. This multidisciplinary approach is critical to managing the inherent complexity of climate change projects.

## Looking Forward

Change is the only constant. We will continue to monitor the physical, regulatory and market risks and opportunities that our clients face, while collaborating internally to better understand the unique challenges of the sectors we serve. Furthermore, we will continue to encourage our employees to take on leadership roles in the organizations leading the dialogue on the impacts of climate change and resiliency. Our involvement in these organizations offers a design and engineering perspective, provides insight to emerging trends and issues, and, most importantly, better allows us to serve our clients.



The planet's average surface temperature has risen about

**2.12** degrees Fahrenheit

since the late 19<sup>th</sup> century, a change driven largely by increased carbon dioxide emissions into the atmosphere and other human activities.



Global sea level rose nearly

**8** inches

in the last century.

The rate in the last two decades, however, is nearly double that of the last century.

Reference: NASA [<https://climate.nasa.gov/evidence/>]



## CASE STUDY

*Managing major interstate closure through swift assessments, inspections & repairs.*



## 2019 Flood Response and Recovery Efforts

*Iowa Department of Transportation*

### IOWA, USA

In March 2019, record Missouri River flooding caused substantial damage to infrastructure across southwest Iowa, closing several river crossings, flooding 60,000 acres, and leaving people unable to reach jobs, schools, healthcare and other services. Approximately 48 miles of Interstate 29 near the river were closed, severing the main connection between Omaha/Council Bluffs and Kansas City. The detour between the two metro areas required travelers and freight to travel an extra 130 miles and nearly two hours, costing users nearly \$200,000 per day.

Within days of a request from the Iowa Department of Transportation, an HDR team mobilized, providing more than 110 staff employees to help monitor and respond to the emergency.

We provided on-call flood response and support, with tasks for damage assessments; emergency bridge inspection, design and repair; levee design, permitting and construction inspection; strategic communications; complex 2D hydraulic modeling; construction engineering and inspection; betterment and resiliency analysis; and GIS StoryMap development. Our experts also focused on how to provide resiliency in future floods.

### Future Resiliency

The spring 2019 floods were the second time this area has flooded in eight years. So the team focused on improvements to provide resiliency after future floods, using Iowa's first application of Flexamat shoulder protection.

This was the first time this material had been used in Iowa. Our team developed a computational fluid dynamics model to understand how the material would perform. This model evaluated near-field hydraulics, turbulence and flow rates over the roadway and the threshold of protection provided. As a result, Flexamat was installed on I-680.

The design and product performed well just weeks later in May, when water rose again. Areas of I-680 where Flexamat was installed were protected, and the road reopened hours after waters receded with no new damage to shoulders or the roadway.





Limiting global warming to 1.5 degrees Celsius and avoiding the worst impacts of climate change requires transformative changes across all market segments and geographies.

# Climate Action: Decarbonization

Reducing carbon emissions requires fundamental changes to nearly every aspect of community infrastructure. From the buildings where we live and work and the energy that powers them, to the way we get around, communities are transitioning away from systems dependent on fossil fuels.

Doing so requires systemic thinking to understand interdependencies between infrastructure systems to deliver compounding benefits with targeted GHG reduction strategies.

## Management Approach

We focus on optimizing the connections between community infrastructure through shared solutions that drastically reduce carbon emissions, while promoting economic and social prosperity. This includes:

### DESIGNING TO ENHANCE SYSTEM RELIABILITY

As a recognized leader in transportation, energy, water, and building design, we prioritize decarbonization solutions to maintain reliability and enhance resiliency, while optimizing connections between interrelated infrastructure systems.

### UNDERSTANDING THE LOCAL COMMUNITY

Climate action strategies are most effective when built upon local programs. Our local professionals partner with national experts to implement the most effective GHG emissions reduction strategies.

### FOCUSED SOLUTIONS ON MEANINGFUL IMPACT

Climate action strategies are identified and prioritized for implementation by ranking the relative impact of each strategy and identifying integrated solutions that deliver compounding benefits.

### COLLABORATING ACROSS-DISCIPLINES

Implementation of climate action strategies requires a combination of technical disciplines. Our teams blend engineers, scientists and economists to implement innovative and impactful solutions.

## PUTTING PLANS INTO ACTION

There are numerous ways to develop and implement climate action strategies to decarbonize community infrastructure, including those in:

### Energy Systems

Developing infrastructure that powers the world is where HDR got its start over 100 years ago. It's this industry legacy that positions us to help reduce the carbon intensity of energy systems, while maintaining reliability and improving resiliency. We help communities do this by:

- Assisting with all phases of renewable energy strategy.
- Evaluating and integrating optimal energy storage and microgrid solutions into community infrastructure to maintain reliability and enhance resiliency.
- Helping to plan, establish, optimize and expand a district energy system including the addition of combined heat and power (CHP) capacity to further carbon reduction and resiliency goals.

### Buildings

As urban migration continues, communities are challenged to decouple carbon emissions from growth in the building sector. Reducing building carbon intensity will require simultaneous efforts to drastically improve efficiency, while transitioning away from fossil-fuel energy for heating and electrical systems. We help communities do this by:

- Designing high-performance, energy-efficient buildings.
- Bringing net zero and regenerative design innovations to create buildings of a low-carbon future.
- Helping to identify, evaluate, and implement electric heating, steam, and hot water solutions; electrify buildings; and prepare for a fossil fuel-free future.





# Climate Action: Decarbonization

## Transportation

The transportation sector is one of the largest contributors to GHG emissions globally, signaling the need for transformative change in the way we move people and products. Decarbonizing transportation represents a significant shift in technology and human behavior, requiring supporting policies and infrastructure to enable change at scale. We help communities do this by:

- Facilitating transit and mobility planning to offer innovative approaches that leverage transit as a catalyst for creating connected, vibrant communities.
- Planning for transportation electrification to help transform a sector historically reliant on fossil fuels.

## Solid Waste

Carbon emissions from solid waste operations can be deceiving. While direct emissions generally represent a small percentage of a community's GHG inventory, indirect or consumption-based emissions, including the embodied carbon within discarded materials, is the single-largest source. We help communities handle these issues by:

- Providing landfill gas recovery and reuse solutions that improve the effectiveness of collection systems and evaluating reuse alternatives such as electricity generation and direct use of medium-Btu or renewable natural gas (RNG).
- Evaluating and designing solutions to implement the most economical and least carbon-intensive organics management alternatives.
- Building programs and infrastructure to support a circular economy.

## Wastewater

Effective management of municipal wastewater is not only important for public health and ecosystems, but also an increasingly critical strategy for climate action. Wastewater represents multiple climate action opportunities, such as direct emissions reduction through methane recovery and renewable energy generation. We help clients manage these issues with solutions like:

- Designing innovative wastewater treatment processes that provide opportunities to optimize generation of methane emissions to maximize recovery and reuse potential.
- Improving operating efficiency to reduce energy use.

## Land Use Planning

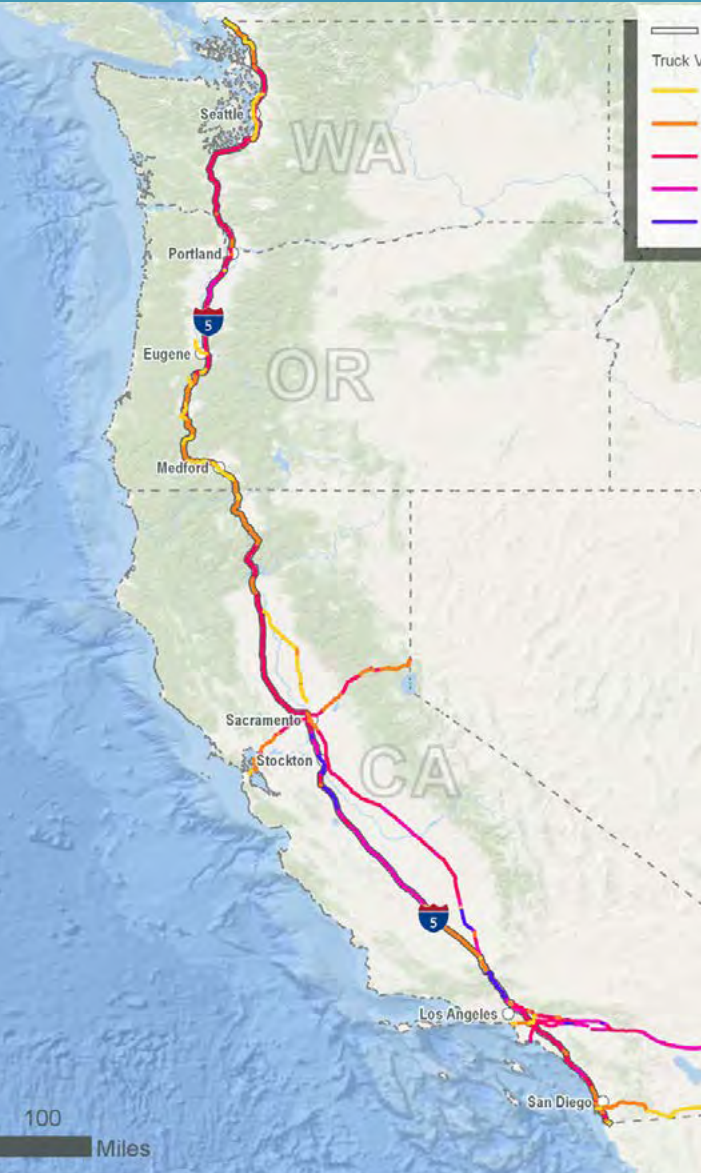
The physical effects of the climate crisis are readily apparent in communities around the world. Urban planning and design through a climate lens plays an integral role in changing cultural norms around mobility and consumption, while promoting low-impact development. We help communities manage these concerns by:

- Using an inclusive master planning process that unites community aspirations for low-carbon lifestyles with state-of-the-art urban design practices and market realities to serve the unmet needs of local residents and businesses.
- Walkable greenfield planning that results in active neighborhoods that cater to people of all ages, are environmentally friendly, and will stand the test of time.



## CASE STUDY

*Reducing emissions by electrifying the I-5 Corridor.*



## West Coast Clean Transit Corridor Initiative

*Southern California Edison*

**CA, OR, WA, USA**

Electric utilities in three West Coast states joined together to commission the West Coast Clean Transit Corridor Initiative, a study focused on introducing electric vehicle charging infrastructure to drastically reduce emissions. Led by HDR, the study provides recommendations for electric charging infrastructure to support medium- and heavy-duty (MD/HD) electric trucks along the 1,300-mile I-5 corridor.

Technical experts from HDR's power and transportation teams combined their expertise to develop a phased and achievable set of recommendations for the study. By 2025, the study proposes installing 27 electric charging sites for medium-duty electric vehicles at approximately 50-mile intervals along I-5. Once the charging stations are in place, a second phase would expand 14 of the 27 charging sites to accommodate charging for electric heavy-duty regional haul tractors by 2030, when it is estimated that 8% of all trucks on the road in California could be electric.

To arrive at the recommendations, the study included:

- Zero-emission MD/HD truck market assessment
- Zero-emission MD/HD truck forecasts
- Stakeholder surveys

- Current trucking market landscape analysis
- Current utility infrastructure evaluation
- Current and forecasted truck volumes along the corridor
- Identification of locations for future electric truck charging facilities

The West Coast Clean Transit Corridor Initiative identifies and recommends which technology-application solutions to prioritize based on research analyses, and provides recommendations to each electric service partner on where to locate charging infrastructure in their territories to accelerate the adoption of MD/HD electric trucks.

Other initiative sponsors of the study are Los Angeles Department of Water & Power, Northern California Power Agency, Pacific Gas and Electric Company, Pacific Power, Portland General Electric, Puget Sound Energy, Sacramento Municipal Utility District, San Diego Gas & Electric, Seattle City Light and Southern California Public Power Authority.

HDR completed the study in partnership with CALSTART, S Curve Strategies and Ross Strategic.

## CASE STUDY

*Reducing energy costs  
and enhancing resiliency.*

# Community Solar and Energy Storage Project

*Orcas Power and Light Cooperative*

**DECATUR ISLAND, WA, USA**

Orcas Power and Light Cooperative (OPALCO) is a member-owned, nonprofit cooperative utility providing energy services to 20 islands with approximately 11,200 customers by way of submarine cables. The project is located on Decatur Island, which is part of the San Juan Islands in the northern portion of the Puget Sound in Washington state. The project consists of a 0.5 MW/2 MWH Containerized Lithium-ion Battery co-located with a 504 kW Community Solar array at the Decatur Island Substation. The Decatur Island Substation is essential to ensuring reliable energy to the residents of the San Juan Islands as it is the point of interconnection with the mainland transmission system. The battery energy storage system, in combination with the community solar array and an advanced high-speed switching mechanism, provides a microgrid that both reduces the cost of energy for OPALCO's customers through several value streams and enhances resiliency through seamless islanding of the Decatur Island loads in the event of a transmission outage. The Washington Clean Energy Fund (CEF) has given Orcas Power and Light Cooperative a grid modernization grant for the project.

HDR operated as the Owner's Engineer to provide the following tasks to achieve successful completion of the project:

- Project Management Services
- CEF II quarterly update reporting and project update documents
- Schedule development
- Host biweekly project meetings
- Technical Specifications for battery vendor request for proposals
- Request for information support
- Bid review and recommendation
- Construction Specifications portion of Contractor request for proposals
- Construction support





## CASE STUDY

*Leveraging expertise to meet performance expectations for the life of the project.*

## Owner's Engineer for Multiple Solar PV Projects

*Confidential Client*

### NATIONWIDE, USA

Over the past two years, HDR has served as the trusted advisor to a major developer of renewable energy, providing support for their growing portfolio of solar PV projects across several states.

Our technical experts team is currently reviewing the specifications that are used by our client to bid the initial design up to 30%, and then the EPC contractors through final design. HDR's reviews and edits are incorporating best management practices developed through lessons learned on current and past PV solar projects to be applied over a wide range of locations. HDR is also coordinating with the client to develop a list of challenges and observations that they have made over their history of projects and is working to incorporate those items into the content of the specifications with specific consideration of practicality and cost efficiency.

HDR is providing Owner's Engineering design reviews for several projects. These reviews include civil, structural, and electrical design packages and supporting documentation for the critical milestones (30%, 70%, 90% and Issued for Construction). HDR has developed a streamlined process of providing markups of drawings or reports along with a tracking spreadsheet. The tracking spreadsheet documents each of our findings and observations, provides the correspondence between HDR, the client, and the contractor, and tracks each item to its closure.

HDR also performs monthly site visits to monitor and observe the progress of site work to be performed in connection with the SWPPP during the construction phase of projects. During HDR's site visits, our representative performs the following activities:

- Interview the relevant site staff
- Review a representative sample of the conformance documentation related to the SWPPP
- Perform visual observations of a select sample of key ongoing and/or completed site work related to the SWPPP

Following each visit, HDR provides a memorandum that summarizes our observations. Where findings are made, HDR characterized the finding within the memorandum and provided our corresponding recommendation.

Our approach as owner's engineer for these projects was to leverage our expertise to help the project maintain quality of the design in accordance with the specifications and best management practices with the ultimate goal that our client's project is designed to meet their performance expectations for the life of the project.



# Climate Action: Adapting to Change

While reducing GHG emissions is required to avoid the worst impacts of climate change, many clients in vulnerable geographies are already beginning to develop strategies to adapt to the changes already underway and assess the potential for future changes. Aiming to reduce the risk to businesses or communities, adaptation planning is critical to protecting people and the natural and built environment, while strengthening economic and social resilience.

This means understanding climate threats in a local context by evaluating climate trends, projections, threats and the potential impacts to the people and assets that need protected. The assessment needs to be appropriate for dynamic systems where climate and non-climate stresses change over time with varying levels of sensitivity to change. At the same time, potential adaptation strategies must be amenable to stakeholders, economically justified and effective in mitigating risk to an acceptable level.

We've become increasingly involved in this process with our clients. In some cases, we'll help navigate the entire process, facilitating an inclusive stakeholder engagement process to gather community input and prioritize adaptation strategies. For others, we'll provide technical insight to one aspect of the assessment, such as climate scenario modeling or economic analysis of adaptation strategy alternatives. On a project basis, we also work with clients to consider how climate change might impact siting, design specifications, or long-term operations. Altogether, adaptation planning is becoming increasingly important to our clients and an important element in project planning.



## The Standards of the Past 'Need to be Challenged'

How can infrastructure be created, managed and upgraded to withstand the challenges of global climate change? What role do engineers on infrastructure projects play? The American Society of Civil Engineers and Civil Engineering magazine recently convened a panel of industry experts to discuss the issue at ASCE's International Conference on Sustainable Infrastructure. Michaela Wittmann, our director of sustainability and resiliency, was on the five-member invitation-only panel.

It's imperative for engineers to understand that "the standards that we designed to in the past need to be challenged and rewritten to address the changing climate and demands of today's infrastructure needs," Wittmann said at the event.

Wittmann, ENV SP, LEED AP, works to make sure we discuss resiliency needs with all of our infrastructure clients. We introduce our resiliency framework plan to clients to make sure we are asking them the right questions about resiliency and what it means to them. Our goal is to make sure first that the conversation happens and then to identify the specific outcomes our clients need. From there, we can put our interdisciplinary teams to work implementing the goals of our clients and their communities.

“...the standards that we designed to in the past need to be challenged and rewritten to address the changing climate and demands of today's infrastructure needs.”

Collaboration and cooperation are key to these conversations. Wittmann emphasized that clients or a representative for clients need to be deeply involved in sustainability discussions for them to be impactful. She cited the design of HDR's global headquarters, which opened in late 2018. "We had our developer at the table, we had our facility manager at the table, we had our building's day-to-day operations manager at the table. They all had a stake and contributed to the success in achieving our sustainability goals." Ensuring that the right people are involved in the sustainability and resiliency conversation is important to ensuring an initiative's success.

Read the whole panel discussion in '[Leadership Required](#),' in the February 2020 edition of Civil Engineering magazine.

## CASE STUDY

*Merging climate change science and modeling with engineering and planning.*



# Monroe County Roadway Vulnerability Analysis

*Monroe County*

**KEY LARGO, FL, USA**

Monroe County is among the most vulnerable communities in the nation to rising sea levels, with a 120-mile archipelago of islands, most of which are at or near sea level. The county is also among the most vulnerable to impacts of tidal flooding. County leadership is well aware that being a coastal community exposes the population to long-term sea level rise (SLR) risks, including impacts to public infrastructure and natural habitats within these highly vulnerable zones. Actively protecting this infrastructure supports the county's efforts to provide continuity of public services, with the intent to create a competitive advantage across economic, built, and natural environments as climate change makes a progressively greater impact on the region.

Climate change, including but not limited to extreme weather conditions and SLR, has prompted planners and officials to focus on strategies that support a more resilient system. The County's roadway system is vital for access/evacuation and mobilization within the Florida Keys. It provides a crucial contribution to economic development and growth, as well as producing important social benefits. A well maintained roadway system encourages tourism and serves residents by providing access to employment, social, health, and education facilities. The County maintains an estimated 311 miles of roads distributed among more than 1,200 roadway segments.

As part of the County's proactive sustainability approach, this project is merging climate change science and modeling with transportation engineering and planning to develop a long-term road adaptation plan based on design criteria, SLR projections, adaptation methodology, policy/financing evaluation, and public/stakeholder outreach. The primary objective is to analyze impacts of current and projected SLR levels on all County-maintained roads and develop an implementation plan and timeline to adapt roads for SLR. The results will also be used to determine new policy considerations and design criteria for acceptable levels of service.

HDR is evaluating future SLR, tidal waves, storm surge, and extreme weather analysis projections (2025, 2030, 2035, 2040, 2045, 2060, and 2100) to determine the vulnerability level of the roadway segments and prioritize the implementation of the adaptation improvements (i.e., raising the roadway, improving storm drain system, and using green engineering). An assessment of operational and construction-related GHG emissions was performed for alternatives as part of the evaluation. We will develop mitigation concept roadway and drainage plans, cost estimates, and benefit cost analysis for the most critical segments. An adaptation plan will then be developed based on the multiple criticality components evaluated throughout the life of the project.

## CASE STUDY

*Preparing facilities for the impacts of a major natural hazard event.*



# Resiliency Preparedness & Recovery Recommendations

King County Department of Natural Resources and Parks, Wastewater Treatment Division

## SEATTLE, WA, USA

King County protects water quality and public health in the central Puget Sound region by providing high-quality and effective treatment of wastewater collected from local sewer agencies. The King County Wastewater Treatment Division (WTD) serves about 1.7 million people within a 424-square-mile service area. With portions of its wastewater system facing potential downtimes after a catastrophic event of months to several years, WTD recognizes the role of resiliency planning in minimizing the risk of facility failures and service disruptions that could result in human and environmental contact with raw sewage and other safety concerns in its facilities.

The purpose of this resiliency project was to provide a comprehensive strategy for preparing WTD's conveyance and treatment facilities for the impacts of a major natural hazard event. The effort considered system-wide risks from the natural hazards most likely to cause significant impact in WTD's service area: earthquake, liquefaction, landslide, flooding/tsunami, and extreme weather. Determining these risks required hazard modeling, identification of vulnerabilities to these hazards in WTD's collection and treatment system, and knowledge of the potential consequences of failure. The remediation and resilience strategies from this project provide a benefit to WTD's ratepayers, system partners, employees and residents.

The project had four key goals:

1. Minimization of injury or loss of life among WTD staff during and after a major event.
2. Minimization of public health risks following a disaster by improving facility resilience and establishing a more rapid resumption of conveyance and treatment operations.
3. Reduction in the expected cost of recovery by, where possible, mitigating identified weaknesses in the system.
4. Improving the ability of post-earthquake rebuilding and restoration through the long-term survivability and resiliency of WTD facilities.

An important aspect of sustainability is ensuring the economic and financial viability of communities and the organizations serving them. To identify the most at-risk wastewater system components, the project team needed to understand which portions of WTD's service area would be affected during a catastrophic event, including: flooding, extreme weather, and the seismic, liquefaction, and tsunami threats from three specific earthquake hazards: Cascadia Subduction Zone, Magnitude 9.0; Seattle Fault, Magnitude 7.2; and South Whidbey Island Fault, Magnitude 7.4. In partnership with County GIS analysts and the consultant team's experts, the team developed specialized GIS modeling to identify the areas that would be affected by

each hazard class, and evaluated those in combination with pre-existing local models and studies. The team performed a desktop analysis to identify vulnerabilities using facility attributes such as age, retrofit history, materials composition, elevation relative to floodplains and tsunami inundation zones, etc. Hazus, a methodology developed by FEMA, estimated expected damage to buildings from ground motions, and American Lifeline Association methodology determined pipeline vulnerabilities. After workshops were conducted with the County to validate these findings and determine system criticality and consequence of failure ratings, the team performed a risk assessment to identify high-risk pipelines and facilities.

Guided by the goals of King County's Equity and Social Justice strategic plan, the team was conscientious of the neighborhoods most likely to struggle financially and/or face significant response and recovery challenges. The team created an ESJ Vulnerability Index to address determinants of equity, and conducted a pro-equity analysis to determine if there was any bias or structural racism in the recommendations. Results were used to prioritize mitigation recommendations and can be applied to the County's response and recovery efforts.



## CASE STUDY

*Recognizing infrastructure that promotes excellence in construction management and administration.*



# Three HDR Projects Receive APWA 2019 Public Works Project of the Year Awards

Three HDR projects in Washington and Texas were selected as recipients of the American Public Works Association's 2019 Public Works Project of the Year Awards for infrastructure publicly developed, owned and maintained that promotes excellence in construction management and administration. These awards recognize the alliance between the managing agency, the contractor, the consultant and their cooperative achievements.

The APWA Public Works Project of the Year Awards are presented annually at APWA's PWX conference. Awards are given in four divisions and five categories. Project divisions include: projects less than \$5 million, projects \$5 million to \$25 million, projects \$25 million to \$75 million, and projects of more than \$75 million. The categories are Structures, Transportation, Environment, Historical Restoration/Preservation, and Disaster or Emergency Construction Repair.

## San Pedro Creek Improvements

The San Pedro Creek Improvements in San Antonio, Texas, received APWA's 2019 Public Works Project of the Year Award in the \$25-\$75 million category, Environment division. HDR led the design team for the project, which completed the first phase of transforming a 2-mile stretch of creekway for the San Antonio River Authority into walking

paths and park areas while accomplishing flood control. The project improvements reflect the creek's place in the city's cultural history, revitalize natural habitats and water quality, and catalyze economic development.

## Fish Passage Enhancement Program

The Fish Passage Enhancement Program in Thurston County, Washington, was honored in the less than \$5 million category, Environment division. HDR led analysis and design of improvements to fish passage crossings for the County at two roads south of Olympia.

## Yesler Way Bridge Reconstruction

The Yesler Way Bridge Reconstruction in Seattle was honored in the \$5-\$25 million category, Historical Restoration/Preservation division. HDR led design for the renovation and rehabilitation of the more than 100-year-old bridge in central Seattle for the Seattle Department of Transportation. The team balanced historic preservation goals while providing a safer, more accessible and resilient bridge that was less at risk from earthquakes and the impact of vehicle strike.



# Water Stewardship

We work with a variety of clients for whom water is a priority in their business. For some, water is an essential resource for conducting business; for others, managing water is their business. Projects range broadly, but concerns tend to be the same: water availability and quality. Our professionals work with clients to address complex water issues and develop decision-making processes focused on sustainable near-term and long-term outcomes.

## Water Scarcity

We frequently see situations where water is already allocated and securing future supplies is strained by climate variability, environmental needs and population growth. Access to sufficient and high-quality surface water, groundwater, or reclaimed water sources for today's needs, and into the future, is complex yet achievable.

## Management Approach

Our water supply planners help to evaluate risk and uncertainty, measure system reliability and resiliency, and quantify the value of benefits related to ecosystem function and health. Agencies continue to evaluate the potential for directly reusing treated water, meeting customer demand while minimizing ecosystem impacts.

For example, HDR is supporting the City of Carlsbad, New Mexico, in efforts to efficiently manage their water through the planning and design of reuse systems. Using treated wastewater effluent for non-potable needs (i.e., irrigation) reserves drinking water for potable demands. HDR updated the City's reuse master plan and, after approval from the New Mexico Environment Department (NMED), designed improvements to reuse infrastructure to expand the City's reuse program by 2 million gallons per day.

## Water Quality

Safe and reliable water is vital for our communities. Agencies must manage diverse and integrated supply systems and consider potential for issues caused by contaminants and the source water properties.

## Management Approach

We work toward the mission of providing clean water for people and our planet. To do this, we help water utilities provide drinking water that is safe and reliable for their consumers. We help our customers comply with all rules and regulations by anticipating the impacts that a change to one aspect of treatment can have on other aspects of a water system. And we work to clean the water we use and return to streams, wetlands and the ocean.

Our professionals assist federal, state and local agencies and private sector clients to successfully implement Green Infrastructure (GI) and Low Impact Development (LID) solutions. Our LID facilities strive to closely mimic natural hydrology and aid in reducing surface water pollution. We often combine stormwater management and natural system restoration to activate multiple benefits of improved water quality and ecosystem functions.

We support independent and collaborative research studies for numerous municipal, government and professional organizations (USEPA, WRF and WE&RF), as well as industrial foundations, universities and utility research partners. We are helping to drive watershed-based, cross-discipline solutions such as those being implemented in the Puget Sound Region. The Puget Sound Initiative is taking a one-water approach to improving water quality, by considering municipal wastewater, urban drainage, and water reuse, as well as industrial and non-point sources in developing pathways forward to improve water quality to support fisheries, marine life and recreational use of the Sound.

## ONE WATER INSTITUTE

Most recently, water utilities are moving toward a novel focus on sustainability, resource recovery, and improving operational efficiency through management of the entire water cycle—a truly One Water shift in how utilities have traditionally been managed. A One Water utility manages an amalgam of wastewater treatment, water reuse, groundwater, stormwater, and water treatment through a holistic lens that focuses on providing safe water while being mindful of environmental and social impacts.

Through HDR's One Water Institute, our staff have access to a network of technical leaders in a number of water markets. Additionally, we are making a concerted effort to network with academic, consultant, and utility partnerships for specific research topics. This year, we've identified several One Water focus areas that are developing rapidly. Just to name a few, we're partnering with utilities to investigate per- and polyfluoroalkyl substances, harmful algae blooms, bioinformatics, intelligent water systems, and opportunities for potable reuse.



## CASE STUDY

*Minimizing CSOs into Puget Sound.*



## Murray Combined Sewer Overflow Wet Weather Facility

*King County*

**SEATTLE, WA, USA**

King County has a history of reducing the discharge of untreated stormwater and wastewater into Puget Sound. An integral part of the program is the new Murray Combined Sewer Overflow Control project, which minimizes overflows by storing up to 1 million gallons of excess combined sewage. During heavy rain, the Murray Avenue Pump Station capacity can be exceeded, resulting in untreated CSOs into Puget Sound. The new storage system reduces yearly CSO events from five to one, meeting the Environmental Protection Agency's Consent Decree and improving Puget Sound water quality.

Using a unique circular shape gravity-fed storage tank, automated cleaning system, and odor control system, the facility efficiently fulfills its duty while blending into the neighborhood. Extensive community involvement—

including public meetings, a charrette process and advisory groups—reduced visual impacts. The facility encourages public access, improves connectivity and enhances environmental stewardship with a green roof, bioretention swales and permeable pavement to treat stormwater runoff. The artwork creates a “Mountains to Sound” theme, a metaphor for water’s journey from the Cascades to the shoreline, a journey reflected in the facility’s use.

Opened to an enamored crowd, the facility is a model for enhancing the environment and infrastructure while creating a destination for residents.



## CASE STUDY

*Revealing novel and cost-effective way to comply with increasingly stringent standards.*



# Brewing Up Solutions for Nutrient Removal Optimization

*City of Bozeman*

## BOZEMAN, MT, USA

In Bozeman, Montana, life centers around outdoor recreation. An afternoon of world-class fly fishing on the state's pristine waters often follows with a refreshing visit to one of the area's many microbreweries.

The convergence of those two pastimes took an innovative twist when a group of engineers asked: What if the carbon-rich byproduct of brewing beer could be used as a cost-effective way for the city to reduce nitrogen in its wastewater?

The idea meets a serious need for communities throughout the U.S. facing stringent nutrient criteria limits for wastewater discharged into rivers and streams. As states continue to lower the nitrogen effluent limits, cities face the challenge of expensive upgrades to their wastewater facilities. One alternative involves adding carbon to the plant's post-anoxic zone to reduce levels of nitrogen before discharge into the river. However, glycerin- or methanol-based carbon products such as microC can be expensive to transport and hazardous to store.

Meanwhile, owners of growing microbreweries face their own high cost of treating and hauling brewery waste, or paying municipal fees associated with discharging high-strength waste into the public collection system. However, that high-strength waste contains a large concentration of carbon.

With that in mind, engineers proposed a pilot study to test the viability of collecting the "second runnings" from a brewery and dosing specific amounts in the post-anoxic zone at a wastewater facility. The City of Bozeman volunteered its water reclamation facility for a three-week pilot using two identical bioreactors—for a control and variable. MAP Brewing Company agreed to participate, running a pump and hoses to an outside tank it donated. The study required frequent water sampling, equipment testing and adjustments to the dosing concentration.

The conclusion: The brewery waste helped consistently lower the nitrogen output 1.5 to 2 milligrams per liter. That equates to 25 to 40 percent less nitrogen being discharged into the stream. Ultimately, the results offer a wide applicability to municipalities across the country searching for a cost-effective way to increase biological nutrient removal performance at wastewater treatment facilities.



# Waste Management

The concept of recycling has occurred in nature for thousands of years, and for many businesses, government agencies and municipalities, managing waste provided a launching point for sustainability programs as we know them today. Waste in itself is a signal of inefficiency, where “throwing something away” also implies a loss of all the energy, water and other natural resources that went into producing that item. And while the desire to recover materials to extend their useful life is intuitive, the challenge of doing so has increased with the diversity and complexity of the materials that we use every day. Yet, the opportunity in getting it right is tremendous: The Ellen MacArthur Foundation estimates that a circular economy—one that promotes greater resource productivity—could be a trillion-dollar opportunity, with huge potential for innovation, job creation and economic growth.

## Looking Forward

We will continue to evolve our practice to meet the needs of our clients and stay ahead of emerging trends and issues. We continue to see growth in the number of communities working to improve organics management, with emphasis on food waste recovery. The U.S. recycling market has continued to experience volatility due to China having banned the import of most plastic waste, creating both uncertainty and opportunity. Interest in beneficially reusing landfill gas has become an increasingly common strategy for community-scale decarbonization. And while these areas are growing, we remain committed to our core practice of helping clients extend the useful life of materials to maximize their value and eliminate waste.

Recycling is a  
\$2,000,000,000,000 industry in the U.S.

Recent research shows that eight materials are responsible for:<sup>1</sup>

 **20%** of global GHG emissions

 **95%** of water reuse

 **80%** of land use

<sup>1</sup> World Business Council for Sustainable Development

## Management Approach

While the concept of recycling is universal, we’ve learned through working with many clients that programs must be tailored to meet the needs of the local community. This begins with evaluating existing or potential local policies and continues through how materials are collected and processed. Most importantly, material recovery programs must be independently viable through the value provided to the local economy and the environment. Within our waste sector services group, we have a proven track record of helping our clients recover and redirect materials to the most beneficial reuse and design the building blocks for circular economies. Our areas of focus include:

- **Waste planning**, to understand waste composition, evaluate hauling and material handling efficiency, and identify and prioritize opportunities to build a circular economy.
- **Material Recovery Facility (MRF)** and organics processing facility design, incorporating the latest technologies and utilizing sustainable design principles.
- **Landfill gas recovery and reuse**, converting methane into clean, renewable natural gas (RNG) to displace fossil fuel use.
- **Waste-to-energy**, to generate electricity from recovered materials.



## CASE STUDY

*Aiming for waste diversion.*



# Larimer County Solid Waste Infrastructure Master Plan & Design

Larimer County, Colorado

## LARIMER COUNTY, CO, USA

Over the last 20 years the population in Larimer County, Colorado, has grown more than 50%—and landfill disposal has grown along with it. The County now accepts more than 350,000 tons of solid waste each year, and it expects to accept more than 500,000 tons per year by 2025 when the existing landfill is projected to close. Larimer County brought HDR on board to identify a forward-thinking solid waste plan for handling waste economically and sustainably. They've kept us by their side as the plan has moved into implementation, with the permitting and design of a new landfill and transfer station facility.

At the start we evaluated dozens of disposal options and narrowed it down to 11 with 88 representatives from regional governments/agencies, boards and commissions, educational institutions, solid waste experts, business/industry and various associations. The County Board of Commissioners approved five of the recommended options aimed at diverting 40% of trash from the landfill while creating a plan for public education, outreach and solid waste reduction:

- New, modern "last landfill ever"
- Central transfer station
- Construction and demolition processing facility
- Yard composting facility
- Food waste composting facility

## Solid Waste Plan Based on SROI and Community Engagement

For the first time on a U.S.-based solid waste infrastructure project, we used a unique sustainable return on investment (SROI) tool. The tool looked at the social, economic, environmental and health impacts of each option, which resulted in a cost-to-benefit ratio ranging from \$1.11 to nearly \$4 in benefits for every \$1 invested.

Guided by goals of collaboration and community benefit, an engaging communications strategy empowered and involved stakeholders throughout the planning process. This approach during plan development offered a holistic, inclusive nature while swiftly addressing potential risks and benefits. Proactive outreach was essential to inform the public on plan components, associated benefits and upcoming changes. The strategy resulted in a comprehensive plan that reflects a partnership and commitment to keeping the community at the heart of the project. The solid waste plan also provided an opportunity to:

- Evaluate and refine existing programs, activities and infrastructure
- Identify policies that will help implement the recommended programs and practices
- Provide a roadmap for the County's solid waste management system
- Support stakeholder goals and objectives

## Implementing the Plan for Solid Waste Diversion

The County is working to implement the next phase of its solid waste management system—a new landfill, and central transfer station and scale house. Once closed, the existing landfill facility will find new purpose as a resource recovery park—a one-stop shop for construction and yard waste, food scraps, and recycling and transfer of non-recyclable waste.

We worked alongside the County to complete the transfer station and scale house conceptual design, and have progressed to detailed design while the new landfill property is being evaluated for site suitability and local and state permitting. The transfer station and scale house are designed for success with input from County staff gained during an interactive programming workshop. Each of these infrastructure options is anticipated to be operational by 2021.

Larimer County's award-winning plan is taking shape and setting it apart as a model for solid waste in Colorado and across the United States.



2019 Outstanding Community or Government Program Award, National Recycling Coalition



## CASE STUDY

*Researching recycling incentive programs to help NYC reach a zero waste goal.*



# New York City Recycling Incentive Pilot Study

*City of New York Department of Sanitation*

## NEW YORK, NY, USA

New York City is committed to achieving carbon neutrality by 2050. To meet this objective, NYC is working on a range of zero waste initiatives, including encouraging residents to participate in existing recycling and composting initiatives. With a goal of sending zero waste to landfills, the New York City Department of Sanitation (DSNY) brought HDR on board to determine whether incentive programs would encourage residents to recycle.

We sought to uncover the answer by studying voluntary recycling incentive pilot programs at the New York City Housing Authority (NYCHA). We researched North American and European incentive programs to identify options that might be feasible for NYCHA. The list of programs was narrowed down to three, which we brought to stakeholders for input. Multi-platform stakeholder outreach was used to assess the impact that incentives would have on the NYCHA community.

While the initial research was being conducted, we developed a statistically significant survey to get feedback on the current recycling program from NYCHA residents. Questions centered on residents' knowledge of the recycling program, use of the program and barriers to recycling. Over 2,000 surveys were completed in four languages throughout the five boroughs in New York City.

## Stakeholder Engagement Provided Insight Into Recycling Incentive Options

Stakeholders were engaged using a variety of methods:

- Stakeholder advisory group meetings were held at key points during the study with DSNY and NYCHA staff, as well as with residents, environmental groups and tenant groups. These meetings sought input on the current recycling program, potential incentives and the short-listed options.
- Focus groups were conducted to get input on the current recycling program at NYCHA as well as input on the three short-listed options.
- To engage a wider audience, a short video was developed to explain the short-listed options with an online survey to capture feedback. The online survey was promoted through Facebook advertisements using geotags and microtargeting based on keywords associated with behavior and general interests by target demographics.

The short-listed options assessed diversion potential, cost and revenue. Further analysis indicated that all three options would be expensive to implement on a pilot scale. Based on the research and stakeholder input, NYCHA residents indicated they value convenience over incentives.

DSNY concluded that deploying a voluntary recycling incentive pilot was unlikely to increase recycling rates in public housing at a level that would help the city reach its zero waste goal. DSNY and NYCHA continue to work together to look for ways to educate residents about the recycling program and increase recycling rates in the city.

## CASE STUDY

*Improving the customer experience with flexible design for waste & recycling.*



# Coquitlam Transfer Station

*Metro Vancouver*

## COQUITLAM, BC, CANADA

Coquitlam Transfer Station is being replaced from the ground up on the site of a former landfill. Sustainable reuse of the site is transforming a brownfield into an asset for Metro Vancouver Regional District.

In partnership with Morrison Hershfield, HDR is providing design and permitting services for the transfer station including architectural design of the facility, site circulation and traffic routing, landscape architecture, frontage improvements and civil design. When complete, the transfer station will serve roughly 850 customers daily, with a processing capacity of 661 tons per day. The design emphasizes an array of diversion opportunities to minimize waste going to disposal.

After leading a design charrette process, we used input from a variety of stakeholders to develop a design that betters the brownfield site and creates a state-of-the-art facility for the community. The new transfer station will enable commercial waste haulers and local residents to dispose of waste, recycling and organics in one stop. A flexible design allows Metro Vancouver to customize the facility as demand shifts for various waste streams. The facility's completion is driven by a tight timeline, leading to an aggressive development and design process—the current transfer station's lease expired in 2020, requiring the facility to close for site redevelopment.

The design of the new Coquitlam Transfer Station improves aesthetics, sustainability and customer experience with unique features:

- Bottom ash from a nearby waste-to-energy facility will be used as a foundation for the new transfer station. It's a safe, innovative use of material that would otherwise go to waste.
- Customer convenience will improve with the site offering disposal for solid waste, recycling and green waste.
- Site design will enable easier navigation than the former transfer station, with customer safety and efficiency in mind.
- Site improvements will include architecture, low maintenance landscaping and integration of a walking/biking path.
- Trees planted offsite will offset site carbon emissions.

## CASE STUDY

*Taking urgent action on climate change through implementation of a CAAP.*



# Climate Action Plan Implementation: Methane Recovery and Reuse

*City of Iowa City*

**IOWA CITY, IOWA, USA**

On the heels of declaring a climate crisis and setting a new goal to decrease citywide carbon emissions by 45% by 2030 and net zero by 2050, the City of Iowa City is taking urgent action on climate change through implementation of its Climate Action and Adoption Plan (CAAP). HDR's team of engineers, economists and sustainability professionals played an important role in accelerating two key climate action goals, including:

- Action Item 3.7: Take Action on a Study to Efficiently Capture and Use Methane from Wastewater Operations
- Action Item 3.8: Take Action on a Feasibility Study on Energy Generation from Landfill Methane

The first phase of the project involved a technical evaluation of biogas generation potential over the next 30 years at both the City's landfill and wastewater treatment facility. HDR took into account related CAAP strategies, such as expanded organics recovery, to project how implementation could affect biogas generation.

Next, HDR worked in collaboration with the City to identify viable biogas reuse alternatives. The team explored opportunities to leverage synergies with other CAAP strategies, such as onsite renewable energy generation and alternate-fuel vehicles, as well as conventional reuse alternatives, such as natural gas pipeline injection.

Keeping focus on the City's priority to achieve the greatest GHG emissions reduction, HDR completed a carbon impact assessment for 11 variations of preferred alternatives. GHG emissions were calculated in accordance with the Global Protocol for Community-Scale GHG Emission Inventories. HDR also utilized the EPA's Waste Reduction Model (WARM) to understand life-cycle GHG emissions impact of organics diversion and Energy Return on Investment (EROI) for methane reuse alternatives.

As a final step to inform the City's decision making, HDR's Decision Economics team members integrated planned capital investment, operations and maintenance costs, and GHG emissions modeling through a Sustainable Return on Investment (SROI) model.







## OUR PEOPLE

**We work to make our world a better, smarter, safer place.**

For over a century, we have partnered with clients to shape communities and push the boundaries of what's possible. Our expertise spans more than 10,000 employees in more than 200 locations around the world—and counting. Our engineering, architecture, environmental and construction services bring an impressive breadth of knowledge to every project. Our optimistic approach to finding innovative solutions defined our past and drives our future.



# We Strive to Create Value

In 1917, Henning H. Henningson was struck by how many people near and far needed clean water and electricity. So he founded the Henningson Engineering Company in Omaha, Nebraska, adding value to the local community and inspiring positive change in neighboring states.

By the 1930s, our company was moving rural communities forward by lighting up their streets and helping them recover from drought. Just 20 years later, we added architectural services to our growing roster and expanded our engineering services to include resource management, community planning, transportation and more.

A civil engineer named Chuck Durham led our early era of growth, as we expanded from 15 employees to 1,700. Chuck went on to become a philanthropic giant, instilling the value of giving back into the fabric of our culture.

Our entrepreneurial spirit continued into the 1990s, as our employee ownership energized the company. By winning more global projects, we opened doors to share our talents with people around the world. Today, we continue to collaborate with our clients to push boundaries and uncover new possibilities.

We believe in doing the right things for the right reasons. We trace this back to our early days as the Henningson Engineering Company, when the company motto was "Work Well Done." As we helped design the infrastructure of the Midwestern United States, we looked out for our clients' best interests. We demonstrate the same commitment to quality with our clients today.

Part of that commitment starts with letting people do what they do best. Much of our entrepreneurial spirit comes from Chuck Durham, who learned to fly and made our company the first U.S. architecture-engineering firm to regularly use aircraft to visit project sites. Today, that spirit shows as we seek work in new markets, expand the services we offer clients and encourage employees to continue learning.

By treating each other with respect, listening to others' ideas and holding ourselves accountable, we build strong relationships with each other and with our clients.

## We Continue to Expand Our Total Service Capabilities

In 2019, we further expanded our service capabilities and global presence with the acquisitions of Hurley Palmer Flatt Group (HPF), Calthorpe Associates, and David Ford Consulting. Additional information about each firm is provided on the following pages.



We believe in doing the right things for the right reasons.



## CASE STUDY

*Expanding our service capabilities and global presence.*



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HPF brings strong client relationships and specialized skill sets to HDR that, when combined with our capabilities, offer tremendous possibilities. By combining our teams of professionals, we will develop a stronger building engineering practice globally.

Eric Keen, HDR Chairman and CEO



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## Acquisitions Support Strategic Growth in 2019

### Hurley Palmer Flatt Group

In 2019, HDR expanded its multidisciplinary building engineering services by acquiring Hurley Palmer Flatt Group (HPF), headquartered in London. The U.K. firm is doing business as HDR | Hurley Palmer Flatt Group.

The acquired entity comprises all subsidiaries, which will also do business as HDR | Hurley Palmer Flatt; HDR | Andrew Reid; HDR | Bradbrook Consulting; and HDR | Concentre Consulting.

HPF Group is the United Kingdom’s leading independent engineering consultancy, providing solutions for the built environment. Services include mechanical, electrical and plumbing; civil and structural engineering; and commissioning management, with particular expertise in institutional, high-rise multiuse, financial and commercial “smart” buildings. The firm also specializes in energy and sustainable “green” building design, and mission critical facilities and complex data centers, including digital management for buildings.

Established in 1968, Hurley Palmer Flatt Group had more than 500 active clients, many of which are Fortune 500 firms representing the top technology and financial clients in the world. With more than 500 staff members in 10 offices, they have grown steadily through innovation and acquisition.

This acquisition brings together HDR’s global practice with HPF Group’s strategic locations in Europe, the Middle East and Africa, and in the Asia-Pacific region.

### David Ford Consulting Engineers

In 2019, HDR expanded its water resource services by acquiring the assets of Sacramento, California-based David Ford Consulting Engineers, which specializes in hydrology, water hydraulics and flood risk analysis, among other water-related services. The firm is doing business as HDR | David Ford Consulting Engineers.

David Ford Consulting Engineers has some of the nation’s top expertise providing highly complex hydrology and water hydraulic services to agencies such as the U.S. Army Corps of Engineers and the California Department of Water Resources.

David Ford, president of David Ford Consulting Engineers, joined HDR as a vice president. He is an internationally recognized expert in water resources engineering, planning and management. He is a licensed professional engineer and board-certified specialist in water resources engineering.

## CASE STUDY

*Expanding our service capabilities  
and global presence.*



## Acquisitions Support Strategic Growth in 2019

### Calthorpe Associates

In 2019, HDR expanded its multidisciplinary team of urban and regional planners by acquiring Calthorpe Associates, based in Berkeley, California. The firm is doing business as HDR | Calthorpe.

Calthorpe Associates is internationally recognized for innovative leadership in regional planning, urban design and transit-oriented development. Since 1983, the company has assisted public and private sector clients in shaping livable communities. The firm is an international leader in smart growth and a founding partner in the Congress for the New Urbanism. The combined relationship with HDR will benefit communities with groundbreaking urban growth in livable, sustainable and low-carbon solutions.

Peter Calthorpe, founder and principal at Calthorpe Associates, joined HDR as a senior vice president. He is a renowned pioneer of innovative approaches to urban revitalization, community planning and regional design. He was awarded the Urban Land Institute's prestigious J.C. Nichols Prize for Visionaries in Urban Development and is one of the founders and first board president of the Congress for the New Urbanism.

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We believe our urban design practice can be a bridge between many of the HDR disciplines and a catalyst for integration. Our focus on smart, sustainable cities over the decades has always depended on input and guidance between many design professionals. Now we can offer comprehensive services to our clients and develop plans that are truly grounded in expertise in every dimension of the challenge.



**Peter Calthorpe**, Principal Urban Design Consultant

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## CODE OF BUSINESS ETHICS & CONDUCT

HDR actively supports the ethical principles that guide our values, striving to be a good citizen in each community where we operate an office or have project responsibility. All employees must follow the company's strict Code of Business Ethics & Conduct governing:

- Conflicts of interest
  - Employment of relatives
  - Required disclosures
- Equal employment opportunity
- Confidentiality of company affairs
- Political contributions
- Bribes, payoffs and kickbacks
- Antitrust laws
- Accounting practices and records
- Prohibitions against retaliation

# Ethics, Integrity and Human Rights

An ethical workplace begins with the tone set by leadership and the culture created for and by the employees. We believe that our employees are our most valuable assets. Each person deserves to work in a positive, productive environment, and we will do our best to provide that. Reaching that goal requires everyone's commitment to our values and ethical standards and making integrity a priority in everything we do.

We reach these goals, in part, by providing annual training on our Corporate Code of Business Ethics & Conduct, and targeted training on worldwide anti-corruption regulations including the United States Foreign Corrupt Practices Act.

## Management Approach EMPHASIZING INTEGRITY IN ACTION

We provide a hotline—maintained by an external, independent firm that ensures anonymity when sought—that allows our employees to report suspected instances of improper conduct and violations of our Corporate Code of Business Ethics & Conduct.

Employees may also use the hotline when they are uncertain of the appropriate person to talk to or if they want their reports to be anonymous. Information on accessing the hotline is readily available on our intranet, from our Ethics & Compliance Office and from any Human Resources representative.

## HARASSMENT AND DISCRIMINATION

We are committed to providing a comfortable work environment, free from intimidation for all employees, and we will not tolerate any form of harassment or discrimination. This prohibition includes sexual harassment, retaliation against individuals bringing forward or participating in an investigation of discrimination or harassment, and discrimination or harassment of individuals on the basis of race, gender, age, sexual orientation, disability, or any other legally protected trait.

## MANAGING CONFLICTS OF INTEREST

Processes and plans to deal with conflicts of interest are essential to us as a company. We need to be aware of and address all client and contract requirements and acknowledge that some contracts will have specific demands above and beyond the requirements we typically encounter. Conflict of interest processes and plans apply to all HDR operating companies. When a conflict of interest plan is necessary, we address the following areas:

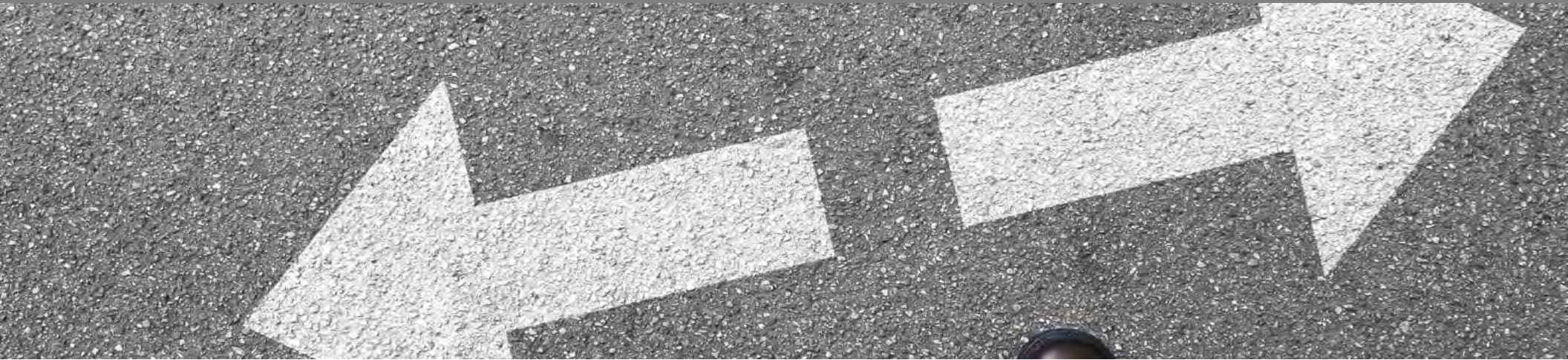
- Steps needed to avoid a conflict of interest
- Steps needed if we uncover a conflict of interest
- Clear delineation of responsibilities and verifications

Our project approach is summarized as follows:

- Watch for conflicts, whether specifically noted in a contract or not
- Be fully aware of contract language about conflicts and requirements
- Promote education and awareness through communication
- The project manager is responsible for adherence to Conflict of Interest/Avoidance Plan

In addition to the above steps, each employee is asked to review, acknowledge and sign our Corporate Code of Business Ethics & Conduct on an annual basis. All HDR employees must make annual disclosures so that any conflicts of interest can be evaluated. Additionally, before hiring individuals, we require that they disclose potential conflicts of interest, including any non-compete agreements that they have signed, so that we can manage the conflicts from day one.

We expect all employees to maintain the highest standard of integrity and professional business ethics in the conduct of company affairs. Compliance with all laws and regulations applicable to the company is an essential element of this



We trace our values back to our early days as the Henningson Engineering Company, when the company motto was “Work Well Done.”

## Ethics, Integrity & Human Rights

policy, as is the strict avoidance of conflicts of interest (or the appearance of such conflicts) and any other activity or transaction that would be unethical, unlawful or otherwise harmful to the company’s interests. Such prohibited activities include but are not limited to improper political contributions, payments to government or corporate officials and employees, other improper payments, and improper accounting practices. Employees should avoid any personal interest or activity that may create or appear to create a conflict with their company responsibilities and assignments.

### STABLE LEADERSHIP

HDR’s officers and board of directors are committed to quality, professionalism and integrity. Most of our executive officers have been with us for more than a decade, providing stable leadership to guide the company’s long-term strategy and daily operations.

### Board of Directors

As an employee-owned company, how we manage our company matters. We are working for ourselves—and to sustain our business for the next generation of owners. A mix of internal and external directors helps guide our growth in a way that is responsive, but also responsible.

Our Board of Directors is made up of nine members, six males and three females. Five of the members are current HDR employees, who also serve as our internal board. The other four are external members.

Board members are elected by our employee shareholders. Candidates are identified by a Nominating Committee of the Board in accordance with the nominating criteria.



# Safety Matters

The essence of our success at HDR is built around our employees' ability to carry out their work in an efficient and effective manner. This can only be done when they are provided the tools, knowledge and skills necessary to perform their work safely. The commitment by HDR's employees to the culture of safety and understanding of processes and procedures presented in HDR's safety program ensures that our employees are provided with the key ingredients necessary to support our core value of safety and maintain a competitive edge.

## Management Approach

Management's commitment to safety has provided the catalyst for continuous improvement to our Corporate Safety, Health and Environmental program. The focus of the program includes the following proactive processes and procedures in support of our Value of Safety:

- All HDR employees are trained in hazard recognition skills and how to develop a Job Hazard Analysis (JHA) that supports identification of task hazards and the solutions to those potential hazards in order to minimize injuries/incidents.
- All offices and projects develop site-specific safety programs and Emergency Action Plans to support employee safety and health in their specific geographic location.
- All offices and project sites have developed site-specific Business Continuity plans to support potential employee health and safety issues and business disruption events.
- Providing employees with the health and safety training specific to their project and/or office hazards.
- Implementation of a proactive injury management system to provide all employees with efficient and effective medical support for minor work-related injuries.

We care about our people, and we're dedicated to keeping them safe. Our low safety rates and certification by third-party review programs show we're serious about safety.

## Safety Rankings

We care about our people, and we're dedicated to keeping them safe. Our low safety rates and certification by third-party review programs show we're serious about safety.



**EMR  
RATING**

HDR'S  
2020  
RATE **0.61**

---

Industry average  
1.00

**DART  
RATING**

HDR'S  
2020  
RATE **0.06**

---

Industry average  
0.3

**TRIR  
RATING**

HDR'S  
2020  
RATE **0.18**

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Industry average  
0.7

# Safety Matters

- Providing employees with an integrated mobile incident reporting system to ensure timely reporting of all injury/illness, property damage and environmental incidents.
- Implementing an emergency management support system to communicate with all employees during catastrophic events such as earthquakes, hurricanes, active shooter and protests.
- Development of a Field Safety Standard for project managers and field staff to support all requirements to effectively develop, implement and monitor a project safety program.
- Implementation of a Safety Coordinator program to assist project and office staff in the development and implementation of safety programs, JHAs, safety awareness boards and other site-specific HDR safety requirements.

## Our Drive Forward

Our Drive to Zero initiative, which originated in 2016 from the commitment and vision of our executive leadership, continues to embody our Value of Safety at HDR.

Our Drive to Zero is a culture shift emphasizing the importance and value that our company places on a safe and healthful working environment. It is also a reminder that every one of us is an ambassador of safety and our motivation to continue to implement and follow all of our safety practices and procedures supports "zero incidents" at all of our offices and projects.



Award of Honor with Distinction,  
National Safety Council,  
2017-2020

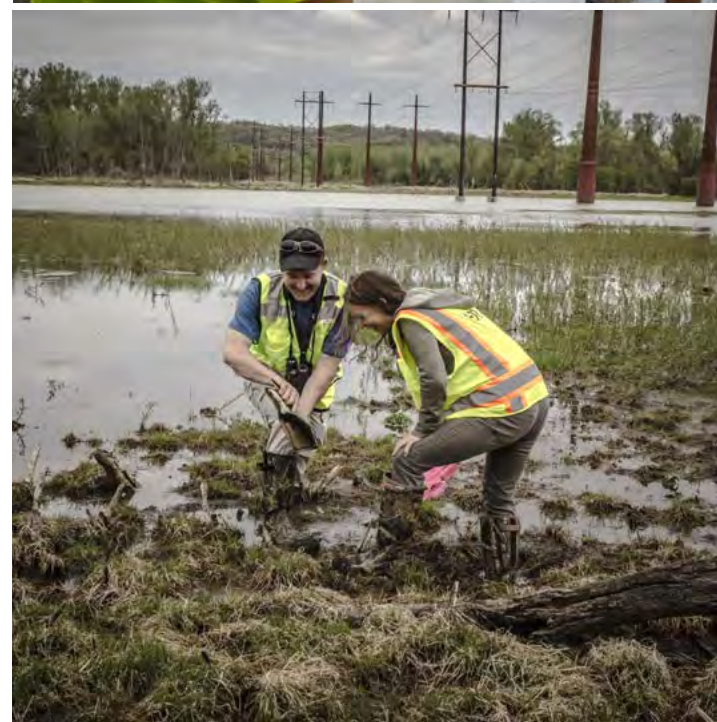
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At HDR, our employees have supported and focused on our safety leading indicators that have had a major impact on global injury and incident reductions. This ongoing focus on the proactive safety processes and procedures continues to support world class safety results identified in our current Industry statistical averages.

**Jeff Kleinfelter**, Director of Safety, Health & Environmental



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# Workplace Culture

Every good story has a solid foundation upon which it's created. HDR's foundation is our 10,000+ dedicated and talented employees. Our company was built on values and work ethic that continue to thrive today. From the employee focus groups, to surveys, to steering team discussions, we learned that the significance of hiring, developing, and retaining talented staff was paramount. We recognize that creating connections with all employees is essential to ensuring that our history exceeds well beyond 100 years. To maintain our competitive edge, we must unleash the power of our people and empower them to do their best work.

## Management Approach

We actively and continuously examine our culture and those elements that could make the most significant impacts. One of our strategic objectives is to ensure a "Culture of Connection." Key strategies to achieving this objective include:

**EMPOWER** people to drive a positive, energized workplace where people feel valued and do their best work.

**CONNECT** people from all corners of the company to build internal relationships, improve access to leadership, and better inform employees of current capabilities and results.

**PROMOTE** and **PRACTICE** mindful stewardship of our communities and resources to create shared value.

**CREATE** collaborative, convenient and distinctly HDR work environments to foster quality teamwork and optimize productivity.

## EMPLOYEE ENGAGEMENT SURVEY

We regularly distribute a company-wide employee engagement survey. Survey responses allow us to understand and analyze how employees think we are doing in areas such as our workplace, career development, trust in senior leadership, manager effectiveness, individual needs and teamwork. The overall results provide a comprehensive view, as well as metrics to measure progress toward our 2022 strategic plan. This information allows us to plan and make adjustments as we move forward.

## CULTURE OF OWNERSHIP

Employee ownership is an important aspect of our culture. Each day we go to work, contribute our best, and use our skills to add excellence to our projects. Employees choose to invest in HDR to benefit from their hard work and that of their coworkers—employee-owners all working toward the same goal, providing focused teamwork and collaborating on behalf of our clients.

## ROBUST EMPLOYEE OWNERSHIP

We have been an employee-owned company for two decades. Our management believes that employee ownership by an informed and dedicated staff improves the company's financial performance, creates high employee morale and promotes organizational growth and value. Impressive continual growth rates reinforce this philosophy and demonstrate the benefits of all employees sharing in the value of the organization they have helped create.

Each year, the company's stock is evaluated by an independent financial advisory firm that specializes in providing valuation services to employee-owned companies. Employee-owners have enjoyed stock price gains annually, while also enjoying competitive salaries and benefits in the A/E/C industry. After the 2019 buy/sell period, more than 90 percent of eligible employees were owners.

## CASE STUDY

*Excelling in efforts to attract, retain and develop young professionals.*



### HDR's Princeton Office Selected for Company Choice Award

The Princeton Regional Chamber of Commerce's Princeton Region Young Professionals selected HDR's Princeton office as the 2018 Company Choice Award winner.

The award recognizes "an outstanding organization in the region that excels in their efforts to attract, retain and develop young professionals. HDR has been involved in community service from its inception, and currently boasts many leadership development opportunities such as the Leadership Series and the BOOST program," according to a press release issued by the Princeton Regional Chamber of Commerce.

The fifth annual Company Choice Award was presented at the Princeton Region Young Professionals' Summit at Mercer County Community College. The event, which was attended by about 170 young professionals, featured keynote speakers and breakout sessions.

HDR employs about 400 architecture, engineering and related professionals in New Jersey, with locations in Lawrenceville, Mahwah and Newark.

“

We are very proud of our young professionals group here in the Princeton office, and we congratulate them for being recognized in this way. HDR has always had a focus on developing our younger staff, and we hope to inspire people to lead from where they are to galvanize leadership potential in individuals, within teams and across the company.



**Eric Jaffe**, East Region Director of Architecture

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# Learning and Development

We believe in the development of our employees and strive to provide learning opportunities and development models to facilitate positive growth for them and our company. HDR is unique in that we are an accredited provider of continuing education credits through the International Accreditors for Continuing Education and Training (IACET) and American Institute of Architects (AIA). Our internal courses go through rigorous design and review processes in order to meet the high level of standards required for our employees to earn continuing education credit for professional license and certification renewals. Our training programs are tailored to address:

- Supervisory and leadership development
- People skills
- Onboarding
- Risk, quality and project management
- Health, safety and environmental
- Information technology
- Cybersecurity and data protection
- Marketing and business development
- Technical training
- Regulatory training

## Management Approach

We aim to find a balance for time between employee development and meeting client needs. So while we do provide formal and informal on-the-job learning opportunities, we also encourage employees to seek the right resources to meet their professional development goals. Whether internal or external to HDR, learning is a priority.

Internally, we employ a variety of delivery methods, such as instructor-led classroom, virtual instructor-led, online self-directed, or a blended approach, which we determine based on the goals and needs of the client and the learners. We also follow an instructional design model that focuses on micro-learning and just-in-time availability, and we rely on a learning management system (LMS) to house, deploy and track all of the curricula in our catalog.

## Looking forward – 2020 and beyond

HDR's learning culture thrived in 2019 with every employee from our offices across the globe participating in learning and development events.

We expanded our eLearning catalog, creating more opportunities for employees to access training on their own terms. More than half the hours of training that people participated in came via eLearning. A lot of these hours represented HDR's compliance training efforts to promote lawful and ethical behavior no matter where an employee lives or works. Some of the new mandatory items added to our library focused on cybersecurity, email phishing, and data privacy. We also rolled out new Preventing Harassment trainings and required staff to review. Some of the most popular elective eLearnings cover HDR's brand, construction documents, and project management.

HDR's Learning & Organizational Development (L&OD) team drove trainings such as: Gallup CliftonStrengths, Multigenerational Workforce, and Supervisor Essentials. The Safety, Health, and Environmental (SH&E) team supported trainings to help professionals across the company be prepared for the project or task ahead. Whatever the topic, L&OD and SH&E drove a majority of HDR's training efforts, while also supporting numerous locally led sessions. Those grass-roots efforts accounted for hundreds of hours' worth of learning, particularly in the technical realm. HDR's Transportation Business Group (TBG) held their biannual conference that offered over 60 breakout sessions, and it created a space to offer those same sessions as webinars after the conference. Another initiative the TBG led was the Exponential Growth Workshop, which was designed to foster effective partnerships between leaders in the business and provide a space where they could share common barriers and solutions, as well as broaden their network so they're more prepared to lead strong teams. These opportunities for knowledge sharing equip HDR's professionals with the tools to stay current and competitive in their disciplines—and earn continuing education while doing it.

In 2019, **11,389 employees** participated in **1,139 unique training courses**. More than 51,309 instructor-led classroom hours were delivered, and more than 59,658 eLearning hours were logged. This translates to an average of more than 9.75 hours of training per employee.





# Wellness – Improving Quality of Life

Since 2013, we have worked to make wellness a significant part of our culture. We want to help our employees lead and enjoy their healthiest lives while they're at work and play today, and after they retire. Our goals for this program are to improve the quality of life for all employees and their families through programs that promote healthy lifestyles and to provide multidimensional health and wellness initiatives to improve employee health. In turn, these activities will impact safety, productivity, efficiency and employee engagement throughout HDR.

We want to provide the tools and support needed for our staff to live healthy and well. Regardless if the goal is to have more energy, lose weight, manage stress, or maintain a healthy lifestyle, we want to provide some of those opportunities that can be the catalyst for an enriching life.

## Management Approach

We have dedicated resources including the Vitality Group, our Wellness Platform partner, and a full-time Wellness Manager to this effort. We've installed over 130 volunteer employee Wellness Coordinators, championing wellness to nearly 10,000 employees across the U.S. and Canada.

Our wellness services include annual health reviews and screenings, tobacco cessation coverage within program guidelines, immunizations, health education including financial wellness, an Employee Assistance Program and health club reimbursement. We are very proud of the financial incentives we offer, which also include a Wellness Credit that is available to our employees who participate in the HDR medical benefit plan and meet program guidelines.

Our wellness program manager works with wellness coordinators in all locations, as well as executive leadership, to help implement our program, which includes:

- Stress management education
- On-site fitness classes
- Wellness/fitness challenges/competitions
- Wellness fairs
- Lunch-and-learns and webinars

The company uses many tools to ensure good communication about wellness topics, including:

- Wellness bulletin boards
- Healthy living and wellness awareness and educational programs (lunch-and-learns, informational resources, etc.)
- Wellness e-newsletters
- Nutritional information provided for cafeteria foods
- Yammer Wellness page
- Volunteer Wellness Leadership Council, coordinators and teams

Benefits of Vitality, our Wellness Platform partner, include:

- Free annual blood screenings
- Free annual health risk appraisals
- Confidential access to personal medical screening data
- Educational tools to assist our employees with a healthy lifestyle
- Customized personal goals and discounts to fitness facilities
- Many other benefits

Program improvements are based on employee feedback and medical claims analysis. Employee surveys and evaluations provide programming and website feedback.



## CASE STUDY

*Providing tools and support needed for our staff to live healthy and well.*



# Wellness Program Continues Success in 2019

## HDR Receives AWE Wellness Seal of Approval

For the fourth year, we received the Alliance for Workplace Excellence (AWE) Health & Wellness Seal of Approval. HDR was one of 31 companies to receive the award, which recognizes an outstanding commitment to employee health and wellness and emphasizes leadership in developing and implementing innovative wellness programs.



## Wellness Teams with the Young Professionals Group for Fall into Fitness

In October 2019, 1,690 people participated in the Fall into Fitness Steps Challenge, recording 226,201,054 steps over the course of 16 days. This was a company-wide event promoting an active lifestyle. All employees and eligible spouses were invited to participate in the competition to get moving, earn bonus Vitality Points and a chance at prizes, and have fun along the way!

## Wellness 2019 by the Numbers

**4,630**  
Employees  
Participated in a local wellness event



**4,392**  
Employees  
Earned wellness credit



**822,885**  
verified employee workouts



**5.6%**  
improvement in biometric and lifestyle risk factors





## CASE STUDY

*Promoting wellness through design and evaluation of our workplace environments.*



### HDR Wins WELLCOM I.C.E Award

HDR received the WELLCOM I.C.E. (Innovate, Connect, Engage) Award at the 2019 Wellness Awards Gala in Omaha, Nebraska.

The WELLCOM I.C.E. Award recognizes corporate wellness, cultural innovation and impact, and this year honored HDR's groundbreaking work to promote wellness through the design and formal evaluation of our own workplace environments.

As designers of the built environment across a wide range of scales, HDR is committed to creating and providing optimal and cost-effective physical work environments to support employees' well-being, engagement, productivity and overall happiness at work.

Specifically, HDR's research team designed and implemented a formal research study to test the actual impacts of the new headquarters building and neighborhood on aspects of employees' well-being, including experience of the work environment, engagement, performance and objective measures of physical activity and sedentary behavior during work time.

“

We believe that knowing the impacts is essential to making our designs even better in the future. We're honored that the WELLCOM jury saw the foresight and value in this work, and we're grateful to our HDR collaborators and leaders who are contributing to make it happen.



**Dr. Jeri Brittin**, Director of Research

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# Recruiting & Retaining the Best

Our greatest asset is our people. We recruit motivated, innovative individuals who see challenges as opportunities and take satisfaction from solving problems, and we empower our employees to grow as individuals and contribute toward making our world a better place.

## Management Approach

### EXPERIENCED PROFESSIONALS

We realize that experienced employees are often looking for more. Sometimes, they seek challenge or opportunity for growth, or perhaps it's a chance to be part of a strong, passionate team.

Our team's entrepreneurial spirit and diversified skills offer a unique framework to find the right roles for professionals to succeed. Each individual's professional insights are both an asset to share with our clients and a guide to write the next chapter in their career.

We work to leverage the talent and experience of our employees to continue to grow both as professionals and a successful organization.

### CULTIVATING THE NEXT GENERATION

Staff members born between 1960 and 1980 represent the company's largest employee age group—about half of all employees. Younger professionals—born after 1980—currently comprise just over 30 percent of professional staff. Because these individuals represent our future, we provide numerous development opportunities and activities geared toward professional development to create networking opportunities and foster the next generation of HDR leaders.

### YOUNG PROFESSIONALS GROUPS

Many HDR offices have Young Professionals Groups (YPGs) where employees can build relationships, develop professionally, have a forum for sharing ideas and just have fun. The YPGs publish a quarterly newsletter called FUSE, host yearly regional summits and organize local and firm-wide events.

People can make a difference locally, help motivate each other, and establish lifelong friendships through our various social clubs and charitable events in their communities.

### MENTORING PROGRAMS

Our 2022 Strategic Plan has a focus on evolving our professionals, including mentoring programs that empower employees to drive a positive workplace and to connect people in the company to build relationships. Mentoring also promotes total service capabilities by pairing experienced project managers or technical experts with employees eager to improve.

Many offices manage mentoring programs to facilitate career growth, develop relationships and aid in employee knowledge of HDR as a company. Programs offer opportunities for protégés to prepare and deliver presentations in a supportive environment, as well as an internal library of books and resources focused on personal awareness and growth.

Mentoring programs lead to empowered, connected employees who can deliver their best to our clients.

### NEXTGEN GROUPS

Younger staff members in several disciplines formed groups to grow professionally by enhancing their technical and corporate knowledge. This knowledge is broadened by networking with peer groups throughout HDR to learn what the company is doing as a whole, rather than just locally.

### EMPLOYEE REFERRAL PROGRAMS

Great people know great people! For years, HDR has offered our employees the opportunity to be rewarded with a cash bonus when talent they have referred is hired.

### SCHOLARSHIP PROGRAM

HDR has a broad scholarship program used to build relationships with schools and help attract the brightest talent to our company.



### DIVERSITY RECRUITMENT

In 2019, HDR actively participated in multiple regional National Society of Black Engineers events to help recruit talent and build local relationships.

## Looking Forward

Our 2022 Strategic Plan again highlights the benefits of mentoring programs, collaboration and building community. Strategies like "Inspire people to lead from where they are" and "Build organizational trust and collaboration" speak to our objectives to facilitate individual growth and learning, while amplifying our collective talent and knowledge.



## CASE STUDY

*Developing future generations to lead America into its infrastructure future.*



# HDR Is Invested in Future Generations of Infrastructure Leaders

## Infrastructure Careers Gateway Summer Program

With the infrastructure industry facing an unprecedented shortage of skilled professionals, technicians and workers, workforce development is more important than ever. HDR played a major role in the successful first installment of a unique program aimed at developing future generations to lead America into its infrastructure future.

In the summer of 2019, seventeen 11<sup>th</sup> and 12<sup>th</sup> grade students chosen from the Washington, D.C., area took part in the first offering of an intensive, six-week Infrastructure Careers Gateway Summer Program with a curriculum focused on various aspects of the transportation, water and energy/power sectors and their interrelationships with communities. The program was spearheaded by Introducing Youth to American Infrastructure+ (IYAI+), a 501(c)3 founded by Dr. Beverley Scott, a nationally renowned transit leader and workforce innovator, and supported by the TranSTEM Academy at the Cardozo Education Campus in D.C.

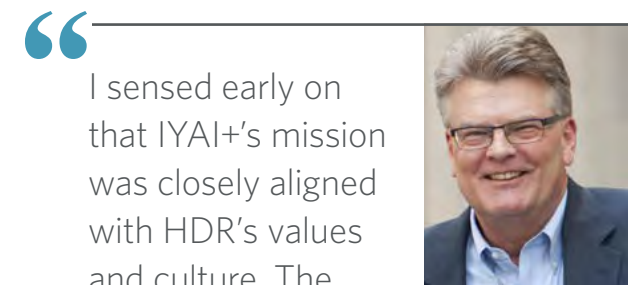
The students met Monday-Friday, five hours/day starting in June, with a TranSTEM lead instructor supported by a host of guest presenters and several field visits to observe infrastructure in action. An August celebration capped the successful pilot program, where former USDOT Secretary Rodney Slater delivered an inspirational keynote address and presented achievement certificates to the proud graduates.

Dr. Scott first approached HDR in 2018 when IYAI+ was just a concept with a mission to inspire young people to choose infrastructure careers and become tomorrow's leaders, community builders, innovators, entrepreneurs and skilled workforce—with specific interest in increasing the participation of historically underrepresented groups such as communities of color and women. With HDR's counsel and early backing, she was able to attract other sponsors, including the American Public Transportation Association (APTA), and offer a curriculum that incorporates mentoring, real-world community problem solving and analysis to teach youth about the needs and career opportunities in infrastructure.

HDR's Roshé Copeland Volcy, Dallas DeFord and Maggie Adams were among the guest lecturers to address the class, sharing their perspectives on freight rail, the economics of infrastructure, and communications strategies for advancing the infrastructure agenda. It was a gratifying experience for students and instructors alike.

"Seventeen young adults in Washington, D.C., are now infrastructure savvy, whereas before they didn't know much about it and never imagined working in it," Dr. Scott said. "I can say without a doubt that were it not for HDR's early involvement and belief in the program, this would not have happened."

With the successful rollout of the IYAI+ program in Washington, other major cities like Los Angeles, Chicago, Atlanta, Philadelphia and Boston are being eyed as venues for future editions of the summer program.



“I sensed early on that IYAI+'s mission was closely aligned with HDR's values and culture. The fact that HDR was willing to commit significant financial and staff resources to this program in its infancy is a testament to its unrivaled commitment to building better communities, and to bringing along the future generations that will help do it.”

Tom Waldron, Global Transit Director

## CASE STUDY

*Developing future generations to lead America into its infrastructure future.*



# HDR Is Invested in Future Generations of Infrastructure Leaders

## HDR Newark Scholars Program: High School Interns with STEM Interests

With the goal of strengthening relations with the city of Newark, New Jersey, as well as introducing the city's youth to the world of engineering, the HDR Newark office developed the Newark Scholars Program. The six-week summer internship program centers around exposure to different engineering disciplines, as well as the professional development of the intern.

HDR engineers from disciplines such as Water Resources, Roadway, Traffic, Structural, Mechanical and Electrical all spent time describing their fields and assigning tasks to further exposure of a topic. Interdisciplinary skills such as drafting, personal skills and meeting deadlines were fostered throughout the course of the internship.

Malcolm X Shabazz High School Junior Aniya Travers spent her summer in the Newark Scholars Program. With strong interests in math and science, a determined work ethic and a thirst for knowledge, Aniya learned a little bit about everything related to engineering while working for HDR. Being exposed to different fields of engineering allowed her not only to see how diverse the field is, but also to see how engineers work as a team.

She researched flood events in the state of New Jersey, checked roadway quantities, performed traffic counts, created detour maps and worked on the conceptual

replacement of a bridge. The culmination of her internship experience was a presentation she made to local city officials, administrators from her high school and HDR employees. Impressed by her experience and presentation, Newark city officials and her high school administrators supported continuation and expansion of the program. Aniya will return to high school and will take a few advance placement classes in her senior year, then plans to attend a technological university next year to study computer science or engineering.

Being located in an urban city, the Newark office is committed to fostering the STEM field in the city's youth and to encourage them to pursue a career in engineering, architecture or any STEM field. By working with city officials and the local high schools, HDR looks to continue to develop its involvement in the community.

## University of Nebraska Students Get Inside Look at A-E Careers and HDR

An interactive mixer held for University of Nebraska students blended unique networking activities, insightful career advice and a tour of our new global headquarters.

More than 100 architecture and engineering students attended, and they received an inside look at a career in our industry while making connections that could change their lives.

"This was an opportunity for us to continue building our relationship with the students and the university, and host at our new global headquarters," said Brent Kollars, National Director of Employment. Brent noted that the idea for the mixer came from an Inclusion & Diversity pilot program. "We want to become more familiar with a broad cross-section of students in our area and further develop our outreach activities with area educational institutions, especially those with architecture and engineering programs."

The mixer featured a panel discussion and question-and-answer session including five current HDR employees with diverse areas of expertise and experience. The panel included the Nebraska/Iowa Transportation Program Manager, Nebraska/Iowa Resources Business Group Manager, the Director of Civic Architecture, a Traffic Engineer/Transportation Planner, a Transportation Engineer-in-Training, and a Lighting Designer.

The panel talked about the importance of communication and mentoring in their careers, as well as tips on how to get started, favorite projects, professional opportunities, challenges, successes and more.

The panelists joined about 20 HDR managers and supervisors for a networking session, which even proved to be an early interview for many.



## CASE STUDY

*Honoring leadership and contributions to the AEC industry.*

# HDR Professionals Recognized for Leadership

## Lara Syrocki Honored in Crain's Michigan 2019 List of Notable Women in STEM

HDR's Lara Syrocki, PE, was selected by Crain's Michigan as a Notable Woman in STEM 2019 honoree. Recipients are selected based on career accomplishments, track record of success in the field, contributions to their community and mentorship of others.

A standout in helping women reach their full potential in engineering, Lara, a senior project manager, is a founding member of HDR's Women in Science & Engineering (WISE) initiative. Using a grassroots approach, she helped outline the need for WISE—offering quality soft skills program development—and grew the group to more than 500 members in just two years.

"Her passion for making a difference in the world and promoting and supporting women in engineering and other STEM fields is infectious, making it hard not to want to join her," said HDR Senior Vice President Colleen Scholl.

## Michaela Wittmann Honored with USD Career Achievement Award

Michaela Wittmann, Sustainability & Resiliency Director, was recently honored with the University of San Diego (USD) Author E. Hughes Career Achievement Award. As part of the university's Alumni Honors program, events recognizing honorees were included during Homecoming and Family Weekend (HFW). The 24<sup>th</sup> annual Alumni Honors celebrated 11 "USD Superheroes."

The Author E. Hughes Career Achievement Awards originated in 1995 and are named in honor of President Emeritus Author E. Hughes. His outstanding achievements over his 24 years as president and his commitment to excellence mirror the extraordinary accomplishments of the 50-plus honorees who proudly wear the medallion bearing his name. The award is presented annually to an alum from each of the five schools of the university.

Michaela received recognition from the Shiley-Marcos School of Engineering for her work leading HDR's Office of Sustainability, where she and her team focus on adding value to projects by balancing environmental, economic and social equity goals. She also oversees the firm's initiatives to reduce the impact of HDR's own business practices and an associated emissions-reduction goal.



Lara Syrocki



Michaela Wittmann



Michaela  
**WITTMANN**

# Investing in Our Employees



While career is a big part of our employees' lives, we know it's not their whole life.

We are dedicated to creating a workforce that's engaged and productive. That is why we work hard to develop programs and benefits that allow our employees to flourish.

## Employee Recognition

It is important to recognize and celebrate employee contributions toward the achievement of business objectives. Our recognition programs focus on outstanding individual and team performance, technical areas of expertise and contributions to the communities we serve. For example, Pathfinder Awards are a peer-recognized program recognizing standout contributions in any of eight award categories: Community Service, Creativity, External Client Service, Internal Client Service, Leadership, Process Improvement, Productivity & Performance, and Teamwork. The program offers an avenue for any employee to nominate a coworker for outstanding performance, dedication and innovation in any area of operations.

Our company also expresses appreciation for continued service, dedication and commitment of employees through the Service Award Program. On the second, fifth and every fifth anniversary thereafter, full-time and part-time (working 30 hours or more per week) regular employees may select an anniversary gift from an online catalog of options. These gifts are HDR's way of thanking employees for their efforts and contributions over time.

Each year, current company officers nominate employees for consideration by the executive management team for recognition and promotion to the positions of Associate, Associate Vice President or Vice President. The Associate Program recognizes employees who embody high standards of personal and professional conduct and show extraordinary potential for advancing in technical, creative or business careers. Current Vice Presidents may be nominated by Senior Vice Presidents for the position of Senior Vice President. Potential nominees may include employees who demonstrate outstanding leadership skills, have consistently exceeded expectations, are excellent communicators and who uphold our values.

Additionally, three professional titles (Principal Professional Associate, Senior Professional Associate and Professional Associate) have been established to recognize technical or creative experts who achieve varying levels of eminence in their profession. Within HDR, these titles are equivalent in status and benefits to Senior Vice President, Vice President and Associate Vice President, respectively.

## Competitive Benefits

While career is a big part of our employees' lives, we know it's not their whole life. That's why we offer a complete benefits package and support suggestions to enhance the work/life balance of our employees, understanding that flexibility and balance look different for everyone.

Our benefits promote health and wellness, with a focus on financial planning and retirement. Employees can continue their education with internal training opportunities, as well as tuition reimbursement. We also offer programs to support personal and professional development.

### HEALTH BENEFITS

- Dental insurance
- Medical insurance
- Vision insurance
- Health savings accounts
- Flexible spending accounts
- Telehealth services
- Global Business travel medical insurance
- Long-term Care insurance

### WORK/LIFE BALANCE

- Adoption assistance program
- Bereavement leave
- Jury duty pay
- Equipment to support working from home
- Family leave
- Paid parental leave
- Flexible schedules
- Leaves of absence
- Paid holidays
- Paid time off (PTO)
- Domestic partner benefits
- Modified dress code policy
- Tuition reimbursement
- Wellness and Employee Assistance Programs (EAP)
- Tobacco Cessation Program

# Investing in Our Employees

## FINANCIAL PROTECTION

- Accidental death and dismemberment insurance
- Business travel and accident insurance
- Disability insurance
- Life insurance
- Travel assistance program
- Financial wellness learning opportunities

## RETIREMENT BENEFITS

- 401(k) and employee stock ownership plans, with corporate match
- Roth 401(k)
- Retiree medical, dental and vision insurance

Benefits are provided to employees who are regularly scheduled to work 30 hours or more per week. Part-time employees who work 20 hours per week are encouraged to participate in the BEST 401(k) program with corporate match, and also qualify for business travel and accident insurance, as well as International SOS global business travel assistance. Temporary employees are also eligible to participate in the BEST 401(k) program with corporate match.

## Leadership Development

We offer multiple programs to support the growth and development of our future leaders. One example is HDR's CareerBOOST program, which prepares mid- and senior-level professionals who are recognized leaders in HDR for executive and principal level leadership positions. The program offers a combination of classroom and field exposure, providing advancement of core leadership competencies and increased understanding of HDR business practices and organizational roles and responsibilities. Each participant is paired with a sponsor who acts as a mentor, guide and advocate during the program.

## Fair Wages

We are committed to fair and equitable compensation practices and strive to maintain pay rates that are comparable to other companies in the industry and geographic area. We conduct an annual audit of wages to ensure employees are being paid equitably and work with local management to correct any red flags that arise.

## Reimbursements

We encourage all employees to continue educational and developmental activities outside of work, so we provide reimbursement for tuition and professional registrations. Bonuses are paid to employees attaining an accredited technical registration/certification.

## Performance Appraisals

Our Annual Performance Conversation (APC) is a formal time for employees and supervisor to review the past 12 months, celebrate successes, identify areas for improvement, and set goals for the next 12 months based on previous performance gaps or opportunities. Throughout the year, they are encouraged to engage in one-on-one meetings that are informal check-ins focused on three primary areas—connection, communication, and development. This process is both employee and supervisor driven and provides best practices to help make the APC as effective as possible.



CareerBOOST prepares mid- and senior-level professionals for executive and principal level leadership positions.





# Diverse, Global Workforce

Diversity encompasses the ways in which human beings are both similar and different from one another. Its impact rests on inclusion and exclusion, and the ways that similarities and differences are applied to one another. The critical questions for organizations such as ours are twofold:

1. Are there exclusions that hinder our ability to be successful?
2. Are there inclusions that could increase our ability to be successful?

When considering the three pillars of the employee experience, as defined by Deloitte University's Leadership Center, we understand that inclusion is a business imperative and supports the following:

1. Employee Empowerment
2. True to Self
3. Employee Engagement

## Management Approach

We strive to encourage an environment that accurately reflects the rich culture and individual differences of our local communities where we live and work. We are committed to a company culture in which employees of differing generations, genders, colors, races, sexual orientations, disabilities and ethnicities work well together to deliver one-of-a-kind services to our clients. We have policies in place supportive of this initiative that all employees are required to acknowledge.

In alignment with our culture, we facilitate policy and procedures trainings concerning aspects of human rights that are relevant to business operations.

Providing an environment that enables people to be true to themselves requires us to be inclusive, with increased opportunities such as:

- Employee recruitment and retention
- Creativity and idea sharing
- Motivated, trusting atmosphere
- High engagement = high discretionary effort
- Increased potential for profitability
- Better solutions for clients
- Changes people's mindsets about stereotypes
- Better understand and reflect clients and communities
- Better quality project opportunities

In support of our goals to have a more diverse organization, we use the following:

- Attend conferences such as the NSBE (National Society of Black Engineers)
- Local office involvement with diverse organizations that have shared interests in their community (Veteran, Minority, Women and Individuals with Disabilities)
- Membership in diverse organizations in our industry (Society of Military Engineers, Society of Women Engineers, etc.)
- Advertisements in diverse association publications
- Participation in diverse job fairs
- Outreach to leadership of diverse student organizations
- Scholarships to diverse students
- Targeted social media

## HIRING LOCALLY

We believe in hiring all employees, including senior management, from our local communities. Our philosophy is that we are a global firm with a local presence. It is important to us to have employees located where our clients are. To that end, we want senior management to make outreach efforts in our local communities. We will always look for the strongest candidate for all of our posted positions, but we look for opportunities to hire individuals locally whenever possible.

## Looking forward - 2020 and beyond

In 2020, we hired our first executive leader for Inclusion and Diversity (I&D), Abe Carrillo, an experienced leader who previously oversaw the inclusiveness and diversity initiative for a large global company. We created an I&D team that is focused on crafting a strategy that will support our broader 2022 Strategic Plan. Our global I&D Council includes employees from all business groups and global regions to help provide input and guidance to our inclusion and diversity strategies. We began creating an employee engagement model by activating eight Employee Network Groups (ENG) to help create an inclusive and supportive environment where everyone is empowered to engage and contribute. Each group has an executive sponsor and is open to all employees. We also created an executive steering committee that includes our CEO and several senior executive leaders to guide our work and establish priorities.

# Diverse, Global Workforce



**200+**  
Offices  
Around  
the Globe



**10,000+**  
Employees  
Worldwide



Operating  
in **13**  
Countries

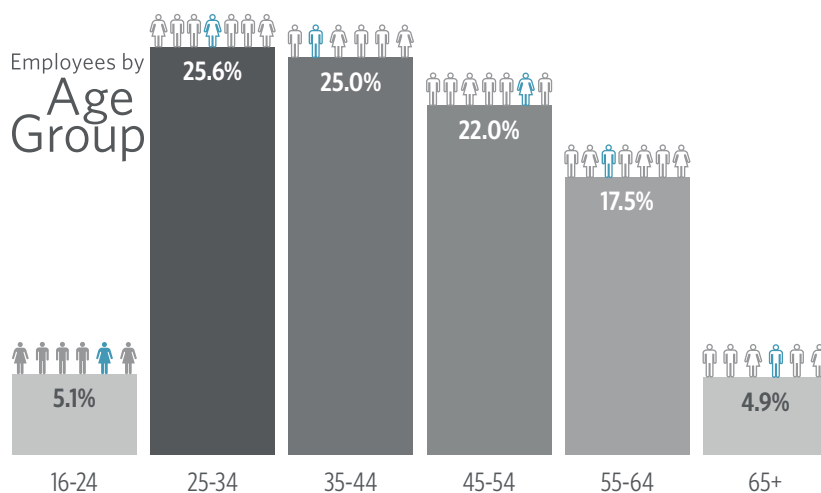


Nearly  
**111,000**  
Hours  
of training,  
instructor-led & eLearning



**44%**

Professionals under  
40 comprise nearly  
44% of our staff

**309**  
Female  
Officials &  
Managers



## CASE STUDY

*Acting as a community champion  
for minority business inclusion.*



# HDR Named Champion of Diversity in Oregon

In October 2019, HDR was recognized as a champion of diversity and inclusion.

The Business Diversity Institute (BDI), a nonprofit based in Portland, Oregon, presented HDR with its Champion Award for 2019 during its annual Minority Enterprise Development celebration. BDI provides training and education to minority-owned and woman-owned businesses in Oregon and southwest Washington.

The Champion Award recognizes a public or private organization that is a community champion for minority business inclusion and that demonstrates and promotes best practices, ideas and strategies to increase the overall participation of minority-owned firms on projects.

Amey Rivera, Assistant Transportation Marketing manager for the Oregon area, regularly participates in BDI events and recently co-presented a session on marketing and business development at a BDI small businesses retreat.

We were nominated for the award by Emerio Design, an Oregon-based MBE/DBE engineering firm that is a regular teaming partner.

"HDR has consistently supported Emerio Design's growth by providing meaningful work on local transportation projects as well as providing mentoring in multiple areas of our business, including marketing, contracting and project coordination," according to the nomination.

Emerio Design also noted our extensive outreach to DBE firms on teaming opportunities for recent projects, including the I-5 Rose Quarter Project for ODOT. In citing our positive impact on the community, Emerio pointed out a mentoring program for certified businesses created by the local office, "where HDR will host quarterly meetings as well as offer key decision-makers to make presentations and be available for networking."

“

BDI is very well respected in the area and supported by many of our clients. This award is a prestigious recognition of HDR's inclusive efforts and continued outreach. ...We're excited to share our expertise, build even stronger relationships with local businesses and do our part to boost the industry as a whole. This award is just icing on the cake.



**Amey Rivera**, Marketing Services Manager

”

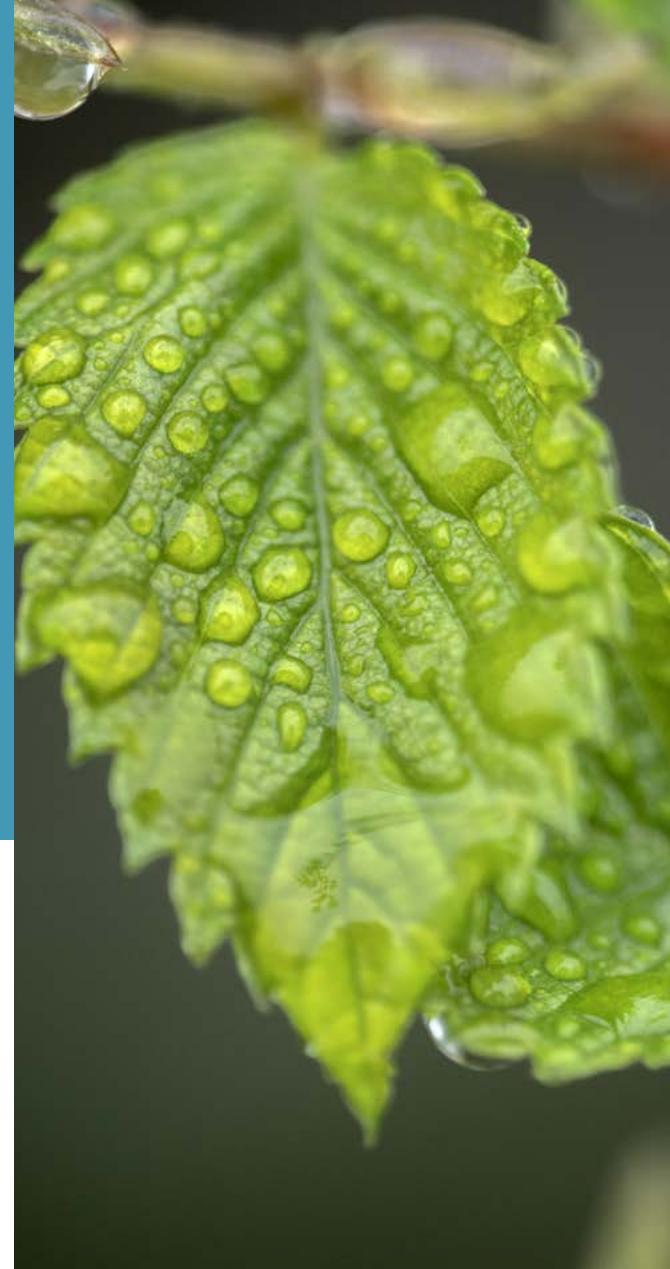




## SUSTAINABLE BUSINESS PRACTICES

### **We are committed to reducing our environmental impact.**

We understand the importance of responsible practices to our clients, employee-owners and communities. That's why we are committed to reducing the impacts of our business and developing our employees' skills to transform how buildings, infrastructure and communities are designed and built to support resiliency, sustainability and human health. Our Environmental Policy, adopted in 2008, describes the priorities guiding our internal and external practices.





# Our Commitment

## Our Environmental Policy

Our environmental policy supports our commitment to leadership, quality, safety and corporate responsibility through our actions and the services that we provide.

We are committed to reducing our environmental impact through responsible practices to our clients, employee-owners and communities.

These principles guide our actions::

- Create technically credible and positive environmental, social and economic benefits for the communities where clients and employee-owners live, work and play.
- Reduce fossil-fuel use, water consumption and waste generation.
- Use financial resources efficiently on behalf of employee-owners and clients.
- Capture opportunities to support client programs in order to help them meet their sustainability goals.
- Provide technical opportunities and resources for our staff to increase sustainability-related expertise.
- Steadily improve company operations and efficiency.
- Track the environmental benefits of our projects.
- Make decisions using the evaluation of environmental, economic and social equity whenever possible.

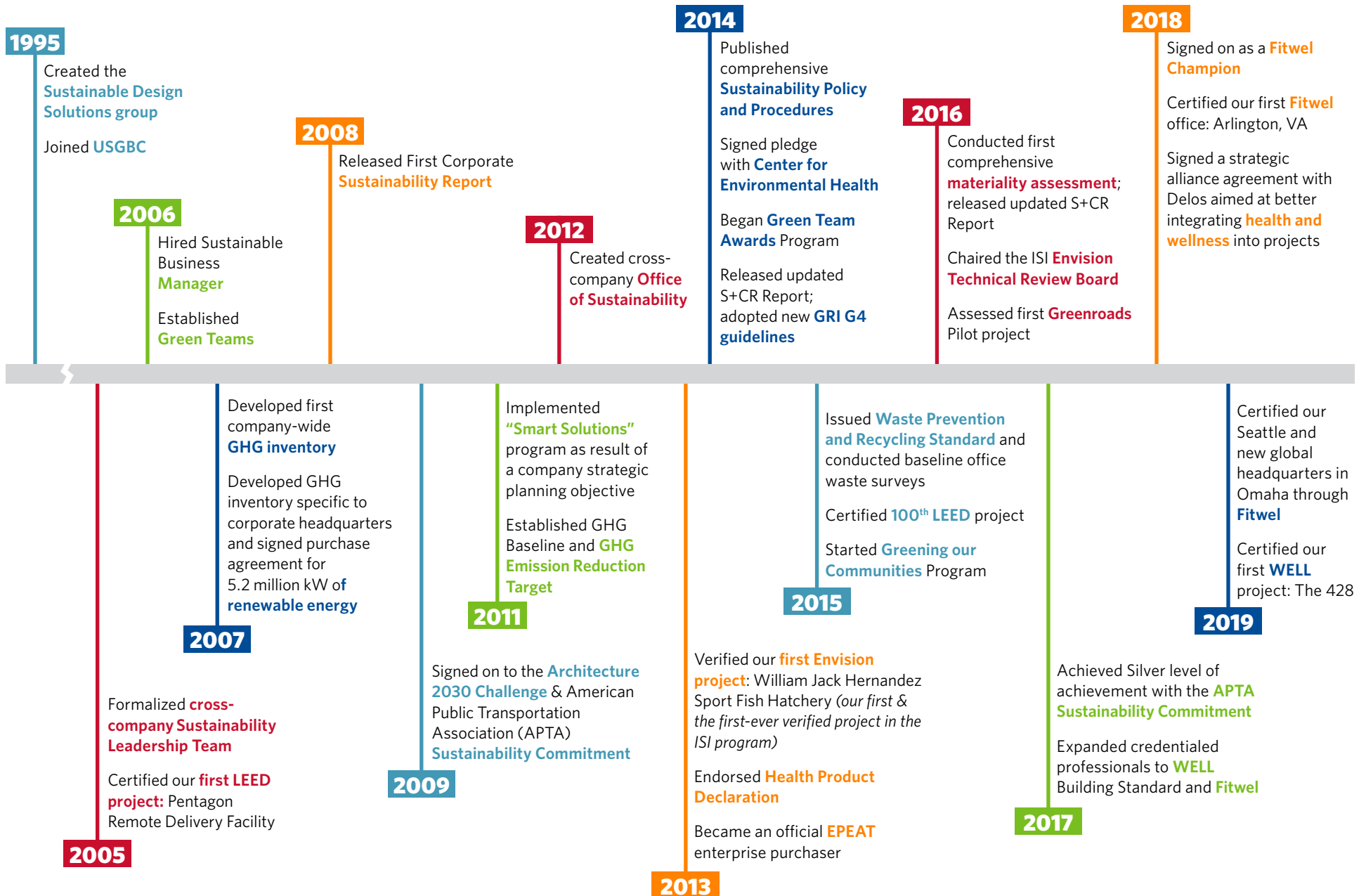
## Key Sustainability Priorities

We focus on two key priorities to move toward our goal of incorporating sustainability into everything we do:

- We transform how buildings and infrastructure are designed and built to support resiliency, sustainability and human health.
- We improve our business practices to reduce environmental impacts and share our progress in a transparent manner.



# 25 Years of Sustainability Leadership





## CASE STUDY

*Maximizing opportunities to implement innovative green building strategies.*



## HDR's New Headquarters Earns LEED Gold

HDR's new headquarters in the Aksarben mixed-use neighborhood of Omaha, Nebraska, has been awarded LEED Gold certification from the U.S. Green Building Council. The 10-story office building is home to approximately 1,000 employees of the global A/E/C firm. It features a modern façade with a unique form sliced at the corners to maximize square footage on upper floors while opening walkable space for the community on the ground level. Wide continuous sidewalks connect the building's entrances and public spaces, and the ground-level façade has doors and glazing that provide a visual connection with the building's interior.

Additionally, bike racks, bus access, bike network connections and a walkable urban base provide a solid transit-oriented urban design solution.

Numerous design decisions contributed to the Gold-level rating; the building was designed to achieve specific performance achievements, including the following:

- 23.8% energy use reduction compared to ASHRAE 90.1.2010 baseline
- 68% Energy Use Intensity Reduction compared to the regional average
- 31% indoor water use reduction
- 87% outdoor water use reduction
- Lighting Power Density that is 38% better than code

A handful of the design strategies adopted by the team included: a chilled beam system for increased energy reduction, improved comfort, decreased floor-to-floor height, few air handling units, and less shaft space; a high-performance envelope featuring a 44% window-to-wall ratio; light occupancy sensors and daylight controls that help achieve a calculated lighting power density of 0.6 watts per square foot or lower; low-flow fixtures; and documented Environmental Product Declarations (EPDs) for 41 different installed products, totaling 53 points in weighted EPD value, with 25% of materials sustainably sourced.

“What we were able to achieve with this building illustrates the importance of engaging all parties early in the design process. ...We were able to infuse continuous improvement and rigor into the design approach to achieve holistic, high-performance design.”



**Michaela Wittmann,**  
Director, Sustainability & Resiliency

# Sustainable Business Practices

We are committed to reducing our carbon footprint and annually tracking our GHG emissions reductions. In 2011, we made it a priority to reduce our company-wide Scope 1, 2 and 3 emissions 20 percent by 2020 from our 2011 baseline, adjusted for growth. To achieve this goal, our Office of Sustainability works with executive management, local office leadership and Green Teams to examine our day-to-day activities and determine where we can make business improvements that deliver long-term sustainable value.

## Implementing Strategies with Multiple Sustainability Benefits

### TRAINING AND COMMUNICATION

We have both formal and informal training regarding environmental purchasing and other sustainability topics. We offer e-learning, webinars and in-person training opportunities, focused on sustainable strategies for multiple architecture and engineering services.

In addition, we have a formal communication plan that includes providing information on a variety of environmental topics, such as purchasing, sustainable materials and rating systems. We publish a quarterly internal sustainability newsletter, host presentations and lunch-and-learns, host virtual Green Team and Sustainability Leadership meetings, and publish related articles. We use internal tools such as Yammer and Microsoft Teams to share related articles and external educational opportunities.

### HEALTHY OFFICE ENVIRONMENTS

We are continuously seeking ways to improve our office environments so they are sustainable and healthy for our employees. Space planning looks to maximize natural light, as well as provide access to fresh air and green space for employees. We look at accessibility to walking or biking, and neighborhood adjacencies so

employees can enjoy the outdoors or get a bit of fresh air. Many offices offer on-site showers for staff's use after commuting or after any daytime physical activities.

We make efforts to eliminate toxic and hazardous substances from the workplace. In our Sustainable Office Finish Standards we have identified materials, finishes and furniture that meet the most stringent sustainable requirements and indoor air quality standards for tenant improvements of all HDR office renovations. The standards include information related to minimizing volatile organic compounds (VOCs) in paints, coatings, adhesives and sealants, as well as flooring and furniture. HDR has a standard contract with Steelcase furniture for all of the furniture that is purchased for our offices. The furniture we specify and purchase meets the USGBC's LEED CI IEQ Credit 4.5 for low-emitting furniture for contributing to good indoor air quality. In 2014, we signed a pledge with the Center for Environmental Health (CEH), giving preference for flame retardant-free furniture.

### Fitwel

In 2018, HDR adopted Fitwel and certified our first office in Arlington, Virginia. As a Fitwel Champion, HDR committed to certifying a minimum of six offices. In 2019, the new HDR headquarters building in Omaha, Nebraska, received Fitwel's highest-possible rating of 3 stars.

Fitwel is an evidence-based design standard that enables positive impacts on employee and resident health through improvements to design and operations within buildings. It was developed by the U.S. Centers for Disease Control and Prevention and the U.S. General Services Administration, and is operated by the Center for Active Design. Workspaces that incorporate these evidence-based design and policy strategies support the physical, mental and social health of building occupants, clients and visitors.

In our Arlington office, leaders have adopted a healthy food standard for meetings and events, and the building is well-located in a mixed-use hub with easy access to public transportation, farmers markets and local open space amenities. The office received a Fitwel 2018 Best in Building Health Award for achieving the third-highest score for a commercial interior space certified in 2018.

Our Omaha office is in a centrally located mixed-use development with access to multiple amenities, and is adjacent to hotels, the University of Nebraska at Omaha and the nearby Keystone Trail, which offers walking and biking opportunities. Other Fitwel features include signs encouraging the use of stairs in lieu of taking the elevator; healthy food and beverage options in Café 1917 and at all onsite meetings; bicycle parking; and public amenities on the ground floor.

“We think the framework helps drive the design of our office spaces toward something that we value for our employees—positive health and wellness outcomes in our work environment.”

**Charlie O'Reilly**, Chief Operating Officer (Retired)



## CASE STUDY

*Marking four consecutive years winning three awards.*



## HDR Earns Three Awards from Alliance for Workplace Excellence in 2019

HDR has been named the recipient of three awards by the Alliance for Workplace Excellence, earning honors for the Workplace Excellence Seal of Approval, Health & Wellness Seal of Approval and the EcoLeadership Award. The awards were presented during a luncheon on June 7 in Gaithersburg, Maryland.

Of the 44 organizations to receive an award, HDR was one of seven recognized in three of the four categories. This is the fifth year that HDR has won an EcoLeadership Award and the fourth consecutive year it has won seals of approval for Workplace Excellence and Health & Wellness.

The Workplace Excellence Seal of Approval recognizes outstanding commitment to overall workplace quality and creating the best possible workplace for employees. Applicants are evaluated on corporate culture and management practices, flexibility of work environment, and communication and employee engagement programs.

The Health & Wellness Seal of Approval recognizes an outstanding commitment to employee health and wellness and emphasizes leadership in developing and implementing innovative wellness programs.

The AWE EcoLeadership Award recognizes visionary leadership and an outstanding commitment to environmentally sustainable workplaces and efficient use of resources.

AWE is a nonprofit organization that awards workplaces based on the quality of life for its employees, their families and its local community. This year marks the 20<sup>th</sup> year that AWE has recognized excellence in the workplace. The 44 award-winning companies represent organizations of all sizes and all industry types across the United States.





# Smart Solutions

All segments of the company are tasked with making environmental sustainability our standard way of doing business. Balanced sustainable solutions result in sound choices that are resource-sensitive, provide opportunities for economic growth and development, and consider the broad context of each decision. Our Smart Solutions program helps to instill those principles in our approach to improving all areas of our sustainable business practices.

## Management Approach

Our Smart Solutions Program focuses on four areas:

### 1. SMART PROCUREMENT

*Focus on initiatives regarding the selection and use of products in our offices, including materials, equipment and supplies.*

**Supply Chain** – We are always looking for ways to make our supply chain more sustainable, making sustainable choices regarding the selection and use of products used to do business. To do this, we work with suppliers that encourage sustainability in their supply chains and ask them for information that contributes to our carbon footprint (rental car miles driven or paper consumed, for example), acknowledging suppliers that help us work toward mutual sustainability goals. We encourage and take advantage of sustainability-focused programs from our suppliers and vendors, and search for products that reduce impacts on the environment.

### 2. SMART TRAVEL

*Focus on our efforts to reduce the environmental impact of our employee commutes and business travel.*

**Business Travel** – We communicate with staff regarding information and strategies to reduce the environmental impacts of business travel—for air travel, car rental and hotel, as well as guidance on purchasing voluntary carbon offsets. We work with carshare programs, and encourage employees to be mindful in their transportation decisions, to communicate about ride-sharing when traveling together or to the same city, and to share transportation when mass transit is not available.

**Commute Survey** – We conduct an annual employee commute survey to track associated GHG emissions for inclusion in our annual GHG inventory, as well as to solicit input on strategies to make our employees' commute to work more sustainable. The results are summarized each year and presented to Department Managers and the Executive Management Team to prioritize investment in strategies such as installing showers or bike racks in offices where possible, or covering expenses for bus, subway, ferry, light rail and train if used to commute to work.

**Alternative Commuting** – To encourage our employees to use alternative commuting options, we have a flexible spending plan that allows employees to set aside pre-tax dollars for parking and mass transit expenses. Some offices have designated parking for carpools, hybrid and electric vehicles. Our employee commute survey also shows the amount of alternative commuting that is taking place. Typically, rail and bus use remain steady, depending on office relocations.

### 3. SMART OFFICE ENVIRONMENTS

*Focus on initiatives to create sustainable, healthy work environments for our employees.*

**Energy Efficiency** – With more than 200 locations, energy efficiency is important. To minimize our impact, many offices work with property management to incorporate energy-saving features like occupancy sensors and energy-efficient lighting. ENERGY STAR appliances and equipment are included in our sustainable office standards.

**Waste Prevention** – In 2015, we issued a company-wide Waste Prevention and Recycling Standard as part of our Sustainability Policies to provide staff information, tools and resources on waste prevention and minimization, recycling, composting and sustainable purchasing. Since that time, offices have participated in an annual Waste Prevention and Recycling (WPR) survey and updated their WPR Plan to set waste reduction goals for the following year.



## Smart Solutions

### 4. SMART EMPLOYEE ENGAGEMENT

*Focuses on opportunities for employees to be involved in activities related to sustainability and corporate responsibility.*

**Green Teams** – Green Teams are made up of motivated professionals who help implement sustainable solutions, educate and promote sustainability in their local office. Green Team members help build a culture of sustainability in our offices by:

- Promoting sustainability through office improvements, education and events
- Working toward our GHG emission reduction target and our Smart Solutions goals
- Maintaining a network of professionals passionate about sustainability
- Improving the communities where we live and work

Green Teams help reduce our impacts by working with their office management to install more energy-efficient light bulbs or motion sensor light switches, encouraging employees and visitors to use alternative transportation options, and conducting an annual waste audit and setting goals for waste reduction.

In 2014, we developed the Green Team Smart Solutions Project (GTSSP), which consists of a collection of goals organized by category and Scope 2 or 3 emissions reductions. The GTSSP goals are intended to bring a baseline of sustainability to all our offices and also serve as a springboard for new, creative ideas. The GTSSP is organized by the themes of the Smart Solutions Program, with each focus area including a number of goals to be pursued by each office.

Green Team Innovation Awards recognize and reward outstanding and innovative solutions that can be implemented in other offices, teams that are meeting or exceeding an established goal, and teams showing overall effort toward achieving HDR's GHG emissions reduction goal. See Case Study on following page.

**Giving Back to our Communities** – Each year, our Office of Sustainability uses the heightened awareness of Earth Day to celebrate the sustainability and environmental efforts that we do all year, as a company and as individuals. In 2019, we held our fifth annual Greening our Communities events, which encourage all employees to get involved in their community by hosting a clean-up event. Greening our Communities has been very successful, with offices across the country participating in events during April and May—from Anchorage, Alaska, to Jacksonville, Florida; Honolulu, Hawaii, to Portland, Maine. We were inspired to initiate this large program due to the enthusiasm and passion of our more than 60 Green Teams.

Many Green Teams initiate community-focused activities throughout the year, engaging their office and working with other affinity groups. Activities include food and clothing drives, fundraising efforts, adopting an area for regular cleanup, planting and/or harvesting gardens, and helping with park repair and maintenance.



## CASE STUDY

*Celebrating the great things our Green Teams are doing every day.*



# Green Team Awards Recognize Innovative, Engaging and Impactful Solutions

HDR's annual Green Team Awards recognize the great things Green Teams (GT) throughout the company are doing every day. The 2019 awards were distributed in December via webcast, with innovation award winners named for:

- Most Active Green Team in the Local Community
- Most Innovative Office Engagement
- Best Office Solution

GTs self-nominate by submitting an awards application, and judges from across the company select the award winners. The 2019 winners showcased their ability to engage coworkers, nurture amazing partnerships and develop creative and inspiring solutions.

### **MOST ACTIVE GT IN THE LOCAL COMMUNITY Houston, Texas**

The Houston office (Loop Central Drive) won an award for Most Active Green Team in the Local Community for a second year in a row due to the group's participation in local community events including: a tree planting competition, Adopt-A-Drain cleaning and the Centennial Gardens volunteer day.

For the tree planting competition, the GT organized a team of 11 HDR colleagues with friends and family to participate in the Houston Area Urban Forestry Council's 12th Annual Tree Planting Competition. Teams raced to plant 100 trees at

Buffalo Run Park in Missouri City, Texas. A sanctioned urban forester first taught tree-planting guidelines that maximize the saplings' chances for survival, providing participants a valuable skill for their own yards and gardens. Each team was then judged as to whether they properly planted the trees per the demonstrated specifications. The trees were planted along a Harris County Flood Control District retention basin, so as they take root and grow, they will prevent erosion of the soil and runoff from entering the local waterways. In HDR's first time participating in the competition, the office planted 100 trees in one hour and 14 minutes!

### **Portland, Oregon**

The Portland office won an award for Most Active Green Team in the Local Community for their dedication to participating in events and making commitments that bring them closer to their local community.

The GT selects volunteer opportunities that are set up by established community organizations and partners, which reduces planning efforts, allows them to participate in more events and builds relationships with outside organizations. They have planted trees for Friends for Trees, cleaned up trash with SOLVE and weatherproofed homes with the Community Energy Project. They also partnered with the City of Portland in a monthly volunteer initiative to care for bioswales near the office. They spent so much time cleaning the swales that the City gave them a "Master Cleaner" award!



## CASE STUDY

*Celebrating the great things our Green Teams are doing every day.*



## Green Team Awards Recognize Innovative, Engaging and Impactful Solutions

### MOST INNOVATIVE OFFICE ENGAGEMENT

The **Omaha, Nebraska**, office won the award for Most Innovative Office Engagement. The GT took advantage of many opportunities to engage with staff and transform behaviors as staff relocated to the new headquarters building. Activities and events designed to educate staff and encourage sustainable business practices in the office include: The GT and staff volunteers kicked off the year in their former location by organizing a free "garage sale" for the community, encouraging reuse of excess office supplies such as binders, etc. All collected items were made available for donation to local organizations. The group championed recycling and cleanup efforts along the way to make sure items found a new home rather than going to the landfill.

The GT planned a number of Earth Week events and activities geared to ramp up staff knowledge about sustainability in the new building and encourage participation. The week kicked off with a GT volunteer stationed as a waste "concierge" in the kitchenette on each floor over lunch to share new waste guidance, answer questions and give staff a waste quiz to encourage conversation about best practices and resources available in the building and local communities. Other Earth Week events included: kick off of the monthly trail cleanup, Cycling Club lunch and learn, electronics collection, sustainability bingo, and a Green Mixer co-hosted with Omaha's YPG, where attendees could play the "Which waste goes where" game.

### BEST OFFICE SOLUTION

The **Denver, Colorado**, office won the award for Best Office Solution for their "Hard to Recycle Center." This year, the GT focused on extending their recycling program (which included plastic bags, compost, and building recycling) to capture more recyclables that would otherwise end up in the landfills. The GT researched and found various return and community distribution centers that take the items, including Terracycle (a company that recycles just about everything), a women's shelter and local grocery stores.

They created the "Hard to Recycle Center" and located it in their main kitchen area, choosing a collection unit that looks clean and not too imposing, but is clearly labeled for employees to see where to put things. Collected items include: toothpaste tubes and toothbrushes; beauty product containers; candy and snack wrappers; CDs, DVDs and game discs; cell phones; CFL light bulbs; pens, mechanical pencils and markers; corks; eye glasses; safety glasses; hotel amenity bottles; and all types of batteries.

The building management company was touring the office recently and showed great interest to incorporate some of the hard-to-recycle elements into the building procedures and asked the GT to meet with them soon.

# Our GHG Emissions

Understanding GHG emissions resulting from our business activities helps us take action to mitigate climate change by implementing strategies to reduce our greatest impacts.

## Management Approach

We continually update our GHG inventory process so we can accurately identify and assess our most significant emissions sources, develop data-driven reduction strategies, and track progress toward our emissions reduction and other sustainability goals, such as energy and cost savings.

In 2011, HDR established a goal to reduce GHG emissions by 20 percent by 2020, adjusted for growth, from a 2011 baseline. To track progress toward this goal, we began calculating our GHG emission inventory annually since 2011 in accordance with the GHG Protocol Corporate Standard, the most widely used, voluntary GHG accounting standard in the world. As such, our direct and indirect GHG emissions are reported in seven categories and 26 emission sources:

**Scope 1**—Direct GHG emissions from sources that we own or control, including:

- Direct energy use, including natural gas used for heating in owned office spaces
- Fugitive emissions from refrigerants used in the HVAC system at our headquarters campus
- Vehicle fleet, including gasoline, diesel and other fuel used in owned or leased vehicles and parking shuttles

**Scope 2**—Indirect emissions associated with the use of all purchased electricity and natural gas in leased spaces, including:

- Indirect energy use, including natural gas in leased office spaces and purchased electricity across all offices

**Scope 3**—All other indirect emissions not included in Scope 2. Scope 3 emissions are a consequence of our activities, but are released from sources outside of our organizational boundary, including:

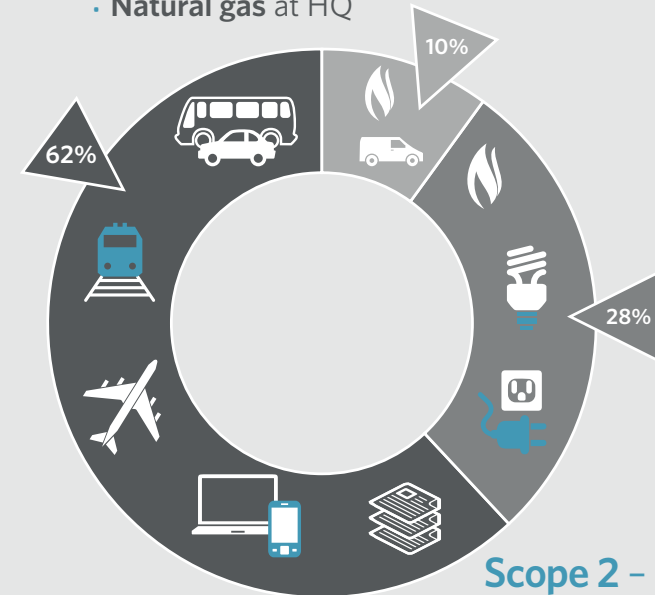
- Business travel, including air travel, hotel nights and ground transportation
- Employee commute, leased and owned vehicles and the headquarters parking shuttle
- Purchased goods, including electronics and paper

We rely on primary activity source data wherever possible. For example, actual electricity and natural gas use is compiled for our headquarters campus. Similarly, business travel and paper use data are provided by our vendors, based on bookings and purchases from national contracts. To improve the accuracy of GHG emissions resulting from employee commuting, we conduct an annual survey to understand location-specific trends in both mode and distance. For 2019 data, approximately 40 percent of our employees participated in the commute survey. Location-specific results were extrapolated to estimate emissions for all employees globally.

## Scope 1 – 6,739 MTCO<sub>2</sub>e

Direct GHG emissions from sources that are owned or controlled by the entity.

- Vehicle fleet
- Natural gas at HQ



## Scope 3 –

41,915 MTCO<sub>2</sub>e

Indirect emissions not included in Scope 2; a consequence of the entity's activities, but are released from sources outside its organizational boundary.

- Business travel
- Employee commute
- Purchased goods

## Scope 2 –

18,642 MTCO<sub>2</sub>e

Indirect emissions associated with consumption of:

- Electricity
- Natural gas in leased space

\* MTCO<sub>2</sub>e – Metric Tons Carbon Dioxide Equivalent is the unit of measure used to compare emissions from various greenhouse gases based upon their global warming potential (GWP).



 **Our Target:**  
Reduce GHG  
emissions levels 20%  
by 2020 from our 2011  
baseline, adjusted for  
growth.

## Our GHG Emissions

### GHG Inventory History

Below is a summary of our GHG emissions since establishing our baseline in 2011 (in MTCO<sub>2</sub>e):

	2011	2012	2013	2014	2015	2016	2017	2018	2019	Change
<b>SCOPE 1</b>	5,956	6,087	5,692	5,779	5,717	5,634	6,421	7,077	6,739	+13.1%
<b>SCOPE 2</b>	27,562	25,948	25,322	24,084	22,999	20,774	20,365	20,454	18,642	-32.4%
<b>SCOPE 3</b>	49,540	49,987	49,647	49,273	51,057	52,313	48,676	45,451	41,915	-15.4%
<b>TOTAL</b>	<b>83,058</b>	<b>82,022</b>	<b>80,661</b>	<b>79,136</b>	<b>79,773</b>	<b>78,721</b>	<b>75,462</b>	<b>72,982</b>	<b>67,296</b>	<b>-19.0%</b>

### Adjustments

In 2019, we made baseline adjustments to business travel and employee commute for 2011-2019 to account for the acquisitions of HPF and Calthorpe in 2019. These emissions sources closely correlate full-time employee (FTE) count, so adjustments were made to account for a net increase of 485 employees based on these two acquisitions. We continually strive to improve our processes and the precision of our data. For this reason, we have also incorporated slight refinements to our data due to the discovery of inaccurate emission factors previously used for travel for 2011-2018.

Since 2015, we have used a proprietary, internally developed database and reporting platform to calculate our emissions inventory, allowing immediate access to pull data for client requests and for our own use internally. Both this internal system and the third-party system we used previously have provided benefit in automating calculations and developing a credible GHG inventory based on the GHG protocol and use the latest emission factors available from the U.S. Environmental Protection Agency and other reputable sources.

### Progress Toward our Goal

- Emissions from paper use have decreased by more than 50% since 2011.
- Purchased electricity for the Omaha headquarters has decreased nearly 50% since 2011.
- Employee commute emissions, which comprise approximately half of our Scope 3 emissions, have decreased by more than 35%.
- Scope 2 emissions have decreased by nearly 17% since 2011.

### Looking Forward

In 2021, we will calculate our final emissions inventory in working toward our target to reduce GHG emissions levels 20% by 2020 from our 2011 baseline, adjusted for growth. Based on the reduction shown in the 2019 inventory and travel reductions in 2020 due to the pandemic, we anticipate being able to meet our goal. The next step will be to establish a new emissions reduction target and outline steps to reach that goal.



# Controlling Our Energy Use

We strive to achieve energy efficiency in our office spaces, just as we seek to provide our clients with energy-efficient buildings and infrastructure. In 2019, we had recently moved to our newly constructed headquarters, in Omaha, Nebraska. Our new global headquarters achieved LEED v4 Gold certification for New Construction and includes many sustainable and energy efficiency measures. Utilizing chilled beams, daylighting, efficient equipment and appliances, as well as LED lighting, helped achieve energy efficiency goals. The project team used a whole building energy model, per LEED's criteria, to calculate anticipated energy reductions of 28.5% in energy usage and 23.8% when calculated by cost.

The building includes advanced metering capabilities, and the building envelope, as well as the mechanical, electrical, and plumbing systems, were commissioned and are supporting through ongoing monitoring. Systems were further tested to see if energy use could be reduced on demand, to limit the amount of energy the building needed if available electricity was limited due to high heat and related stress on the power utility. The building was able to perform, on the hot, humid August day that the test occurred, and reduce energy usage but keep staff comfortable and able to continue their work. By utilizing sustainable strategies into our office spaces we are able to provide examples and firsthand experience and knowledge to our clients.

## Management Approach

We continuously look for ways to reduce energy use while maintaining staff comfort. Our energy management plan includes numerous avenues to reduce energy use:

- When designing the global headquarters, we used an integrated, collaborative process that allowed the design team to explore new ways to reduce energy demand. A life-cycle study conducted for the HVAC system led to the selection of a chilled beam system over a traditional variable air volume (VAV) system. This allowed the air handling size to be reduced by approximately 60% in comparison to a VAV system, which in turn reduced the facility's overall energy usage.

- The chilled beam concept is similar to a radiant floor system and requires less energy due to less required air flow within the system, 80% less than that of a VAV system, while providing proper ventilation.
- The chilled beam system contributes to a 68% Energy Use Intensity (EUI) reduction compared to the regional average.
- Optimizing natural light in our buildings by utilizing an open office plan, furniture and lower partitions where possible, in order to allow maximum light penetration. Offices, conference rooms, break rooms and support spaces are generally organized in the interior of the floor. Where offices or conference rooms occur on the building perimeter, glass sliding doors are used to allow light to fill the room and penetrate beyond.
- Our Omaha headquarters incorporates daylighting and utilizes a distributed wireless network-based lighting system to control illumination levels due to changes in occupancy, time scheduling, and daylight harvesting.
- Glare and excessive light levels are reduced with automatic shades on all four façades and are controlled by sun-tracking sensors, which simultaneously raise and lower shades on each façade based on how much daylight penetrates office floors. These shades reduce solar load—and thus cooling requirements during the summer.
- Light occupancy sensors and daylight controls help achieve a lighting power density of 0.6 watts per square foot, 38% better than energy code, which was further trimmed by an additional 30% during post-occupancy commissioning.
- Installing efficient LED lighting fixtures in new and renovated office spaces.
- Reducing the Omaha headquarters energy load with the noted strategies and technology allowed us to use only one of the two chillers and meet the entire facility's cooling requirements during 2019.

- Using ENERGY STAR appliances, equipment and vending machines throughout our offices, when possible.
- Adopting EPEAT Bronze minimum standards for leased and purchased computers, laptops and monitors (January 2007). In 2011, HDR joined as an EPEAT Enterprise Purchasing Partner. Participating in this program and incorporating the requirements into our leasing and purchasing helps us to ensure we are making environmentally responsible purchases while providing our employees with the tools they need to get their jobs done.
- Continually communicating with our technology vendors to ensure our purchased electronics are increasingly energy efficient.
- Engaging Green Teams to help reduce the energy use of our offices through posting reminders to turn off lights by light switches, working with their office management to install more energy-efficient light bulbs or motion sensor light switches, and implementing other initiatives.
- Working with our Real Estate Department to ensure that office fit-outs and renovations identify energy efficiency opportunities and implement the best solutions.

We continuously look for ways to reduce energy use while maintaining staff comfort.



# Decreasing Our Water Use

We are well aware of issues surrounding water availability, sourcing and security—working every day with clients who are facing those issues. That experience shapes our approach to managing water use for our business.

## Management Approach

We implement and maintain water savings in our offices each year by utilizing the HDR Sustainable Office Finish Standards. These standards include a requirement for the use of low-flow fixtures in office fit-out and renovation projects. Where possible, we seek additional water savings. For example, the HDR office in Arlington, Virginia, is LEED Platinum certified and achieved a 30.6 percent water reduction.

- We have integrated low-flow fixtures into many of our offices, although many restroom facilities are located outside our rental space. Low-flow plumbing fixtures were included in the headquarters and contribute to a water use reduction calculation of 30.88% for the building.
- Our new Omaha headquarters has a zero lot-line and limited adjacent planting areas. There is no turf grass, but shrubs and plantings with low water demand use a microspray irrigation system to provide irrigation at a rate that is 87% below the EPA Water Budget baseline. The site was designed to manage 100% of rainwater runoff from the building and site through the use of and underground chamber detention system, which allows infiltration, slows the speed of the runoff, and filters and improves water quality prior to entering the city's stormwater collection system.

Our approach to managing water use for our business is shaped by our experience with clients facing water availability, sourcing and security challenges.



# Reducing Our Waste

We are very conscious of the fact that nearly everything we do creates waste. Reducing the amount of waste generated through operations and by employees is beneficial for the environment and reduces business costs.

## Management Approach

Our policies aim to manage resource consumption and reduce waste. In 2014, HDR published its first comprehensive Sustainability Policy and Procedures document, and in 2015 we issued a Waste Prevention and Recycling Standard. Our policy and procedures document defines requirements for communicating and implementing sustainable practices for conserving resources, managing waste diversion and disposal, and establishing sustainability goals and reporting. It is HDR policy to administer a sustainability program that defines and manages business practices to reduce the environmental impacts on our employees, our clients and our communities. Any exceptions to this policy and procedures must be approved by the director of sustainability and the chief executive officer. The Sustainability Policy and Procedures document addresses the following topics:

- Eliminate Single-Use Water Bottles
- Eliminate Purchase of Coffee Pods and Single-Cup Coffee Packets (K-Cups or Flavia)
- Establish Default Double-Sided Print Settings
- Establish Recycling and Waste Reduction
- Follow Standards for Sustainable Finishes

## WASTE PREVENTION AND RECYCLING STANDARD

In October 2015, we issued a company-wide Waste Prevention and Recycling Standard as part of our company-wide Sustainability Policies, with the goal of overall waste reduction, as well as reducing the amount and type of waste that goes to landfills. The standard, which provides information, tools and resources on waste prevention and minimization, includes guidance for recycling and

composting, as well as reduction, reuse and sustainable purchasing for office products, food, paper, etc. Our Sustainability Policy makes managers and employees aware of our sustainability principles and empowers them to make a difference in our office environments.

Since issuing the Waste Prevention and Recycling Standard, offices have participated in an annual Waste Prevention and Recycling survey and updated their WPR Plan to set waste reduction goals for the following year.

## Reducing

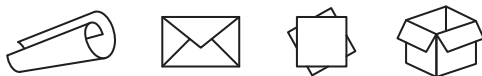
- We created a Catering Guidance Checklist that specifies providing condiment items and beverages packaged in bulk, where applicable; avoiding individually boxed lunches; and encouraging vendors to switch to reusable serving dishes they collect after the meal.
- The new headquarters building uses reusable dishes, glassware, utensils and to-go containers in the kitchens on each floor and the Café and coffee bar, which are accessible to all 1,000 employees in the building.
- We minimize waste at coffee stations by using ceramic mugs, glasses and bulk packaged items.
- The coffee supplied in the Café and each kitchen on each floor of the headquarters building is sustainably sourced coffee, supplied by a local roaster. Coffee machines for staff use in each kitchen grind and brew coffee into a cup, and then used grounds drop into the compost bin located in the cabinet below the counter.
- The life-cycle assessment conducted for the new global headquarters noted that the SidePlate technology, a steel connection system using only bolted connections, resulted in faster construction time, reduced inspection time and saved 67 tons of steel over traditional structural methods. This is the first time a SidePlate system was used in Nebraska.



## RECYCLE

### CLEAN PAPER/PACKAGING

Office paper, books & magazines, envelopes, sticky notes, corrugated boxes (flattened)



### METALS

Aluminum cans, metal food cans (rinsed)



### PLASTICS #1, 2, 3, 5

Soda bottles, plastic cups and lids, yogurt cups, food containers (rinsed)



## COMPOST

### FOOD WASTE



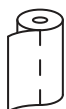
### COMPOSTABLE FOOD PACKAGING



### WOODEN STIR STICKS



### NAPKINS AND PAPER TOWELS



### PIZZA BOXES



### SOILED PAPER PRODUCTS



### GREENSTRIPE AND GREENWARE CUPS



### PAPER AND PACKAGING



## Reducing Our Waste

### Reusing

- Efforts are made to limit construction waste sent to the landfill from office renovation projects. Whenever possible, we look for ways to reuse materials within our office. We also often donate materials, furniture and equipment to local charities for reuse, resale, or for them to recycle and receive the profit.

### Recycling

- To the extent possible in all of our locations, we recycle cans, bottles, plastics, office paper, newspapers, cardboard, packaging, fluorescent lighting tubes, compact fluorescent light bulbs, computers, cell phones, food waste for composting, furniture and plant trimmings/grass clippings.
- Many offices and Green Teams hold recycling events to collect items that may not typically be collected in that office, such as batteries, glass, plastic bags, etc.
- When we host large or small conferences and meetings off-site, we work with the conference venue(s) to compost event food waste, coordinating conversations between convention center staff, the composting vendor and our staff to successfully facilitate composting. These events produce anywhere from 400 pounds of compost for smaller events to 1,500 pounds at larger events. This process has become standard procedure for our internal conferences and has led to opportunities to assist external conferences in facilitating similar processes.
- During the construction of the new headquarters building, the project diverted 79.3% of waste materials including metals, concrete, asphalt, wood, gypsum, plastics, paper, cardboard and glass from the landfill.

### E-WASTE

Leased equipment is returned to IBM, which reuses what it can and recycles items that are obsolete. In addition, we use responsible electronics recyclers for any owned electronics items.

### PURCHASING

We take advantage of sustainability-focused programs from our suppliers. For example, we track the number of "green" designated office supply purchases from Office Depot, and encourage sustainable office supply purchases by participating in the Office Depot Green Smart Cart program. All paper products purchased through our national vendor contain recycled content. We encourage reuse of office supplies like binders and folders, as well as reuse or relocation of furniture, when allowable. Additionally, guidance related to sustainable lunch meetings is included in our Catering Guidance Checklist for staff and lunch caterers to use when planning smaller lunch meetings in our office. We also purchase bulk items when possible to eliminate waste from single-serve packaging.

### Looking Forward

We are always looking for ways to improve our waste reduction efforts and continue the dialogue with our vendors and business partners.



## PARTNERSHIPS

### **Together, everyone achieves more.**

We value the opportunity to engage meaningfully within our industry and with the communities where we live and work. Our goal is to start conversations and drive actions that take the industry, our company and our communities to the next level.



# Partnerships

Business is built on relationships. It takes teamwork to complete projects, and it takes partnerships to build thriving businesses and communities. We take our relationships seriously—challenging conventional thinking and pitching in whenever we can—as we strive to improve our industry and communities.

## Management Approach

Partnerships help us to stay connected and engaged, as well as up-to-date on current practices and issues. Our staff are encouraged to be active members of societies and organizations relating to our business and to participate in civic and community activities. A list of industry commitments and partnership affiliations can be found on pages 120-125 in the [Appendix](#).

## CASE STUDY

### Australian Pavilion Wins the Golden Bee at the XXII Triennale di Milano

The Australian Pavilion won the inaugural Golden Bee Award at the XXII Triennale di Milano. HDR participates in La Triennale di Milano as principal partner supporting the architectural design of the Australian Pavilion led by the University of Technology Sydney (UTS).

This year, for the first time in its history, the Triennale presented three participants with the Bee Awards. Selected by an international jury, the awards recognize “the precision of their interpretation of the theme and the quality and relevance of the ideas they put forth.”

Titled Teatro Della Terra Alienata (Theatre of the Alienated Land), the Australian Pavilion consolidates two years of research and pedagogical projects led by Architecture Lecturer Amaia Sanchez-Velasco, Jorge Valiente Oriol, Gonzalo Valiente and Miguel Rodriguez-Casellas, in collaboration with academics and students from the schools of Design, Architecture and Life Sciences at UTS.

“We are pleased to participate in a special forum such as the Triennale through this collaboration between HDR and UTS,” said HDR Associate Ines Benavente-Molina. “The re-imagining the fate of the Great Barrier Reef installation demonstrates how architecture can go far beyond an orthodox collection of forms and typologies. It speaks volumes about the importance of our global commitment to the unbuilt environment.”

Triggered by Rowan Jacobsen’s seminal “Obituary of the Great Barrier Reef,” the curatorial project employs a combination of cartographies, technological devices, design proposals and artworks to explore design responses to current and future environmental and social challenges affecting the fate of the Great Barrier Reef.

“As a global firm, we have speculated that perhaps architects, like doctors, should be required to—under the first tenant of the Hippocratic Oath—‘first do no harm,’” said Pini. “And this plays out no more dramatically than on the stage of the Great Barrier Reef, which requires architecture to not just politely sit, observe and then remedy, but rather to cross geographic, sociopolitical and ecological boundaries to create possibilities of resilience and restoration.”

The XXII International Exhibition of La Triennale di Milano, titled *Broken Nature: Design Takes on Human Survival*, ran from March 1 to September 1, 2019, and was curated by Paola Antonelli, senior curator of Architecture and Design and director of Research & Development at The Museum of Modern Art. Broken Nature reflects on the relationship between humans and environments at all scales—from the microbiome to the cosmos—including social, cultural and natural ecosystems.

“This is a rare opportunity to take part in a unique dialogue, one that goes beyond the confines of individual disciplines, circling emotions around scientific data, in a feedback loop of disruptive power,” said HDR Director Stefano Cottini.

“This is what collaboration produces. The close collaboration between UTS and HDR was key to this success.

**Susanne Pini**, Principal - National Director, Mixed Use





# Corporate Citizenship

We recognize that our role in the global marketplace extends far beyond the scope of any one project or program. It is vital that we consider the social impacts of both our projects and practices, and evolve our organization and policies to meet the needs of an ever-changing landscape.

## Management Approach

We ask questions to provoke a conversation, seeking to strengthen our relationships with both our business partners and the communities we serve. For more than 20 years our sustainability program has guided our strategies for addressing sustainability on both our projects and internal practices.

Our values drive everything we do.

- Live the network. We **think global and act local**, and as a result we learn from each other. We bring together the right people for each individual client and engagement, ensuring the right skills, expertise, experience and the highest level of teamwork. Every time.
- Listen first. To find the best answer, we need to understand the root and complexity of the problem. We **start by listening**.
- Hold ourselves accountable. We are empowered to **find the best solutions** for our clients and for our own company. We do the right things for the right reasons. And we take personal responsibility to see things through.
- Push boundaries. We **strive to do things better** and stretch further. From our internal processes to the work we deliver, and from the projects we do to the careers we enable.
- Design smart. We have the skills and ability to **tailor our approach to each situation**, whether it's tried and tested, or something more cutting edge. We deliver our best work by designing smart.

## About the HDR Foundation

Our commitment to sustainability drives our grant-making activities through our philanthropic arm, the HDR Foundation. As responsible corporate citizens, our grant funding reaches the neighborhoods and communities where we live and work, addressing food security and educational needs for local schoolchildren, reviving impaired waterways and parks, and upgrading medical clinics. As global citizens, we broaden our reach to the far corners of the world, building domestic water systems in Guatemala and green energy grids in Kenya and Nicaragua. We fund projects that have a lasting impact.

Founded in 2012 by HDR Chairman and CEO Eric Keen, our Foundation has given back \$4 million to over 180 organizations since inception. We mirror our company's expertise through our three granting pillars: 1) environmental stewardship, 2) advancing healthy communities, and 3) improving education for all. In 2019, we awarded grants totaling \$760,000 to worthy nonprofits serving 54 communities. In 2020, the impact was even greater as we stepped up to address the challenge brought on by an unforeseen pandemic.

In 2019, our grants included:

**Bayou Vermillion Preservation Association, Lafayette, LA, USA**—HDR Foundation's \$14,000 grant addressed flood mitigation and improved resiliency in the local floodplain, following the devastation of the Great Flood of 2016. Funding site-specific plant stock, local volunteers planted seedlings in targeted public lands and in adjacent backyard watersheds. This community-based grant addressed watershed resiliency, reclamation, and preparedness for future climate-related impacts.

**Malama Loko EA Foundation, Haleiwa, O'ahu, HI, USA**—The \$18,200 grant restored critical wetlands in the Malama Loko fishponds, located in northwest O'ahu. In partnership with the Kaiaulu Keiki Afterschool Program, grant funds purchased materials to build the mala-garden and outdoor "mauka to makai" (mountain to ocean) classroom, which now harvests Indigenous food from the gardens and the fishponds.

**Engineers without Borders, KC Professional Chapter, Los Churuneles, Guatemala**—Our \$20,000 grant modified an existing water supply system for an entire hillside town, northwest of Guatemala City. Volunteers installed a new water storage tank, water distribution piping and water treatment system.

**Mountain Home Montana, Missoula, MT, USA**—Mountain Home Montana is a safe house for at-risk new mothers. Our \$85,000 grant doubled the capacity of the children's therapy/childcare area, adding a napping space and qualifying it to become a full-time, trauma-sensitive daycare facility.

## LOOKING AHEAD—2020 AND BEYOND

We define sustainability also in terms of resiliency. In 2020, the world faces an unprecedented health pandemic. Our community institutions are under tremendous pressure, yet our HDR employee donors have stepped up as they always do. They have put in more volunteer hours, and donated over \$1.1 million to fund the largest annual grant award cycle to date. Early in 2020, our HDR Foundation made two emergency grants of \$150,000 each, one to Direct Relief to buy needed PPE for frontline workers, and the other to Feeding America, to restock the shelves of local food pantries across the country.

You can learn more at [hdrinc.com/foundation](https://hdrinc.com/foundation).

## CASE STUDY

*Supporting communities in need.*



## Design 4 Others

Design 4 Others (D4O) is a diverse group of HDR design professionals who are passionate about volunteering time to projects that support communities in need. The group was started in 2006 and over time has grown to include 216 volunteers who have partnered with global and local partners on 54 projects worldwide. With our clients and partners, we have designed over 640,000 square feet in 13 countries to promote access to healthcare and education, and to foster economic growth.

In 2019, D4O volunteers started work on two new projects, the iKure Project in West Bengal and the Matibabu Project in Kenya.

### **iKure, West Bengal, India**

D4O is providing design and guidance to iKure, an award-winning revenue-positive social enterprise bringing primary care to rural India. Through a unique health outreach initiative, iKure is combining community engagement, technology and big data to rapidly scale disease prevention and wellness in West Bengal. The first project is a primary care hub serving multiple communities through mobile diagnostic treatment and in-situ care at the edge of the Sundarbans Delta.

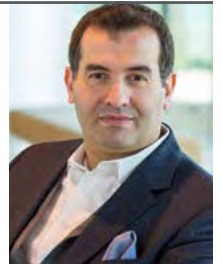
### **Matibabu Project, Kenya, Africa**

Matibabu Hospital is working with Construction for Change, a not-for-profit organization managing the delivery of modern healthcare facilities to communities in need, and D4O to help achieve its vision of becoming the Mayo Clinic of Kenya. The hospital currently operates three outpatient clinics, the Matibabu Women's and Children's Hospital, and helps manage 500 community healthcare workers in the area. With Daniel Ogola, an extraordinary community organizer, at the helm, the hospital has joined forces with U.S. doctors to make huge strides toward achieving the vision.

D4O is providing a master plan that will allow Matibabu Hospital to grow into a full-fledged regional hospital, and to accommodate an academic campus to train the next generation of health care workers. Additionally, D4O is providing design services for the first project: a state-of-the-art surgical platform with four operating rooms and complete pre- and post-op facilities, which are expected to be completed next year.

“

Over the years, I have had the fortune to learn from the wisdom of others. Design 4 Others has given me the privilege to share my expertise in architecture and to give back in a meaningful way; to enhance the lives of people around the world, and specifically those who need it most.



**Mohammed Ayoub**, Design Director

”



# Local Community Engagement

As employee-owners, we take to heart our responsibility to improve our communities—not only in design solutions for clients but also by actively participating in our communities. As a firm that specializes in building, shaping and serving communities, we take special pride in volunteering for community programs, leading community organizations, helping protect the environment and educating our children. It's simply part of our culture and ongoing commitment to the communities where we all live, work and play.

## Management Approach

It's important to have employees engaged in their communities by giving back where they live—through professional organizations, charitable contributions, in-kind donations or numerous additional activities. This includes listening and working with civic leaders in organizations where we reside and conduct business. We work with clients to engage the public on projects that will occur in their communities. We work with our vendors to make sure we are doing all we can to reduce waste and create a positive experience for all parties involved. Decades ago, in 1930, our founder, H.H. Henningson, produced a calendar that stated, *"There is always time enough for Kindness."* This is a motto we still embrace and live today.

Employees are encouraged to participate in efforts that better their individual communities. Offices coordinate efforts that benefit their locality, dependent on their needs. Projects run the gamut—from helping children learn to fish, to raising money for medical research, to collecting food, to cleaning up parks, and much more. Offices often have in-office "drives" for clothing, food, to adopt families during the holidays, or to support local organizations when they are running low on supplies.

Generally, we assist organizations that support community improvement (build-a-thons, beautification campaigns), assist with community enhancement initiatives (arts, community groups) or provide education and development for youth and related professional organizations (youth groups, science, math and A/E projects). We believe it's a privilege to support charitable organizations in the areas we serve. We are driven to strengthen our communities and our industry, and provide much-needed support to organizations seeking to improve lives and inspire positive change.

In 2019, we donated \$1.5 million to 209 charitable organizations. We also provided an estimated \$2.3 million in corporate sponsorships to nearly 900 community organizations and professional associations.

In addition to these efforts, the HDR Foundation, created in 2012, is centered on helping the communities where we are rooted. The HDR Foundation is primarily funded through employee and alumni donations. In 2019, our employees' donations exceeded \$900,000. An estimated 32% of employees participated in our Day of Giving, including nearly 1,000 first-time donors. There are two accounts donors can contribute to: a General Giving Account, which funds grants pertaining to the HDR Foundation's areas of focus; and a Disaster Assistance Account, which provides assistance to employees who incur uninsured losses or expenses due to federally declared disasters.



# Giving Back to Our Communities

Community engagement improves a person's sense of well-being, lowers stress levels, increases self-confidence, improves career skills, provides career experience, and helps everyone make new friends and expand spheres of influence. It also makes people happier by adding meaning and enrichment to their lives. Our employees are big proponents of the principle, "doing well by doing good." They will tell you volunteering is an essential part of the equation that leads to a satisfying personal life and professional career.

## Rosemont and Chicago, IL, USA

During the holiday season the Rosemont and Chicago offices partner with *Letters to Santa*, a program that benefits students living at or below poverty level in Chicago. Some children had previously expressed to their teachers that "Santa missed my house." In 2019, the offices wanted to make sure Santa did not miss their homes so they sponsored 85 children, fulfilling their holiday wish list.

## Toronto and London, Ontario, Canada

Organized by our local community building committee, a team of 24 staff, family and friends from our Toronto and London, Ontario, offices braved the conditions to climb, crawl and scramble their way through the demanding 5K, 13-obstacle course. Courage and strength were in abundance for the Tough Mudder Competition, and that indomitable spirit saw the team work in unison to overcome every challenge and cross the finish line as they started—together. Aches aside, smiles prevailed as everyone realized the significance of their accomplishment, not only completing the course but also raising funds for a number of local charities.

## Boise, ID, USA

A team of 16 employees worked with other community volunteers to help Paint the Town in Boise, Idaho. The event supports Paint the Town, an organization established to help those with physical and/or financial constraints to prep and repaint the exterior of their homes.

## Tampa, FL, USA

The Great American Smokeout, sponsored by the American Cancer Society, highlights the dangers of smoking tobacco and provides a meaningful way for people to avoid cigarettes. It also offers a comfortable environment for family and friends to speak about tobacco and how to quit smoking. Twenty-six employees worked over two days to assemble 5,000 quit kits that were distributed at the event.

## Folsom and Sacramento, CA, USA

HDR volunteers from Folsom and Sacramento, California, made a difference in their local community by participating in a countywide creek cleanup, Creek Week 2019. Our employees cleaned up more than 70 pounds of trash from the Arcade Creek, Folsom Trails and Hansen Ranch area, and celebrated with other community volunteers at Carmichael Park with lunch and information booths.

## Billings, MT, USA

Five employees from our Billings, Montana, office, volunteered to help run the annual MATHCOUNTS competition, which featured 140 middle school mathletes. Our volunteers served as scorers, proctors, photographers, and countdown round judges, and found joy in helping these students get excited about math.

## Kansas City, MO, USA

Over the past few years, a team from HDR in Kansas City, Missouri, has donated time to help package or sort food for Harvesters—The Community Food Network. Harvesters is a regional food bank serving a 26-county area of northwestern Missouri and northeastern Kansas. They provide food and related household products to more than 760 not-for-profit agencies, including: emergency food pantries, community kitchens, homeless shelters, children's homes, schools and more. Part of the team's work includes a quarterly backpack-filling effort, where they pack an average of 800 meals each time.



HDR employees  
have given back to  
our communities  
since our  
beginnings in 1917.



## CASE STUDY

*Encouraging all employees to get involved in their community.*



## Greening Our Communities Makes a Difference

Each year, our Office of Sustainability uses the heightened awareness of Earth Day to celebrate the sustainability and environmental efforts that take place throughout the year, as a company and as individuals. Since 2015, we've stepped up our activities thanks to local office leadership and our Green Teams, encouraging all employees to get involved in their community by hosting or participating in a cleanup or tree planting event during April or May.

In 2019, we had 34 teams from 33 offices join together for the cause, logging an estimated 1,200 volunteer hours. Our service included cleanups of roadways, trails, parks, forests and waterways, tree and garden planting, and park maintenance and rebuilding projects. Events included:

**Charlotte, NC, USA**—The office worked with Charlotte-Mecklenburg Storm Water Services to clean up about 4 acres over a 1-mile stretch of a local stream. Their team collected 50 full bags of trash and pulled out a tire, a roll of carpet, and various other items from the stream.

**Phoenix, AZ, USA**—The office adopted a highway through the Arizona Department of Transportation. They were able to fill five large trash bags along 1 mile of highway.

**Pensacola, FL, USA**—The office had 14 employees work with the City of Pensacola to clean up their local Bertram Park. Through their efforts, six bags of trash were collected and 80 cubic yards of debris were removed from around the park.

**Spokane, WA, USA**—The office worked with Friends of the Centennial Trail during their Unveil the Trail Cleanup. Six volunteers picked up nearly 50 pounds of trash, including one tire, a toilet tank cover, and four bags of trash.

**Cleveland, OH, USA**—The office adopted a highway through the Ohio Department of Transportation. Nine volunteers removed nine bags of trash from near the roadway.

**Vienna, VA, USA**—Seven volunteers participated in a stream cleanup, collecting 15 bags of trash from Accotink Creek and the surrounding areas of Eakin Park.





## Civic Affairs

We work in a relation-based industry, where active involvement in political, community and professional activities is vital to our success.

### Management Approach

Our Civic Affairs Program has increased its presence in the public policy world as our company has grown in size and breadth of services. The program's mission is to create avenues of access to key federal, state and local elected officials and policy-makers. We operate in a diverse set of markets on a local, state and federal level, making interactions with key policy-makers increasingly important.

The Civic Affairs Program features a variety of activities, including:

- Working with local, state and federal elected officials on key issues affecting our business
- Working with local HDR offices on the development of community-based civic affairs programs and activities
- Coordinating participation in national organizations, including many attended by government officials and our clients
- Serving on the board of Employee S Corps of America (ESCA) to advocate for the employee-ownership model
- Leading our Political Action Committee (PAC), which coordinates HDR's support of elected officials
- Hosting a biannual HDR National Policy Forum, bringing HDR employees together with members of Congress in Washington, D.C.





# Market Leadership

Consistent with our commitment to continuously develop the technical expertise of our employees, we also share the responsibility of advancing the industry. When it comes to improving the environmental and social impacts of our work, we believe that promoting best practices externally benefits the industry as a whole. For this reason, HDR encourages and supports our people to be thought leaders within their disciplines, to participate and lead within industry associations, and to contribute time and effort to voluntary initiatives addressing the most relevant and impactful sustainability issues in their field.

## Management Approach

We are able to influence the industry in many ways, both locally and globally. We leverage relationships with many business partners—including clients, communities, teaming partners, suppliers and industry organizations and professional organizations—to raise the bar in advancing sustainable practices. This approach allows us to share insight on emerging issues while also learning from others' experiences. The outcome is mutually beneficial, enabling our employees to grow professionally while collaborating with others to make a positive impact.

- **We strive to be a leader in the communities where we live and work.** For example, employees initiated a conversation with the convention center in Omaha, Nebraska, to encourage them to expand their recycling program and add a composting program. We worked with the local convention authority to pilot both recycling and composting at a large HDR conference held at the center, and they have since made the programs available to other businesses using their meeting space.
- **We invest in new initiatives that have potential for great impact.** For example, we are an Enterprise Sponsor of the International Living Futures Institute, acting as an ambassador and helping to recruit and train future ambassadors. We have staff working with the AIA Materials Knowledge Working Group on the 2050 Pledge

for Materials. The intent of the pledge is to educate the building community to diminish impacts by using materials that are free of toxic substances, minimize GHG emissions and are environmentally and socially responsible.

- **Our employees serve in leadership positions with professional organizations advancing sustainability,** such as the Institute for Sustainable Infrastructure, U.S. Green Building Council, Great Lakes Energy Wind Collaborative, American Public Transportation Association, the International Living Futures Institute, Practice Greenhealth and the Waste-to-Energy Research and Technology Council.
- **We share success to help others adopt best practices.** Our employees speak nationally about sustainability topics, sharing real-world success to organizations such as CDP, National Adaptation Forum, CleanMed, GreenBuild, World Energy Engineering Congress, American Society of Civil Engineers, American Public Transportation Association, Transportation Research Board and American Public Works Association.
- **We drive positive change in our supply chain.** We work with suppliers that encourage sustainability in their supply chains. We look to support the companies that are committed to continuous improvement in these areas. We ask manufacturers to provide product information using one of the following tools: Healthy Building Network's Pharos Project, the Health Product Declaration, the Cradle to Cradle Certified (C2C) product registry, or the Environmental Product Declaration (EPD) protocol. We integrate the comprehensive health and environmental product information provided by complete HPDs and EPDs into our daily practice.

## CASE STUDY

*Serving in leadership positions to help advance sustainability.*

# Leading the Way

## Beduhn Elected to the Board of America's Watershed Initiative

Bob Beduhn, Director of Civil Works, Dams and Levees, was elected to the board of directors of America's Watershed Initiative in 2019. He represents HDR and the National Hydropower Association, the organization that nominated him.

America's Watershed Initiative is a collaboration working with hundreds of business, government, academic and civic organizations to find solutions for the challenges of managing the Mississippi River and the more than 250 rivers that flow into it. The board is made up of consultants, non-government, trade group and industry representatives. The United States Army Corps of Engineers is an advisor to the organization, which also produces a report card that measures six broad goals for America's Watershed—ecosystems, flood control and risk reduction, transportation, water supply, economy and recreation—and how well each of these goals are met, using real data and relevant information that was identified by experts in these fields.

## Yonkin Joins Greenroads Foundation Leadership

Pam Yonkin, Transportation Sustainability and Resiliency Cross Sector Director, joined the Greenroads Foundation Board of Directors. She continues HDR's leadership on the board as Janet Gonzalez-Tudor, Transportation Cross Sector Development Director, concludes her board tenure.

## Waldron Appointed to APTA's Executive Committee

Tom Waldron, HDR's global transit director, will help guide the future of the leading voice for public transportation in North America. At its annual meeting in New York, the American Public Transportation Association (APTA) board of directors appointed Waldron to a three-year, at-large business member term on the organization's 25-member executive committee.

The executive committee is the decision-making body of the board of directors with authority on matters involving the management and performance oversight of the association and its leadership. APTA has more than 1,500 public and private sector member organizations, and more than 90 percent of customers using public transportation in the United States and Canada ride APTA member systems.

## Hansen Explains Need for Healthier, Sustainable Materials

Featured in Healthcare Design Magazine's October segment of the series, "[Rising Up: Healthier Material Selection](#)," HDR Sustainable Design Principal Jean Hansen discussed the need for new resources, education and a framework for design with a healthier materials selection process.

Hansen writes, "It's one thing to recognize that building materials impact the built environment and human health. but understanding what a design professional can do to lessen that impact or, even better, to select and specify materials that promote health is an even bigger challenge."

## Calthorpe Featured in National Geographic Story About Cities of the Future

Our urban planners seek to create walkable, livable, resilient and sustainable communities. One of the impediments to this progress is society's overreliance on automobiles. In the National Geographic feature story, "To Build the Cities of the Future, We Must Get Out of Our Cars," Peter Calthorpe, HDR Principal Urban Design Consultant and Senior Vice President, offers insights about communities close to his home in Northern California.

"The problem with urban environments that are auto oriented," Calthorpe said, "is that if there's no choice, if the only way to get around is in a car, lo and behold, people are going to use cars too much. Too much for the climate, too much for people's pocketbooks, too much for the community in terms of congestion, too much for people's time ..."

He goes on to explain the evolution of transit-oriented development principles, offering examples of how we're applying them to shape communities throughout the world.

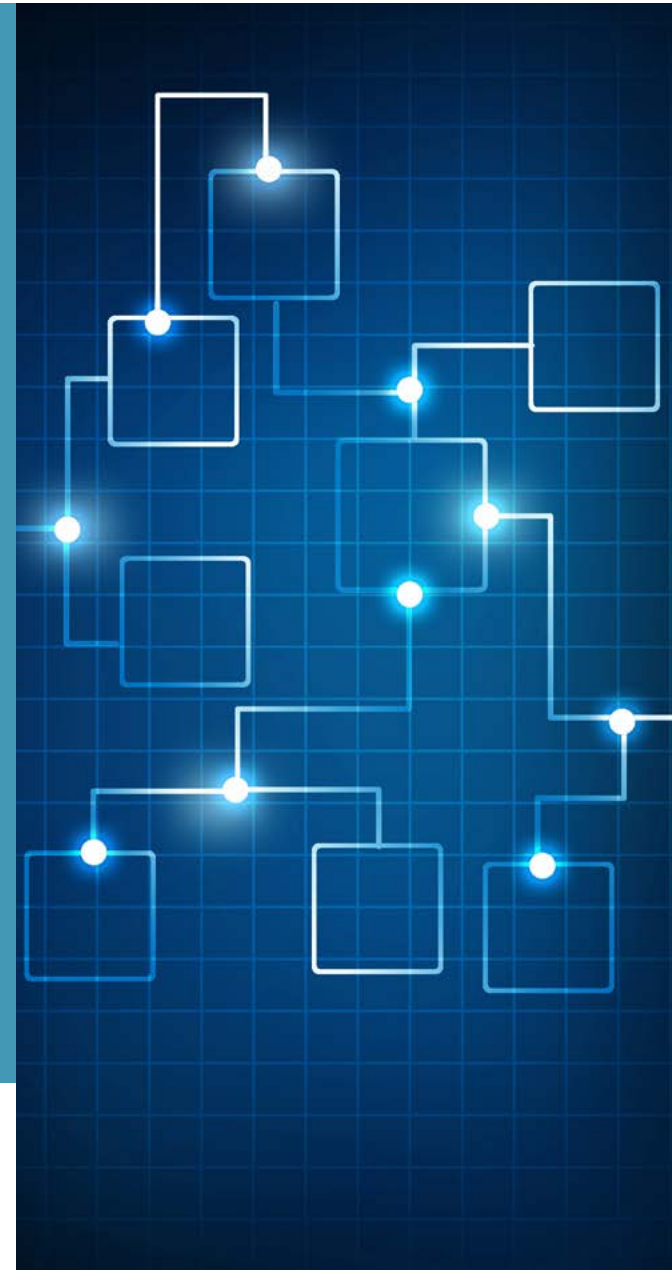


## ABOUT THIS REPORT

### Understanding our environmental, social and economic impacts.

Our Sustainability + Corporate Responsibility Report demonstrates our commitment to understanding our environmental, social and economic impacts by examining activities in our offices and in our project work. We produce a detailed, straightforward and comprehensive report covering sustainability issues occurring throughout the company on a biannual basis. This report details activities from January to December 2019 and updates the report published in 2018. We have included details of our direct operations and companies acquired during the calendar year of 2019. We exclude joint ventures where HDR was not the lead partner.

*Note: Photos taken prior to COVID-19 pandemic.*







We believe that the way we work can add meaning and value to the world.

## GRI Content & Feedback

We applied the Global Reporting Initiative's (GRI) completeness principle to encompass the dimensions of scope, boundary and time of our report. For example, in developing our GHG inventory, we selected the highest quality data available in the context of our business objectives and the GHG Protocol's principles of relevance, completeness, consistency, transparency and accuracy. Throughout our report, we take care to present information that is reasonable and appropriate.

### GRI Standards

This report is organized and presented in accordance with the GRI Standards established by the GRI, which include two options for reporting: "Core" and "Comprehensive."

***This report has been prepared in accordance with the GRI Standards: Core option.*** HDR has voluntarily followed GRI reporting guidelines since 2008.

### GRI Content Index

We provide a complete GRI Standard content index beginning on page 103.

### GRI Standard Numbers

Disclosures on GRI numbers are noted throughout the report. They are found at the bottom of each page noted by the associated GRI Standard Number.

### GRI

More information about the Global Reporting Initiative can be found at [www.globalreporting.org](http://www.globalreporting.org).

### Feedback and Comments

We welcome your feedback and suggestions about this report. Please send comments to: Michaela Wittmann, Director, Sustainability & Resiliency [michaella.wittmann@hdrinc.com](mailto:michaella.wittmann@hdrinc.com).



## GRI INDEX

# A comprehensive sustainability reporting framework.

The Global Reporting Initiative (GRI) is a nonprofit organization that promotes economic, environmental and social sustainability. GRI provides all companies and organizations with a comprehensive sustainability reporting framework that is widely used around the world.





DISCLOSURE NUMBER AND TITLE		SECTION	PAGE(S)
GRI 102 – GENERAL DISCLOSURES			
<b>ORGANIZATIONAL PROFILE</b>			
102-1	Name of the organization	Cover	1
102-2	Activities, brands, products, and services	Pillar 1 - Projects	11
102-3	Location of headquarters	Pillar 2 - People Pillar 3 - Practices	53 79, 86, 87, 88
102-4	Location of operations	Pillar 1 - Projects Appendix	12 109
102-5	Ownership and legal form	Pillar 2 - People	56-57, 60
102-6	Markets served	Pillar 1 - Projects Appendix	11, 12 109
102-7	Scale of the organization	Pillar 1 - Projects Pillar 2 - People Appendix	11, 12 52, 73 109, 126
102-8	Information on employees and other workers	Pillar 2 - People Appendix	73 126
102-9	Supply chain	Pillar 1 - Projects Pillar 3 - Practices Pillar 4 - Partnerships	22 81-84, 89-90 99
102-10	Significant changes to the organization and its supply chain	Pillar 2 - People	53-55
102-11	Precautionary principle or approach	Pillar 1 - Projects Pillar 2 - People Pillar 3 - Practices	17-19, 23-51 63-65 76-78
102-12	External initiatives	Pillar 1 - Projects  Pillar 2 - People Pillar 3 - Practices Pillar 4 - Partnerships Appendix	14-16, 21, 26-27, 29-32, 35, 37, 48-51 63-65 77-80, 87-88 92-100 120-125
102-13	Membership of associations	Pillar 1 - Projects Pillar 4 - Partnerships Appendix	26-27, 29 92, 94, 99-100 120-125
<b>STRATEGY</b>			
102-14	Statement from senior decision-maker	Letter	2
<b>ETHICS &amp; INTEGRITY</b>			
102-16	Values, principles, standards, and norms of behavior	Materiality Pillar 1 - Projects Pillar 2 - People Pillar 3 - Practices Pillar 4 - Partnerships	8 13, 15-42, 45-51 56-59, 66-69, 74 76-84 93-97





DISCLOSURE NUMBER AND TITLE	SECTION	PAGE(S)
<b>GOVERNANCE</b>		
102-18 Governance structure	Appendix	109
<b>STAKEHOLDER ENGAGEMENT</b>		
102-40 List of stakeholder groups	Materiality	8
102-41 Collective bargaining agreements - This disclosure has been omitted because it is not applicable. Our work is primarily performed by licensed professionals who are generally not part of collective bargaining units.		
102-42 Identifying and selecting stakeholders	Materiality	8
102-43 Approach to stakeholder engagement	Materiality	8
102-44 Key topics and concerns raised	Materiality	8
<b>REPORTING PRACTICE</b>		
102-45 Entities included in the consolidated financial statements	Appendix	109
102-46 Defining report content and topic boundaries	Materiality About this Report	6 101
102-47 List of material topics	Materiality	7
102-48 Restatements of information	Materiality	6, 7
102-49 Changes in reporting	Materiality	6, 7
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102-51 Date of most recent report	About this Report	101
102-52 Reporting cycle	About this Report	101
102-53 Contact point for questions regarding the report	About this Report	102
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102-55 GRI content index	About this Report	102
102-56 External assurance	About this Report	102

#### GRI 103 - MANAGEMENT APPROACH

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103-2 The management approach and its components	Materiality Pillar 1 - Projects Pillar 2 - People Pillar 3 - Practices Pillar 4 - Partnerships	9 17, 20, 23, 26, 33, 35, 44, 47 56, 58, 60, 62-66, 72 81, 85, 87, 88, 89, 90 92, 93, 95, 98, 99



DISCLOSURE NUMBER AND TITLE		SECTION	PAGE(S)
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305-5	Reduction of GHG emissions		85-86
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GRI 403 - OCCUPATIONAL HEALTH & SAFETY			
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403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities		58-59
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404-2	Programs for upgrading employee skills and transition assistance programs		62, 66-69, 71
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GRI 405 - DIVERSITY AND EQUAL OPPORTUNITY			
405-1	Diversity of governance bodies and employees	Pillar 2 - People Appendix	73-74 109, 126
GRI 413 - LOCAL COMMUNITIES			
413-1	Operations with local community engagement, impact assessments, and development programs	Pillar 2 - People Pillar 3 - Practices Pillar 4 - Partnerships	63-65, 67-68, 74 83 93-97
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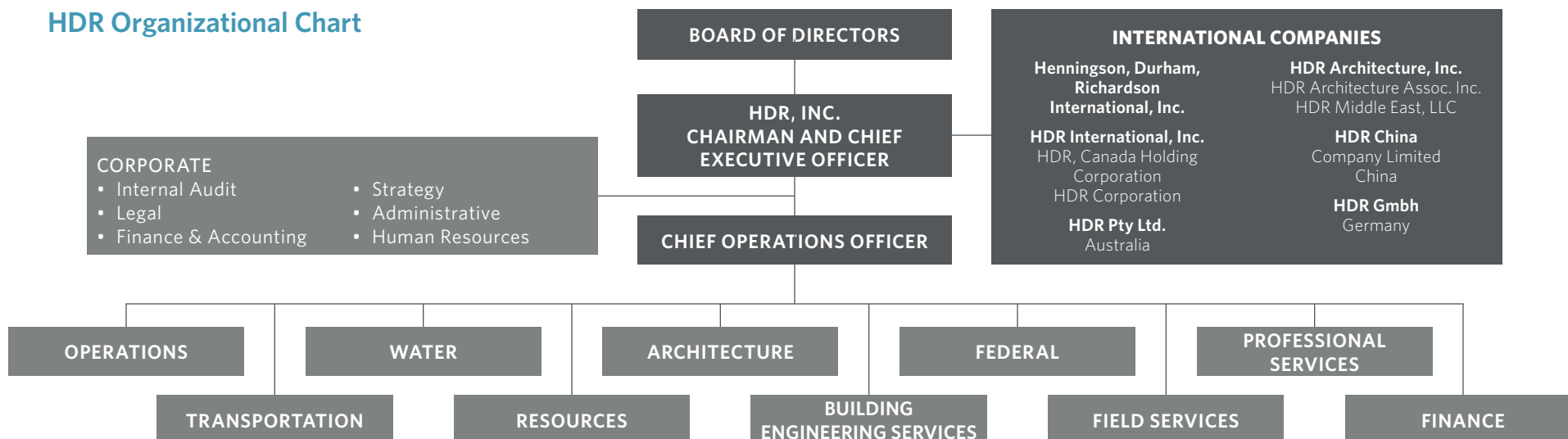


# APPENDIX

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TABLE 2:	Awards & Recognition – Office
TABLE 3:	Awards & Recognition – Rankings
TABLE 4:	Awards & Recognition – Project
TABLE 5:	Commitments and Partnerships
TABLE 6:	Employees by Gender
TABLE 7:	Employees by Age Group
TABLE 8:	Employees by Minority Group
TABLE 9:	Employees by Region



## HDR Organizational Chart



## HDR'S BOARD OF DIRECTORS

### Eric L. Keen, PE

#### Chairman and Chief Executive Officer, HDR

Eric is responsible for the leadership and strategic growth of the company. He previously served as president and chief operating officer and engineering company president, as well as transportation director. Eric has more than 40 years of experience in engineering and planning.

### Timothy R. Crockett

#### Chief Operating Officer, HDR

Tim reviews and implements goals and objectives for the company and coordinates effective and efficient resource allocation to implement the business plan. Previously, Tim was HDR's global director of operations. As the operations leader, he drove our growth, profitability and project delivery. Tim has more than 31 years of industry experience.

### David F. LeCureux

#### Vice Chairman, Chief Strategy Officer, HDR

David leads several of HDR's corporate groups including strategic planning, corporate relations, corporate marketing services and corporate communications. He implements and drives the overall corporate strategy that shapes HDR's global services and supports the firm's employee ownership model. David has over 25 years of experience with domestic and global operations and project work.

### Laurie L. Roden

#### Field Services Group President, HDR

Laurie serves as the field services group president, overseeing several operating companies that focus on environmental, construction and field services work within our engineering practice. She has more than 38 years of experience in the engineering industry.

### Doug S. Wignall, FAIA, RAIC, LEED AP

#### Architecture President, HDR

Doug is responsible for guiding strategic growth in our healthcare, science and technology, civic, justice and higher education markets. With us for more than two decades, he has been instrumental in our expansion into new market segments worldwide and championing the evolution of our "nontraditional" architectural services to keep pace with the challenging and diverse architectural field.

### Mary E. Peters

#### Former Secretary, United States Department of Transportation

Mary served in this role from 2006 to 2009. Before that, she was administrator of the Federal Highway Administration and director of the Arizona Department of Transportation. Mary is a respected national expert on transportation policy and public-private partnerships.

### Richard R. Bell, PE

#### Former Chairman and Chief Executive Officer, HDR

Richard is the former CEO and Chairman of HDR, Inc. Employed with us from 1974 to his retirement in December 2011, he served as our CEO beginning in 1996, when he led the company buyback from foreign ownership.

### John K. Wilson

#### Former President, Durham Resources, LLC

John is the former president of Durham Resources, LLC, a privately held financial management company. He has an extensive background in finance and accounting, and has served on the advisory boards of U.S. Bank NA Omaha and Duncan Aviation. He is also a board member of MDU Resources Group.

### Helvi Sandvik

#### President, Kidways, LLC

Helvi is the president of Kidways, LLC, a management consulting firm providing strategic planning, management consulting and executive and board coaching. She has worked in various leadership roles for 20 years, including president for NANA Development Corporation and Deputy Commissioner of the Alaska Department of Transportation and Public Facilities, Director of Statewide Aviation, Leasing and Airport Administration, and as an Alaska Northern Region Transportation Planner.

# APPENDIX

## 2019 Awards & Recognition

TABLE 1: 2019 AWARDS & RECOGNITION—COMPANY

ORGANIZATION	AWARD
Alliance for Workplace Excellence	• EcoLeadership Award
	• Workplace Excellence Seal of Approval
	• Health and Wellness Seal of Approval
Society of American Military Engineers (SAME)	• J.W. Morris Sustaining Member Award
WELLCOM	• Wellcom I.C.E. (innovate, Connect, Engage) Award

TABLE 2: 2019 AWARDS & RECOGNITION—OFFICE

OFFICE LOCATION	RECOGNITION
Portland, OR	• Gold-level Certification, Sustainability at Work Program
	• Champion of Diversity, Business Diversity Institute

TABLE 3: 2019 AWARDS & RECOGNITION—RANKINGS

PUBLICATION	RANKINGS
<b>Engineering News-Record</b>	<ul style="list-style-type: none"> <li>• <b>No. 7 – Top 100 in Green Design Firms</b> <ul style="list-style-type: none"> <li>- No. 1 – Top 5 in Health Care Green Design</li> </ul> </li> <li>• <b>No. 11 – Top 200 Environmental Firms</b> <ul style="list-style-type: none"> <li>- No. 4 – Top 10 Environmental Science</li> <li>- No. 6 – Firms in CM/PM Work</li> <li>- No. 8 – Firms in Air Quality/Clean Energy</li> <li>- No. 9 – Top 10 in Engineering/Design Work</li> <li>- No. 10 – Top 10 Consulting/Studies</li> <li>- No. 15 – Top 20 Wastewater Treatment</li> </ul> </li> <li>• <b>No. 11 – Top 20 in Power</b> <ul style="list-style-type: none"> <li>- No. 3 – Top 10 in Hydro Plants</li> <li>- No. 7 – Top 10 in Solar Power</li> </ul> </li> </ul>
<b>Architect</b>	<ul style="list-style-type: none"> <li>• <b>No. 7 – Architect 50</b> <ul style="list-style-type: none"> <li>- No. 4 – Sustainability</li> </ul> </li> </ul>
<b>Forbes</b>	<ul style="list-style-type: none"> <li>• <b>No. 35 – Forbes List of America's Best Large Employers</b></li> </ul>
<b>National Center for Employee Ownership</b>	<ul style="list-style-type: none"> <li>• <b>The Employee Ownership 100</b> <ul style="list-style-type: none"> <li>- No. 10 – America's Largest Majority Employee-Owned Companies</li> </ul> </li> </ul>





## APPENDIX

### 2019 Awards & Recognition

TABLE 4: 2019 AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
<b>13<sup>th</sup> Street and Kootenai Streets Traffic Calming Design</b> Boise, ID, USA	<ul style="list-style-type: none"> <li>Excellence in Transportation Award, Idaho Transportation Department</li> </ul>
 <b>Alameda Creek Diversion Dam Fish Passage</b> Santa Rosa, CA, USA	<ul style="list-style-type: none"> <li>Project of the Year Award, Environment Category, American Public Works Association, Northern California Chapter</li> </ul>
 <b>Aquifer Storage and Recovery Program Services</b> Hastings, NE, USA	<ul style="list-style-type: none"> <li>Project of the Year Award, Environmental Category (Over \$2.5 million), American Public Works Association, Nebraska Chapter</li> </ul>
 <b>Bayonne Bridge Navigational Clearance Project</b> New York, NY, and Bayonne, NJ, USA	<ul style="list-style-type: none"> <li>Envision Silver Verification</li> <li>Award of Excellence, American Segmental Bridge Institute</li> <li>No. 1 Bridge, Roads &amp; Bridges Magazine</li> <li>Project of the Year Award, Over \$5 Million Category, American Society of Highway Engineers, New Jersey Chapter</li> </ul>
 <b>Beechwood Boulevard (Greenfield) Bridge Replacement</b> Pittsburgh, PA, USA	<ul style="list-style-type: none"> <li>Figg Award, International Bridge Conference, Engineers Society of Western Pennsylvania</li> <li>Globe Award, American Road &amp; Transportation Builders Association</li> </ul>
<b>Bellevue University Science Labs</b> Bellevue, NE, USA	<ul style="list-style-type: none"> <li>Distinguished Award, Interiors Category, American Institute of Architects Central States</li> </ul>
<b>Betasso Water Treatment Facility</b> Boulder, CO, USA	<ul style="list-style-type: none"> <li>Excellence in Concrete Award, American Concrete Institute Rocky Mountain Chapter</li> </ul>
<b>Big Stone South to Ellendale 345Kv Power Transmission Line</b> Milbank, SD, to Ellendale, ND, USA	<ul style="list-style-type: none"> <li>Merit Award, Energy/Industrial Category, Engineering News-Record Mountain States</li> </ul>
<b>Brendan Iribe Center for Computer Science and Engineering</b> College Park, MD, USA	<ul style="list-style-type: none"> <li>Craftsmanship Award, Doors &amp; Windows (Exterior Glass), Washington Building Congress</li> <li>Merit Award, American Institute of Architects, New Jersey Chapter</li> <li>Merit Award, American Institute of Architects, Virginia Chapter</li> </ul>
<b>Bridge Street Pump Station</b> Hampton, VA, USA	<ul style="list-style-type: none"> <li>Grand Award, Engineering Excellence Awards, American Council of Engineering Companies of Virginia</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
 <b>Bristol-Myers Squibb Module B Office Renovation</b> Lawrenceville, NJ, USA	<ul style="list-style-type: none"> <li>LEED Gold Certification, Commercial Interiors, ID+C (2009)</li> </ul>

A wider-than-normal sidewalk and designated bike paths improved upon the existing bridge cross section, making the new bridge more welcoming to state-of-the-art, multimodal transportation.

**BEECHWOOD BOULEVARD (GREENFIELD) BRIDGE REPLACEMENT, PITTSBURGH, PA, USA**



## APPENDIX

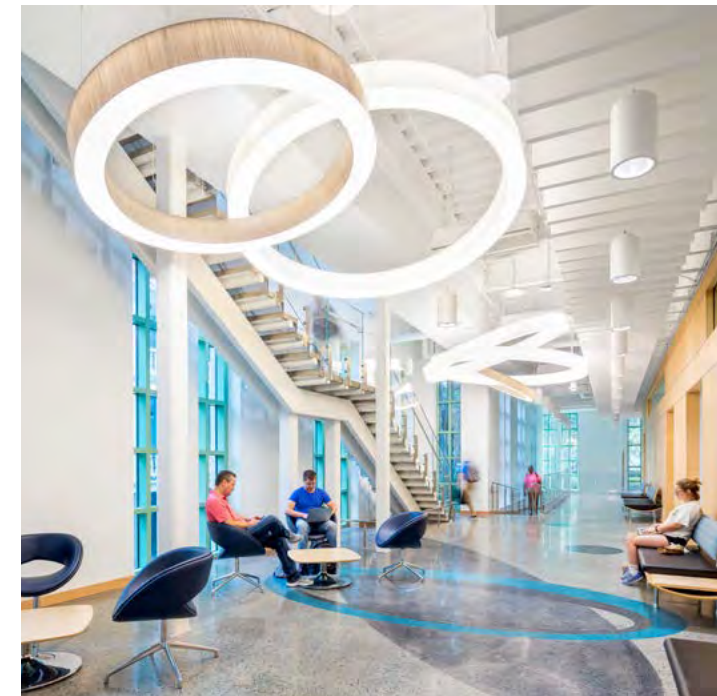
### 2019 Awards & Recognition

TABLE 4: 2019 AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
 <b>Cedar River Flood Control System at New Bohemia/Sinclair Neighborhood</b> Cedar Rapids, IA, USA	<ul style="list-style-type: none"> <li>Envision Bronze Verification</li> </ul>
 <b>Chelan Transmission System</b> Wenatchee, WA, USA	<ul style="list-style-type: none"> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Silver Award, Engineering Excellence Awards, American Council of Engineering Companies of Washington</li> </ul>
 <b>Cincinnati's Interstate-71/MLK Interchange Design-Build</b> Cincinnati, OH, USA	<ul style="list-style-type: none"> <li>America's Transportation Award, Quality of Life/Community Development, Medium Category, American Association of State Highway and Transportation Officials</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Outstanding Achievement Award, Engineering Excellence Awards, American Council of Engineering Companies of Ohio</li> </ul>
<b>Coldiron Watkins Water Treatment Plant</b> Danville, KY, USA	<ul style="list-style-type: none"> <li>Exceptional Project Award, U.S. Environmental Protection Agency</li> </ul>
 <b>College of Charleston Rita Hollings Science Center</b> Charleston, SC, USA (Green Globes Certified 2018 – 2 Green Globes)	<ul style="list-style-type: none"> <li>Merit Award, Preservation and Adaptive Reuse, American Institute of Architects Charleston</li> </ul>
<b>Columbus 3rd and 18th Avenue Viaducts Grade Separation</b> Columbus, NE, USA	<ul style="list-style-type: none"> <li>Concrete Paving Award, Local Project, Less Than 30,000 Square Yards Category, Nebraska Concrete Paving Association</li> </ul>
<b>Columbus Rapelje – Nye Auto 115 KV Transmission Line</b> Rapelje – Nye, MT, USA	<ul style="list-style-type: none"> <li>Excellence Award, Engineering Excellence Awards, American Council of Engineering Companies of Montana</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
 <b>Command and Control Headquarters Facility (ECBMC)</b> Fort Meade, MD	<ul style="list-style-type: none"> <li>LEED Silver Certification, New Construction, BD&amp;C (2009)</li> </ul>
<b>Conduit No. 18 Replacement</b> Colorado Springs, CO, USA	<ul style="list-style-type: none"> <li>Honor Award, Engineering Excellence Awards, American Council of Engineering Companies of Colorado</li> </ul>
<b>Crawford Canyon Road Drainage Improvements and Reconstruction</b> Orange County, CA, USA	<ul style="list-style-type: none"> <li>Project Achievement Award, Outstanding Project Awards, American Society of Civil Engineers, Orange County Chapter</li> </ul>
 <b>Creighton University Pedestrian Bridge</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Merit Award, Engineering Excellence Awards, American Council of Engineering Companies of Nebraska</li> </ul>

Working within an existing building envelope, the design team worked to identify areas where they could improve utilization and usability of space while supporting changes in teaching pedagogy.



COLLEGE OF CHARLESTON RITA HOLLINGS  
SCIENCE CENTER, CHARLESTON, SC, USA



## APPENDIX

### 2019 Awards & Recognition

TABLE 4: 2019 AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
 <b>Defense Logistics Agency Worldwide Area Development Plans Program</b> Europe, Middle East, Far East, USA	<ul style="list-style-type: none"> <li>Honor Award, Outstanding Federal Planning Program Category, American Planning Association's Federal Planning Division</li> </ul>
 <b>Downtown Reimagined</b> Brampton, ON, Canada	<ul style="list-style-type: none"> <li>Brampton Urban Design Award, Project Marketing Category, Brampton Urban Design Awards</li> <li>Brampton Urban Design Award, Concept or Plan Category, Brampton Urban Design Awards</li> </ul>
 <b>Dubuque Solar Project</b> Dubuque, IA, USA (Envision Platinum 2018)	<ul style="list-style-type: none"> <li>Innovation in Sustainable Engineering Award Finalist, Outstanding Projects and Leaders Awards, American Society of Civil Engineers</li> </ul>
 <b>East Midtown Transportation Planning Study</b> New York, NY, USA	<ul style="list-style-type: none"> <li>Platinum Award, Engineering Excellence Awards, American Council of Engineering Companies of New York</li> </ul>
<b>El Camino Women's Hospital Expansion</b> Mountain View, CA, USA	<ul style="list-style-type: none"> <li>LEED Silver Certification, Commercial Interiors, ID+C (v4)</li> </ul>
 <b>Fish Passageways Program</b> WA, USA	<ul style="list-style-type: none"> <li>Project of the Year Award, Environment (Less than \$5 million category), American Public Works Association, Washington State Chapter</li> <li>Project of the Year Award, Environment (Less than \$5 million category), American Public Works Association</li> </ul>
 <b>Flanagan Lake Flood Control Reservoir and Recreation Area</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Honor Award, Engineering Excellence Awards, American Council of Engineering Companies of Nebraska</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
<b>Fred &amp; Pamela Buffett Cancer Center</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Grand Award, Engineering Excellence Awards, American Council of Engineering Companies of Nebraska</li> <li>Honor Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
<b>Freeport Septic Conversion Project</b> Sacramento, CA, USA	<ul style="list-style-type: none"> <li>Project of the Year, Urban or Land Development Category, American Society of Civil Engineers, Sacramento Section</li> </ul>

The project did more than transform the space aesthetically — it created a new, sustainable ecosystem. The 475 acres of green space and nearly 100 acres of wetlands offer a home for migratory birds and fish.

**FLANAGAN LAKE FLOOD CONTROL RESERVOIR AND RECREATION AREA, OMAHA, NE, USA**





## APPENDIX

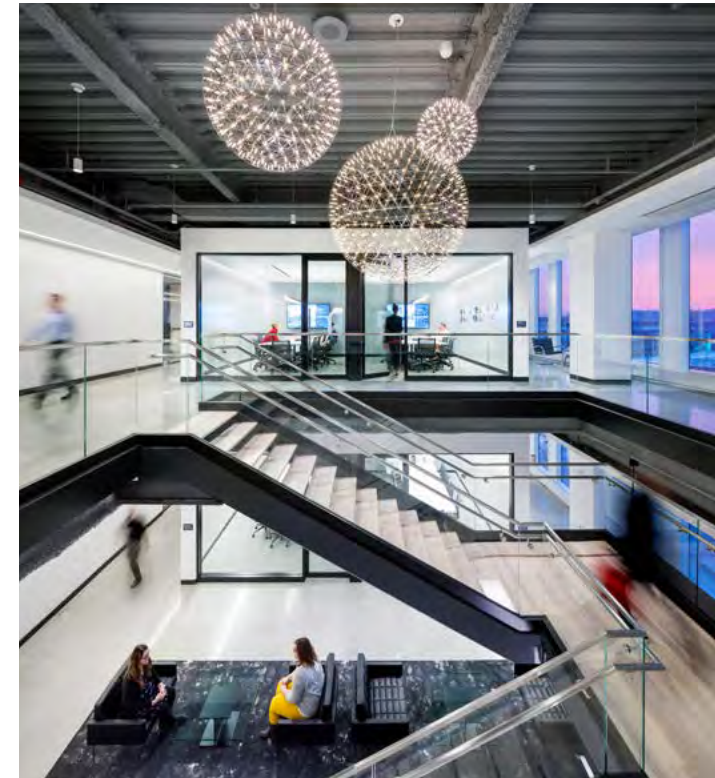
### 2019 Awards & Recognition

TABLE 4: 2019 AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
<b>Governor Mario M. Cuomo Bridge (Tappan Zee Bridge Replacement)</b> Westchester & Rockland Counties, NY, USA	<ul style="list-style-type: none"> <li>Ambassador Award, Canadian Consulting Engineering Magazine/Association of Consulting Engineering Companies, Canada</li> <li>Award of Excellence, Canadian Consulting Engineering Magazine/Association of Consulting Engineering Companies, Canada</li> <li>Award of Excellence, Canadian Consulting Engineering Magazine/Association of Consulting Engineering Companies – British Columbia, Canada</li> <li>Design-Build Project of the Year Award, American Society of Civil Engineers, Metropolitan Section</li> <li>Diamond Award, Engineering Excellence Awards, American Council of Engineering Companies of New York</li> <li>Grand Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Merit Award, International Federation of Consulting Engineers</li> <li>Transportation Award: Best Special Solution, PCI Design Awards, Precast/Prestressed Concrete Institute</li> </ul>
<b>HDR Global Headquarters</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>LEED Gold Certification, New Construction, BD&amp;C (v4)</li> <li>Fitwell Certified - 3 stars</li> <li>Award of Outstanding Achievement, American Concrete Institute, Nebraska Chapter</li> <li>Inhouse Design Award for Environmental Graphics, Graphic Design USA</li> <li>Silver Award in Environmental Graphics, Creativity International Awards</li> </ul>
<b>Henderson and Genesee CSO Reduction</b> Seattle, WA, USA	<ul style="list-style-type: none"> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Project Excellence Award, Water Environment Federation</li> <li>Silver Award, Engineering Excellence Awards, American Council of Engineering Companies of Washington</li> </ul>
<b>Historic Fourth Ward Park</b> Atlanta, GA, USA (Envision Gold 2016)	<ul style="list-style-type: none"> <li>Honor Award, Research Category, American Society of Landscape Architects, Georgia Chapter</li> </ul>
<b>Ho-Chunk Village 2.0 Master Plan</b> Winnebago, NE, USA	<ul style="list-style-type: none"> <li>Urban Design Award, Annual Chapter Awards, American Planning Association, Nebraska Chapter</li> </ul>
<b>Holland Energy Park</b> Holland, MI, USA (Envision Platinum 2016)	<ul style="list-style-type: none"> <li>Environmental Excellence Award, Innovative Technology Category</li> <li>National Association of Environmental Professionals</li> <li>Honor Award, American Society of Landscape Architects, Illinois Chapter</li> <li>Innovation in Sustainable Engineering Award, American Society of Civil Engineers</li> </ul>

Awarded a LEED New Construction v4 Gold-level rating, design strategies adopted by the team include a chilled beam system for increased energy reduction, improved comfort, decreased floor-to-floor height, fewer air handling units, and less shaft space.

HDR GLOBAL HEADQUARTERS, OMAHA, NE, USA



## APPENDIX

### 2019 Awards & Recognition

TABLE 4: 2019 AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
<b>Houston Community College - Coleman College</b> Houston, TX, USA	<ul style="list-style-type: none"> <li>LEED Silver Certification, New Construction, BD&amp;C (2009)</li> </ul>
<b>Hypochlorite Conversion and Continuous Recycled Water Production Facilities</b> Sunnyvale, CA, USA	<ul style="list-style-type: none"> <li>Honor Award, Environment Category, American Public Works Association, Silicon Valley Chapter</li> </ul>
<b>I-84 Overpass and Cloverdale Road Rebuild</b> Boise, ID, USA	<ul style="list-style-type: none"> <li>Excellence in Transportation Award – Construction, Idaho Transportation Department</li> <li>Excellence in Transportation Award – Design, Idaho Transportation Department</li> </ul>
<b>Infinity Loop Rail Design</b>	<ul style="list-style-type: none"> <li>Grand Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Honor Award, Engineering Excellence Awards, American Council of Engineering Companies of Oregon</li> </ul>
<b>Interstate 70 Mountain Corridor Eastbound Express Lane</b> Idaho Springs, CO, USA	<ul style="list-style-type: none"> <li>Excellence Award, Engineering Excellence Awards, American Council of Engineering Companies of Colorado</li> <li>Honor Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
<b>Kaneko Entrance Addition</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Engineering Excellence Awards, Merit Award, Category C, American Council of Engineering Companies of Nebraska</li> </ul>
<b>Keep Omaha Moving: 168th Street-West Dodge Road to West Maple Road</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Project of the Year Award, Environmental Category (Over \$2.5 million), American Public Works Association, Nebraska Chapter</li> </ul>
<b>Kingston Frontenac Public Library</b> Kingston, ON, Canada	<ul style="list-style-type: none"> <li>George Muirhead Heritage Award, Winner, Downtown Kingston!</li> </ul>
<b>KP Chino Grand</b> Chino, CA, USA	<ul style="list-style-type: none"> <li>LEED Gold Certification, New Construction, BD&amp;C (2009)</li> </ul>
<b>Lackawanna Energy Center</b> Jessup, PA, USA	<ul style="list-style-type: none"> <li>Best Project, Energy/Industrial, Engineering News-Record MidAtlantic</li> <li>Excellence in Safety, Best of the Best Projects, Engineering News-Record</li> </ul>
<b>LADWP West Los Angeles Power Yard</b> Los Angeles, CA, USA	<ul style="list-style-type: none"> <li>Merit Award, Unbuilt, Southern California Development Forum Merit Award, Committee on the Environment NEXT, American Institute of Architects Los Angeles</li> </ul>
<b>Lakeshore Connecting Communities Transportation Plan</b> Mississauga, ON, Canada	<ul style="list-style-type: none"> <li>Project of the Year Award, Institute of Transportation Engineers Toronto Section</li> </ul>
<b>Larimer County Solid Waste Infrastructure Master Plan &amp; Design</b> Larimer County, CO, USA	<ul style="list-style-type: none"> <li>Outstanding Community or Government Program Award, National Recycling Coalition</li> </ul>

We are collaborating with LADWP, using a net-zero approach to design the West Los Angeles District Yard and the Hoover Street District Power Yard, which are intended to create a model for all future yards and to demonstrate to the public that there is a viable pathway to a green future.

**LADWP WEST LOS ANGELES POWER YARD,**  
LOS ANGELES, CA, USA



## APPENDIX

### 2019 Awards & Recognition

TABLE 4: 2019 AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
<b>Leslie's Healing Garden, Fred and Pamela Buffett Cancer Center</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Award of Excellence, Design (Built) Category, American Society of Landscape Architects, Nebraska/Dakotas Chapter</li> </ul>
<b>Lincoln AV/CV Microtransit Study</b> Lincoln, NE, USA	<ul style="list-style-type: none"> <li>Merit Award, Engineering Excellence Awards, American Council of Engineering Companies of Nebraska</li> </ul>
<b>Major Mackenzie Culvert Replacement Detail Design</b> Vaughan, ON, Canada	<ul style="list-style-type: none"> <li>Project of the Year Award, Disaster, Emergency, Construction, Repair Category, Ontario Public Works Association</li> </ul>
<b>Marc Basnight Bridge (Bonner Bridge Replacement)</b> Dare County, NC, USA	<ul style="list-style-type: none"> <li>Award of Excellence, American Segmental Bridge Institute</li> <li>Best Project, Highway/Bridge, Engineering News-Record Southeast</li> <li>Globe Award, American Road &amp; Transportation Builders Association</li> <li>No. 2 Bridge, <i>Roads &amp; Bridges Magazine</i></li> <li>Outstanding Project Award, Deep Foundations Institute</li> <li>Project of the Year Award, American Society of Civil Engineers North Carolina Section</li> </ul>
<b>Marshalltown Generating Station</b> Marshalltown, IA, USA ( <i>Envision Platinum 2017</i> )	<ul style="list-style-type: none"> <li>Innovation in Sustainable Engineering Award Finalist, Outstanding Projects and Leaders Awards, American Society of Civil Engineers</li> </ul>
<b>MBTA Government Center Station</b> Boston, MA, USA	<ul style="list-style-type: none"> <li>Accessible Design Award, Design Awards, Boston Society of Architects Access Committee; Massachusetts Architectural Access Board</li> </ul>
<b>Minne Lusa Pump Station Improvements</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Honor Award, Engineering Excellence Awards, American Council of Engineering Companies of Nebraska</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
<b>Montevina Water Treatment Plant Design-Build</b> Los Gatos, CA, USA	<ul style="list-style-type: none"> <li>Award of Merit, Water/Wastewater Category, Design-Build Institute of America</li> </ul>
<b>Murray Combined Sewer Overflow Wet Weather Facility</b> Seattle, WA, USA	<ul style="list-style-type: none"> <li>Honor Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Silver Award, Engineering Excellence Awards, American Council of Engineering Companies of Washington</li> </ul>
<b>NE Alpine Avenue Reconstruction</b> McMinnville, OR, USA	<ul style="list-style-type: none"> <li>Grand Award, Engineering Excellence Awards, American Council of Engineering Companies of Oregon</li> <li>Honor Award, Transportation Category, American Society of Landscape Architects, Oregon Chapter</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>

Marshalltown Generating Station is one of the most sustainable and affordable power plants in Iowa's history. It's designed to integrate with regional wind resources, and with a ramp rate of 50 megawatts per minute the station can quickly adjust to variable wind conditions.

**MARSHALLTOWN GENERATING STATION,**  
MARSHALLTOWN, IA, USA





## APPENDIX

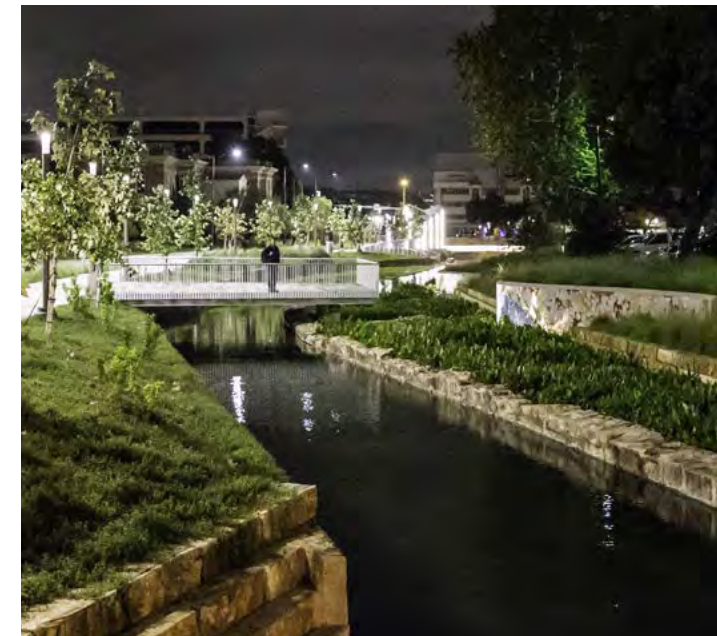
### 2019 Awards & Recognition

TABLE 4: AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
 <b>New York City Subway Enhanced Station Initiative</b> New York, NY, USA	<ul style="list-style-type: none"> <li>Bronze Award, Preservation Architecture Category, American Institute of Architects, Tri-State</li> </ul>
 <b>Old Tampa Bay Water Quality Improvement Project</b> Tampa, FL, USA	<ul style="list-style-type: none"> <li>Environmental Excellence Award, Federal Highway Administration</li> </ul>
 <b>Orange County Sanitation District Headquarters Complex</b> Fountain Valley, CA, USA	<ul style="list-style-type: none"> <li>Merit Award, Committee on the Environment NEXT, American Institute of Architects Los Angeles</li> </ul>
 <b>Procter &amp; Gamble Mason Business Center Expansion 1</b> Manson, OH	<ul style="list-style-type: none"> <li>LEED Silver Certification, New Construction, NC (2009)</li> </ul>
<b>Project Neon</b> Las Vegas, NV, USA	<ul style="list-style-type: none"> <li>No. 1 Road, Top 10 Roads, <i>Roads and Bridges Magazine</i></li> </ul>
<b>Queen's University John Deutsch University Centre</b> Kingston, ON, Canada	<ul style="list-style-type: none"> <li>Award of Excellence, Unbuilt, Canadian Architect</li> </ul>
<b>Radio Park</b> Calgary, AB, Canada	<ul style="list-style-type: none"> <li>Honor Award, Analysis &amp; Planning Category, American Society of Landscape Architects, Georgia Chapter</li> </ul>
 <b>Rodney Cook Sr. Park at Historic Vine City</b> Atlanta, GA, USA	<ul style="list-style-type: none"> <li>Award of Excellence, Analysis &amp; Planning Category, American Society of Landscape Architects, Georgia Chapter</li> </ul>
<b>Ross Fording Road Bridge Rehabilitation</b> Sadsbury, PA, USA	<ul style="list-style-type: none"> <li>Preservation Achievement Grand Jury Award, Preservation Alliance for Greater Philadelphia</li> </ul>
 <b>Sabula-Savanna Mobility Project</b> Sabula, IA, to Savanna, IL, USA	<ul style="list-style-type: none"> <li>Engineering Achievement Award, Engineering Excellence Awards, American Council of Engineering Companies of Iowa</li> </ul>
<b>Sacramento Regional Effluent System Reliability Project</b> Sacramento, CA, USA	<ul style="list-style-type: none"> <li>Outstanding Small Project of the Year, American Society of Civil Engineers Sacramento Section</li> <li>Project of the Year Award, Environment (\$2-\$10 million category), American Public Works Association, Sacramento Chapter</li> </ul>
 <b>San Pedro Creek Improvements</b> San Antonio, TX, USA	<ul style="list-style-type: none"> <li>Gold Award, Engineering Excellence Awards, American Council of Engineering Companies of Texas</li> <li>Grand Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Project of the Year Award, Environment (\$25-\$75 million category), American Public Works Association</li> </ul>
 <b>Shaw AFB Replacement Medical Clinic 1048</b> Sumter, SC, USA	<ul style="list-style-type: none"> <li>LEED Silver Certification, New Construction, BD&amp;C (2009)</li> </ul>

By deepening and widening the existing channel and replacing more than a half-dozen street bridges, the project will contain the 100-year floodplain within the San Pedro Creek banks. It's also expected to spur a \$1.5 billion economic impact, 150 percent increase in new property value and \$227 million in tax revenues.

**SAN PEDRO CREEK IMPROVEMENTS,**  
SAN ANTONIO, TX, USA



## APPENDIX

### 2019 Awards & Recognition

TABLE 4: AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
<b>Shirley Ryan AbilityLab</b> Chicago, IL, USA	<ul style="list-style-type: none"> <li>Honor Award, Interior Architecture Category, American Institute of Architects</li> <li>Merit Award, General Design, Constructed Projects Category, American Society of Landscape Architects, Illinois Chapter</li> <li>Winner, S-Lab Award, Health &amp; Life Science Building Category, United Kingdom Science Park Association</li> </ul>
<b>Southern Ohio Veterans Memorial Highway State Route 823 Independent Quality Firm</b> Portsmouth, OH, USA	<ul style="list-style-type: none"> <li>America's Transportation Award, Quality of Life/Community Development, American Association of State Highway and Transportation Officials</li> <li>Best Project, Highways/Bridges, Engineering News-Record Midwest</li> </ul>
<b>Spero Academy</b> Minneapolis, MN, USA	<ul style="list-style-type: none"> <li>Inspiration Award, Winner, Contract Magazine</li> </ul>
<b>Springfield Union Station</b> Springfield, MA, USA	<ul style="list-style-type: none"> <li>Historic Renovation Award, Metamorphosis Awards, Retrofit Magazine</li> </ul>
<b>SR 520 Bridge Replacement and HOV Program GEC</b> Seattle and Bellevue, WA, USA	<ul style="list-style-type: none"> <li>Gold Award, Engineering Excellence Awards, American Council of Engineering Companies of Washington</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
<b>St. Croix Crossing</b> Oak Park Heights, MN, and St. Joseph, WI, USA	<ul style="list-style-type: none"> <li>Award of Excellence, American Segmental Bridge Institute</li> </ul>
<b>Strauss Performing Arts Center Addition and Renovation</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Excellence in Architecture, People's Choice Award, American Institute of Architects, Nebraska Chapter</li> <li>Excellence in Architecture, Honor Award, American Institute of Architects, Nebraska Chapter</li> <li>Excellence in Masonry, Honor Award, American Institute of Architects, Nebraska Chapter</li> </ul>
<b>The 428</b> St. Paul, MN, USA (WELL Certified 2018)	<ul style="list-style-type: none"> <li>Adaptive Reuse Award, Metamorphosis Awards, <i>Retrofit Magazine</i></li> <li>Bronze Award, Reconstruction Awards, <i>Building Design &amp; Construction Magazine</i></li> <li>Building Health Leadership Award, Winner, U.S. Green Building Council</li> <li>Top Projects of 2018, Winner, <i>Finance &amp; Commerce</i></li> </ul>
<b>The Jewell</b> Omaha, NE, USA	<ul style="list-style-type: none"> <li>Excellence in Architectural Detail, Honor Award, American Institute of Architects, Nebraska Chapter</li> </ul>
<b>U.S. 20 Expansion Project</b> Woodbury County, IA, USA	<ul style="list-style-type: none"> <li>Environmental Excellence Award, Federal Highway Administration</li> </ul>

HDR collaborated with a team of specialists to develop planning studies, a comprehensive redevelopment plan and a thoughtful design to preserve the character of the building's past grandeur, while creating a new, modern transportation and retail hub—with the end objective of producing a practical, self-sustaining, restored Union Station.






**SPRINGFIELD UNION STATION**, SPRINGFIELD, MA, USA



## APPENDIX

### 2019 Awards & Recognition

TABLE 4: AWARDS & RECOGNITION—PROJECT

PROJECT	AWARDS & RECOGNITION
 <b>University of Sydney Life, Earth &amp; Environmental Sciences</b> Sydney, NSW Australia	<ul style="list-style-type: none"> <li>Commendation, Learning Environments (Australasia), NSW Chapter</li> <li>NSW Architecture Awards, Commendation, Australian Institute of Architects, New South Wales Chapter</li> </ul>
 <b>University of Texas Southwest Medical Center Roof Garden</b> Dallas, TX, USA	<ul style="list-style-type: none"> <li>Honor Award, American Society of Landscape Architects, Texas Chapter</li> </ul>
<b>Water Reclamation Facility Expansion and Recharge Facility Design</b> Town of Marana, AZ, USA	<ul style="list-style-type: none"> <li>Project of the Year Award, Small Cities/Rural Communities Category, American Public Works Association, Southern Arizona Branch</li> </ul>
<b>West Central Nebraska Traffic Incident Management Program</b> West Central region, NE, USA	<ul style="list-style-type: none"> <li>Merit Award, Engineering Excellence Awards, American Council of Engineering Companies of Nebraska</li> </ul>
 <b>West Lake Corridor</b> Hammond to Dyer, IN, USA	<ul style="list-style-type: none"> <li>Outstanding Achievement Award for Excellence in Environmental Documentation, Environmental Impact Statement Category, Federal Transit Administration</li> </ul>
 <b>West Vancouver Freight Access Program Management</b> Vancouver, WA, USA	<ul style="list-style-type: none"> <li>Grand Award, Engineering Excellence Awards, American Council of Engineering Companies of Oregon</li> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> </ul>
 <b>Yesler Way Bridge Reconstruction</b> Seattle, WA, USA	<ul style="list-style-type: none"> <li>National Recognition Award, Engineering Excellence Awards, American Council of Engineering Companies</li> <li>Project of the Year Award, Historical Restoration/Preservation (\$5-\$25 million category), American Public Works Association of Washington</li> <li>Project of the Year Award, Historical Restoration/Preservation (\$5-\$25 million category), American Public Works Association</li> <li>Silver Award, Engineering Excellence Awards, American Council of Engineering Companies of Washington</li> </ul>

We balanced historic preservation goals while providing a safer, more accessible and resilient bridge that was less at risk from earthquakes and the impact of vehicle strikes.

**YESLER WAY BRIDGE RECONSTRUCTION,**  
SEATTLE, WA, USA





## APPENDIX

### Commitments & Partnerships—Community and Stakeholder Engagement

TABLE 5: COMMITMENTS & PARTNERSHIPS

ORGANIZATION	THEIR MISSION	OUR COMMITMENT	WEBSITE
<b>American Association of Port Authorities</b>	Promote the common interests of the port community, and provide critical industry leadership on security, trade, transportation, infrastructure, environmental and other issues related to port development and operations	We are an Industry Solution Provider (ISP) Member.	<a href="http://aapa-ports.org">aapa-ports.org</a>
<b>American Public Transportation Association (APTA)</b>	Strengthen and improve public transportation through advocacy, innovation and information sharing to ensure that public transportation is available and accessible for all Americans.	We were named a silver-level signatory and are currently co-chairing the Sustainability Committee.	<a href="http://apta.com">apta.com</a>
<b>American Public Works Association</b>	Unite the diverse water community to advance public health, safety, the economy, and the environment.	We are a Prestige corporate member.	<a href="http://apwa.net">apwa.net</a>
<b>American Shore and Beach Preservation Association</b>	Advocate for healthy, sustainable and resilient coastal systems to sustain four interconnected core values provided by shores and beaches: community protection, a strong economy, ecologic health and recreation.	We are a corporate member.	<a href="http://asbpa.org">asbpa.org</a>
<b>American Society of Civil Engineers (ASCE)</b>	Achieve a more sustainable and natural built environment by helping civil engineers fully understand, embrace and apply the principles and practices of sustainability to their work.	We have been involved in the organization for many years and hold leadership positions on various committees.	<a href="http://asce.org">asce.org</a>
<b>American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)</b>	Advance the arts and sciences of heating, ventilating, air conditioning and refrigerating to serve humanity and promote a sustainable world.	As members of the technical committee, we assisted in the development of Standard 189.2: Design, Construction and Operation of High-Performance Green Health Care Facilities, which prescribes the procedures, methods and documentation requirements related to high-performance green healthcare facilities.	<a href="http://ashrae.org">ashrae.org</a>
<b>American Society of Mechanical Engineers (ASME)</b>	Serve diverse global communities by advancing, disseminating and applying engineering knowledge for improving the quality of life and communicating the excitement of engineering.	We hold a chair position in the Materials and Energy Recovery Division.	<a href="http://asme.org">asme.org</a>
<b>American Water Resources Association (AWRA)</b>	Establish a common meeting ground for people concerned with water resources in order to advance multidisciplinary water resources education, management and research.	We are a corporate member.	<a href="http://awra.org">awra.org</a>
<b>American Water Works Association (AWWA)</b>	Provide knowledge, information and advocacy to improve the quality and supply of water in North America and beyond.	We hold positions on various committees, including the climate change review panel.	<a href="http://awwa.org">awwa.org</a>
<b>American Wind Energy Association (AWEA)</b>	Promote wind energy as a clean source of electricity for consumers around the world.	We have been a corporate member of AWEA for 17 years and hold leadership positions on various committees at the local and national levels.	<a href="http://awea.org">awea.org</a>
<b>Architecture 2030 Challenge</b>	Dramatically reduce the building sector's global-warming-causing greenhouse gas emissions by changing the way buildings and developments are planned, designed and constructed.	We signed the 2030 Challenge in 2009 and continue to report and improve on our project and company performance every year.	<a href="http://architecture2030.org">architecture2030.org</a>

## APPENDIX

### Commitments & Partnerships—Community and Stakeholder Engagement

TABLE 5: COMMITMENTS & PARTNERSHIPS

ORGANIZATION	THEIR MISSION	OUR COMMITMENT	WEBSITE
<b>Association for Contract Textiles (ACT)</b>	Promote the value of contract textiles through five goals, including: establishing and promoting voluntary performance and environmental guidelines and supporting textile design education and vocation.	We are a joint committee member for the development of the ACT Sustainable Textile Standards.	<a href="http://contracttextiles.org">contracttextiles.org</a>
<b>Association of Environmental Engineering and Science Professors</b>	Assist members in the development and dissemination of knowledge in environmental engineering and science.	We are a sustaining member.	<a href="http://aesep.org">aesep.org</a>
<b>Association of Metropolitan Water Agencies (AMWA)</b>	Unify and speak for the largest publicly owned drinking water systems on regulatory, legislative and security issues.	We are a corporate member.	<a href="http://amwa.net">amwa.net</a>
<b>Business and Institutional Furniture Manufacturers Association (BIFMA)</b>	Lead, advocate, inform and develop standards for the North American office and institutional furniture industry.	We participate as a Joint Committee Member for the development and ongoing updating of the BIFMA sustainable furniture standards, “e3” and “level” program.	<a href="http://bifma.org">bifma.org</a>
<b>Center for Environmental Health (CEH)</b>	Protect people from toxic chemicals by working with communities, consumers, workers, government, and the private sector to demand and support business practices that are safe for public health and the environment.	In 2016, we updated our pledge (signed in 2014) with the CEH, giving preference for flame retardant-free furniture.	<a href="http://ceh.org">ceh.org</a>
<b>Coasts, Oceans, Ports, and Rivers Institute</b>	Unite the disciplines working to sustainably develop, protect and restore coasts, oceans, ports, waterways, rivers, and wetlands; integrating the key stakeholders into decision-making processes; advancing technological state of art and practice; and influencing public policy.	We are a corporate member.	<a href="http://asce.org/coasts-oceans-ports-and-rivers-engineering">asce.org/coasts-oceans-ports-and-rivers-engineering</a>
<b>Conference of Minority Transportation Officials</b>	Ensure opportunities and maximum participation in the transportation industry for minority individuals, veterans, people with disabilities and certified MWDDBE businesses through leadership training, professional development, scholarship and internship funding, political advocacy, partnership building and networking opportunities.	We are a Private Sector Corporation member.	<a href="http://comtonational.org">comtonational.org</a>
<b>Congress for New Urbanism</b>	Promote walkable, neighborhood-based development as an alternative to urban sprawl using a proactive, multidisciplinary approach to restoring communities.	Our professionals are active members.	<a href="http://cnu.org">cnu.org</a>
<b>Edison Electric Institute</b>	Provide public policy leadership, strategic business intelligence, and essential conferences and forums to investor-owned electric companies.	We are an associate member.	<a href="http://eei.org">eei.org</a>

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### Commitments & Partnerships—Community and Stakeholder Engagement

TABLE 5: COMMITMENTS & PARTNERSHIPS

ORGANIZATION	THEIR MISSION	OUR COMMITMENT	WEBSITE
<b>Electric Products Environmental Assessment Tool (EPEAT)</b>	Assist purchasers in the public and private sectors to evaluate, compare and select electronic products based on their environmental attributes.	Since 2013, we have been an official EPEAT enterprise purchaser, after following EPEAT bronze minimum standards for leased and purchased computers, laptops and monitors for over seven years. Participating in this program and incorporating the requirements into our leasing and purchasing helps us to make environmentally responsible purchases, while providing our employees with the tools they need to do their jobs.	<a href="http://epeat.net">epeat.net</a>
<b>Engineers Without Borders (EWB)</b>	Help developing countries worldwide become more stable and prosperous by providing necessities such as clean water, power, sanitation and education.	Our professionals actively volunteer their time and engineering expertise.	<a href="http://ewb-usa.org">ewb-usa.org</a>
<b>Eno Transportation Foundation</b>	Shape public debate on critical multimodal transportation issues and build an innovative network of transportation professionals.	We are a corporate member.	<a href="http://enotrans.org">enotrans.org</a>
<b>Environmental &amp; Energy Technology Council of Maine (E2Tech)</b>	Build and expand the State's environmental, energy, and clean technology sectors.	We are a corporate member.	<a href="http://e2tech.org">e2tech.org</a>
<b>Green Guide for Healthcare (GGHC)</b>	Integrate enhanced environmental and health principles and practices into the planning, design, construction, operations and maintenance of healthcare facilities.	We were a founding partner, and our professionals were involved in the early development of this guide and have contributed to various revisions.	<a href="http://gghc.org">gghc.org</a>
<b>Greenroads Foundation</b>	Benefit communities and the environment by recognizing sustainable transportation projects and by promoting sustainability education for transportation infrastructure.	We are a member of Greenroads; HDR staff members currently sit on the Greenroads Foundation Board of Directors.	<a href="http://greenroads.org">greenroads.org</a>
<b>Health Product Declaration (HPD) Collaborative</b>	Work with the collaborative includes bringing a new standardized format for reporting product content and health-related information for building products; created to increase transparency and to provide the human health context for information in decision making and specifications of products.	With positions as an Executive Board member (Secretary) and pilot committee member, our work with the collaborative includes bringing a new standardized format for reporting product content and health-related information for building products. The HPD is meant to increase transparency and product innovation and performance, and to provide associated human health information to aid in decision making and specifications of products.	<a href="http://hpdcollaborative.org">hpdcollaborative.org</a>
<b>Healthier Hospitals Initiative (HHI)</b>	Helps healthcare entities focus efforts toward a healthier, more sustainable future—healthier food, leaner energy, less waste, safer chemicals, smarter purchasing, engaged leadership.	We are a supporting A/E business for this program, which helps healthcare entities focus on a healthier, more sustainable future.	<a href="http://healthierhospitals.org">healthierhospitals.org</a>
<b>Institute for Sustainable Infrastructure (ISI)</b>	Promote and support the planning, design, construction and operation of more sustainable infrastructure projects and programs.	We are a Charter Member of ISI and an early adopter of the Envision sustainable infrastructure framework, and we have more projects verified than any other firm. HDR staff chair the Envision Review Board (ERB) and participate in several committees.	<a href="http://sustainableinfrastructure.org">sustainableinfrastructure.org</a>



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### Commitments & Partnerships—Community and Stakeholder Engagement

TABLE 5: COMMITMENTS & PARTNERSHIPS

ORGANIZATION	THEIR MISSION	OUR COMMITMENT	WEBSITE
<b>Intelligent Transportation Society America</b>	Advance the research and deployment of intelligent transportation technologies to save lives, improve mobility, increase accessibility and equity, promote sustainability, and improve efficiency and productivity	We are a Professional Trust Member.	<a href="https://itsa.org">itsa.org</a>
<b>Intermodal Association of North America</b>	Promote the growth of efficient intermodal freight transportation through innovation, education and dialogue.	We are a Supplier Division Member.	<a href="https://intermodal.org">intermodal.org</a>
<b>International Desalination Association</b>	Committed to development and promotion of the appropriate use of desalination and desalination technology globally in water supply, water reuse, water pollution control, water purification, water treatment and other water sciences and technology	We are a corporate member.	<a href="https://idadesal.org">idadesal.org</a>
<b>International Institute of Sustainable Laboratories (I2SL)</b>	Engage all stakeholders in advancing the safety and sustainability of laboratories and other high-tech facilities globally.	HDR has staff on the I2SL board, and we champion I2SL programs locally and globally by helping the U.S. EPA and DOE promote sustainable laboratories and raise awareness about the benefits of I2SL throughout the industry.	<a href="https://i2sl.org">i2sl.org</a>
<b>International Living Future Institute (ILFI)</b>	Lead and support the transformation toward communities that are socially just, culturally rich and ecologically restorative.	HDR is an Enterprise Sponsor of ILFI. Additionally, we act as an ambassador and member of the LBC ambassador advisory panel, helping recruit and train future ambassadors for the advocacy of the Living Building Challenge.	<a href="https://living-future.org">living-future.org</a>
<b>Maine Renewable Energy Association</b>	Lead the local and statewide policy debate on renewable energy generation in Maine, and work to ensure its efforts are united with those of its member companies.	We are a corporate member.	<a href="https://renewablemaine.org">renewablemaine.org</a>
<b>National Association of Clean Water Agencies (NACWA)</b>	Provide leadership in environmental policy and technical resources on water quality and ecosystem protection issues in parallel with the Clean Water Act.	We are an active member of NACWA with a number of professionals holding leadership positions.	<a href="https://nacwa.org">nacwa.org</a>
<b>National Hydropower Association (NHA)</b>	Work to secure the energy, environmental, and economic benefits of hydropower resources for all Americans.	We are an active member of NHA with professionals holding leadership positions on the Board of Directors.	<a href="https://hydro.org">hydro.org</a>
<b>National Water Resources Association (NWRA)</b>	Provide a forum for public and private entities concerned with the management, conservation and use of water and land resources.	We are an active member of NWRA with professionals holding leadership and committee positions.	<a href="https://nwra.org">nwra.org</a>
<b>NC Sustainable Energy Association (NCSEA)</b>	Cultivate a robust clean energy ecosystem that unifies and benefits all of its stakeholders: consumers, businesses, the clean energy industry and utility energy providers.	We are a corporate member.	<a href="https://energync.org">energync.org</a>
<b>Northwest Hydroelectric Association (NWHHA)</b>	Promote the region's waterpower as a clean, efficient energy while protecting the fisheries and environmental quality that characterize our Northwest region.	We are an active member, with professionals holding leadership positions on the Board of Directors.	<a href="https://nwhydro.org">nwhydro.org</a>

## APPENDIX

### Commitments & Partnerships—Community and Stakeholder Engagement

TABLE 5: COMMITMENTS & PARTNERSHIPS

ORGANIZATION	THEIR MISSION	OUR COMMITMENT	WEBSITE
<b>Occupational Safety and Health Administration (OSHA)</b>	Ensure employee safety and health in the U.S. by working with employers and employees to create better working environments.	We support and grow our safety culture through a comprehensive health and safety program that has received national recognition for excellence. This program includes extensive mandatory safety training for all employees and is supported by a team of certified safety professionals.	<a href="https://www.osha.gov">osha.gov</a>
<b>Practice Greenhealth</b>	Promote healthcare industry commitment to sustainable, eco-friendly practices to improve the health of patients, staff and the environment.	We support Practice Greenhealth, a nonprofit organization founded on the principles of positive environmental stewardship and best practices in the healthcare community. Our commitment to healthy materials is especially aligned with Practice Greenhealth's goal to phase out hazardous substances and toxic chemicals to improve patient safety and care.	<a href="https://practicegreenhealth.com">practicegreenhealth.com</a>
<b>Renewable Northwest Project</b>	Advocate for the expansion of environmentally responsible renewable energy resources in the Northwest through collaboration with government, industry, utilities, customers, and advocacy groups.	We are a corporate member.	<a href="https://rnp.org">rnp.org</a>
<b>Solar Energy Industries Association</b>	Represent an industry that will be the single-largest source of new energy generation over the next decade and to grow as the national voice of a larger, more unified and more diverse industry.	We are a corporate member.	<a href="https://seia.org">seia.org</a>
<b>Solid Waste Association of North America (SWANA)</b>	Advance the practice of environmentally and economically sound management of municipal solid waste in North America.	We are an active member, with professionals holding leadership positions on numerous boards and committees.	<a href="https://swana.org">swana.org</a>
<b>SWANA Research Foundation</b>	Support SWANA's mission through leveraging research dollars to conduct collectively funded and defined applied research projects that address pressing solid waste issues.	We are a member of the Advisory Board, which identifies and selects collectively funded research on pressing solid waste issues.	<a href="https://swana.org/resources/research">swana.org/resources/research</a>
<b>Transportation Research Board (TRB)</b>	Provide innovative, research-based solutions to improve transportation. [Part of the National Academies of Sciences, Engineering, and Medicine.]	We are an Organizational Affiliate member of TRB with professionals holding leadership and committee positions.	<a href="https://www.trb.org">www.trb.org</a>
<b>U.S. Business Council for Sustainable Development (BCSD)</b>	Harness the power of collaborative projects, platforms and partnerships to develop, deploy and scale solutions to ecosystems, energy, materials and water challenges.	We are a corporate member.	<a href="https://www.usbcsc.org">www.usbcsc.org</a>
<b>U.S. Conference of Mayors Climate Protection Center (USCOM)</b>	Provide mayors with guidance and assistance they need to lead their cities' efforts to reduce greenhouse gas emissions linked to climate change.	We support and are actively involved with the U.S. Conference of Mayors, including professionals participating in conferences and panels.	<a href="https://usmayors.org/programs/mayors-climate-protection-center">usmayors.org/programs/mayors-climate-protection-center</a>

## APPENDIX

### Commitments & Partnerships—Community and Stakeholder Engagement

TABLE 5: COMMITMENTS & PARTNERSHIPS

ORGANIZATION	THEIR MISSION	OUR COMMITMENT	WEBSITE
<b>U.S. Green Building Council (USGBC)</b>	Expand green building practices through its LEED green building certification program, education and advocacy to support public policy that fosters green buildings and communities.	We were the first architecture firm to join the USGBC in January 1994, and continue our strong support as a Platinum-Level Sponsor. Our professionals have held significant leadership roles and noteworthy board and committee positions within the organization. Two LEED Fellows have been selected from HDR; one in the inaugural year class of 2011 and the second in 2012.	<a href="http://new.usgbc.org">new.usgbc.org</a>
<b>Urban Land Institute (ULI)</b>	Initiate research that anticipates emerging land use trends and issues, and propose creative solutions based on that research.	We are an active member of ULI with professionals holding leadership and committee positions.	<a href="http://uli.org">uli.org</a>
<b>Waste-to-Energy Research and Technology Council (WTERC)</b>	Identify and advance the best waste-to-energy technologies to increase the global recovery of energy and materials from used solids.	We are members of the Advisory Board, which works with engineers, scientists and managers from universities and industries to identify and advance the best available waste-to-energy (WTE) technologies, which drive the recovery of energy or fuels from municipal solid wastes and other industrial, agricultural and forestry residues.	<a href="http://gwcouncil.org">gwcouncil.org</a>
<b>Water Design-Build Council</b>	Evolve best practices for successful implementation of water projects through collaborative delivery methods, by facilitating thought leadership with stakeholders through research, education, and communication.	We are a corporate member.	<a href="http://waterdesignbulid.com">waterdesignbulid.com</a>
<b>Water Environment Research Foundation (WERF)</b>	Manage independent scientific research that leads to cost-effective responses to water quality concerns affecting the environment and human health.	We are a corporate member.	<a href="http://werf.org">werf.org</a>
<b>Water for People</b>	Help people in developing countries develop locally sustainable drinking water resources, sanitation facilities and health and hygiene education programs.	We support Water for People in the quest to provide safe, clean water for every community. Across the nation, HDR employees volunteer their time and talent. We visit countries in need, not only to design reliable water and sanitation systems, but to provide essential education and training.	<a href="http://waterforpeople.org">waterforpeople.org</a>
<b>Water Research Foundation</b>	Sponsor research to enable water utilities, public health agencies and other professionals to provide safe and affordable drinking water to consumers.	We are a corporate member.	<a href="http://waterrf.org">waterrf.org</a>
<b>WaterReuse Association</b>	Advance beneficial, efficient uses of high-quality, locally produced, sustainable water sources for the betterment of society and the environment.	We are a corporate member.	<a href="http://watereuse.org/association">watereuse.org/association</a>
<b>Western Energy Institute</b>	Support the electric and gas industry by facilitating direct connections and open dialogues between extremely well-defined professional roles through member-driven programs, forums, committees, timely career development opportunities, and relaxing environments to collaborate and network.	We are a corporate member.	<a href="http://westernenergy.org">westernenergy.org</a>
<b>WTS International</b>	Help women find opportunity and recognition in the transportation industry through professional activities, networking opportunities and access to industry and government leaders.	We are a corporate member at the Trailblazer level and hold leadership positions on various committees at the local and national level.	<a href="http://wtsinternational.org">wtsinternational.org</a>



# APPENDIX

## Employee Demographic Information

TABLE 6: EMPLOYEES BY GENDER

JOB GROUP	FEMALE	MALE	TOTAL
Executive/Senior-Level Officials and Managers	2	30	32
First/Mid-Level Officials and Managers	307	1,421	1,728
Professionals	2,256	4,207	6,463
Technicians	340	986	1,326
Administrative	589	69	658
Laborers and Helpers	1	2	3
Craft Workers	-	2	2
<b>Totals</b>	<b>3,495</b>	<b>6,717</b>	<b>10,212</b>

TABLE 7: EMPLOYEES BY AGE GROUP

JOB GROUP	16-24	25-34	35-44	45-54	55-64	65+
Executive/Senior-Level Officials and Managers	-	-	6	8	17	1
First/Mid-Level Officials and Managers	-	31	378	639	542	138
Professionals	329	2,086	1,766	1,185	832	265
Technicians	142	318	274	267	265	60
Administrative	50	181	126	141	124	36
Laborers and Helpers	-	-	-	-	3	-
Craft Workers	-	-	-	2	-	-
<b>Totals</b>	<b>521</b>	<b>2,616</b>	<b>2,550</b>	<b>2,242</b>	<b>1,783</b>	<b>500</b>

TABLE 8: EMPLOYEES BY ETHNICITY

JOB GROUP	AMERICAN INDIAN OR ALASKAN NATIVE	ASIAN	BLACK OR AFRICAN- AMERICAN	HISPANIC OR LATINO OF ANY RACE	NATIVE HAWAIIAN OR OTHER PACIFIC	TWO OR MORE RACES	WHITE	NOT DISCLOSED
Executive/Senior-Level Officials and Managers	-	-	-	2	-	-	29	1
First/Mid-Level Officials and Managers	3	84	10	73	1	23	1,428	106
Professionals	15	688	130	392	8	170	4,558	502
Technicians	5	81	46	156	2	61	865	110
Administrative	1	36	39	48	3	26	446	59
Laborers and Helpers	-	-	-	-	-	-	1	2
Craft Workers	-	-	-	-	-	-	2	-
<b>Totals</b>	<b>24</b>	<b>889</b>	<b>225</b>	<b>671</b>	<b>14</b>	<b>280</b>	<b>7,329</b>	<b>780</b>

TABLE 9: EMPLOYEES BY COUNTRY

COUNTRY	
Australia	151
Canada	310
China	13
Germany	314
Israel	1
Italy	2
Saudi Arabia	6
United Arab Emirates	38
United States	9,377
<b>Totals</b>	<b>10,212</b>