



**bird**

**2021**

**Sustainability Overview**



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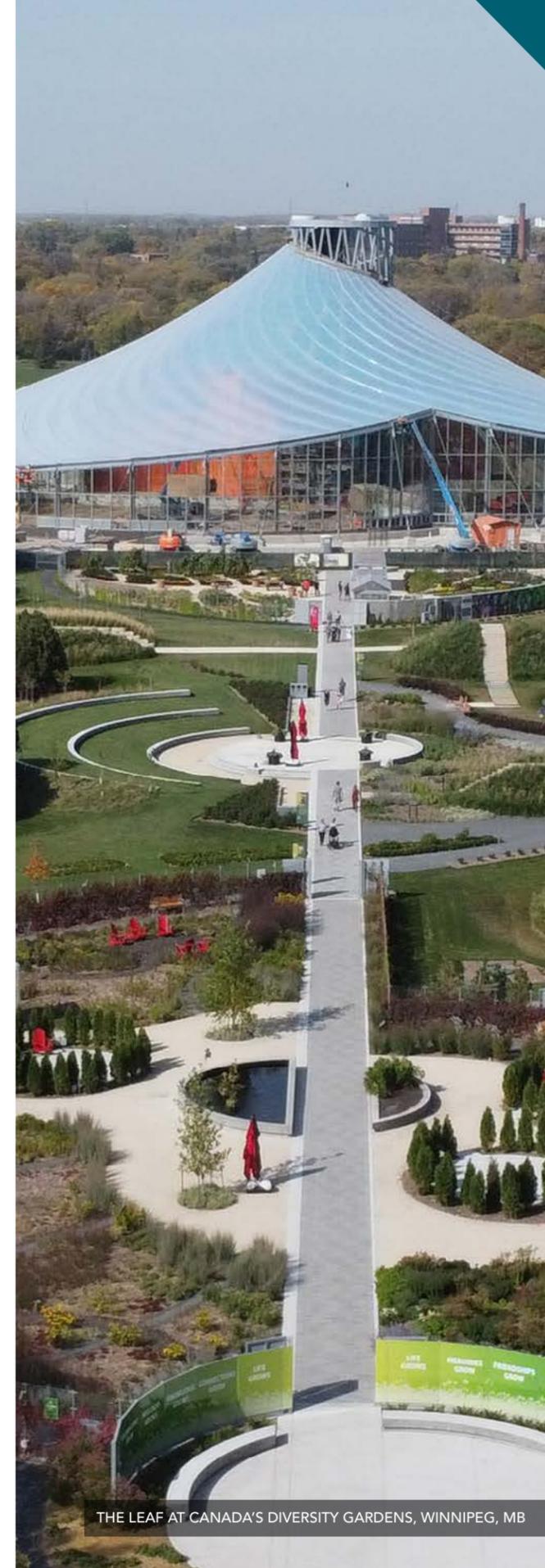


## ABOUT BIRD

For over 100 years, Bird has expanded across the country, building deep Canadian roots. We have grown both organically and through strategic acquisitions across the country, focusing on high performing businesses that support the expansion of our geographic reach and increase our diverse service offerings.

With offices from coast to coast and a workforce of more than 5,000 people, Bird operates in a diverse cross-section of market sectors with the knowledge, capabilities, and experience to support commercial, institutional, and residential projects, and serves a broad range of industrial and infrastructure clients. Bird's comprehensive range of services spans new construction, renovations, tenant improvements, and maintenance programs. In partnership with Stack Modular, Bird also provides purpose-built structural steel modular building design and construction.

Our model for success is simple, yet powerful in its application. An approach to doing business that is grounded in respect, transparency, and collaboration. A commitment to all stakeholders – clients, consultants, trades, and community – to engage in a team approach that values people and thrives on fresh ideas and intelligent solutions. At Bird, we know from experience that collaborative projects promote innovation, which leads to better performance and extraordinary results.



THE LEAF AT CANADA'S DIVERSITY GARDENS, WINNIPEG, MB

## ABOUT THIS SUSTAINABILITY OVERVIEW

Sustainability at Bird is a continuous journey of learning, evolving, innovating, and growing. We strive to incorporate up-to-date guidance into our sustainability priorities and adopt best practices that positively impact the way we work and build.

Bird's approach to sustainability reflects our commitment to the core company values of safety, people, teamwork, professionalism, integrity, and stewardship. These values guide us in all we do and ensure that Bird provides sustainable value and accretive contributions to our clients, employees, shareholders, and the communities in which we live and work.

Bird's Environmental, Social and Governance (ESG) Program and the manner in which sustainability priorities are embedded across the organization is based on in-depth research, industry best practices, materiality to the business and stakeholders, the experience of specialized teams, and expert external guidance. We strive to maximize our positive social and environmental impact, utilizing a strong corporate governance framework that ensures accountability and stewardship across all our operations.

Sustainability is a vast and interconnected topic, and our long-term strategic approach requires the flexibility to adapt. As such, this second annual Sustainability Overview is not intended to be a comprehensive account of all our activities, nor does it reflect the complexity of our long-term strategic approach to sustainability. It provides a snapshot of some of the ESG initiatives currently underway across Bird, and shares some of the results achieved in the past year, illustrating core initiatives that are reflective of our broader ESG Program.

## A MESSAGE FROM

### TERRANCE L. MCKIBBON, PRESIDENT AND CHIEF EXECUTIVE OFFICER

Bird's long-term ESG vision is rooted in the belief that our industry plays an important role in providing sustainable, innovative, and lasting solutions for all stakeholders. Significant global and local events have expanded awareness about the complexity and impact of ESG matters. The discussions during the 2021 United Nations Climate Change Conference (COP26) highlighted the urgent need to accelerate innovative green solutions across all sectors. Global supply chain disruptions have underscored how interconnected world economies are and provided every industry with the opportunity to rethink how we source critical materials. Social justice movements have informed important conversations about how we can all contribute to greater equity throughout our society and learn from diverse communities.

As the world has matured in its approach to ESG, so has Bird. Through our continued evolution and expansion of our geographic footprint and service offering across current and new sectors, we continue to embed a pragmatic approach to sustainability across our business.

Following the transformational acquisition of Stuart Olson in 2020, and the subsequent acquisition of Dagmar Construction in 2021, Bird has realized new opportunities to innovate across markets throughout the integration process. These opportunities were outlined in our 2022-2024 Strategic Plan, which was highlighted during our inaugural [Investor Day](#) in September 2021. ESG principles are embedded in this plan as we continue to fully integrate sustainability throughout the organization.

As part of our sustainability journey, we consider how we build and what we build, as well as the teams and technologies that enable us to deliver our clients' vision. An important part of our sustainability journey is supporting leading global clients as they invest in solutions that support goals to achieve net zero carbon emissions, such as carbon capture technology, as well as clean energy transitions for production, storage, and distribution.

Bird's ESG Program is knowledge-based and rooted in experience, combining research, industry best practices, and expert guidance with the insight and experience of our specialized teams and input from a range of stakeholders.

These efforts, discussed on page 4, have culminated in the ESG Roadmap that will guide Bird's ESG journey over the next three years. This Roadmap is a reflection of our values and our commitment to each other, to our communities, to our country, and to our planet. It provides clear milestones and accountability as we progressively enhance our capabilities to achieve meaningful change.

In this Sustainability Overview, we share some of the impactful technologies and initiatives that have contributed to our sustainability efforts, including [Mass Timber](#), [smart building technology](#), and [net zero](#) projects. We also highlight some of the exciting partnerships that have been forged over the past year, including our ongoing engagement with [Indigenous partners](#), a new alliance agreement with [Noventa Energy Partners](#), and a three-year strategic alliance with Chandos Construction for the [Building Good](#) initiative, amongst others.

Our collaborative culture of professionalism, integrity, and respect has created a dynamic workforce of engaged and high-performing individuals who are invested in the success of the business and its positive impact on the communities in which we live and build. This culture is important to us. We nurture it through the creation of a [safe and inclusive environment](#), an emphasis on [continuous learning](#) and support for career development, and ongoing [engagement](#) with our stakeholders.

Our sustainability journey is an evolving process of learning and discovery. Across the organization, from the Board to the Executive leadership to our teams on site, we are seeing active engagement around core ESG issues, as well as a commitment to transform the way we work and build that is driven by a passion for innovation and sustainability. Working collaboratively with our partners, clients, trades, and suppliers, we will continue to build momentum along the path to a more sustainable future for our company, industry, and country.

Terrance L. McKibbon  
President and CEO



## A MESSAGE FROM

### PAUL RABOUD, CHAIRMAN OF THE BOARD

The construction industry is undergoing a period of extraordinary change on a variety of fronts: the acceleration of technological advancements, the increased size and technical complexity of projects, and the move towards more collaborative contract formats such as Integrated Project Delivery and Alliance Contracting, amongst others. Intersecting with all of these shifts in the way we work and build is the complex matter of addressing sustainability and climate change.

We know that the built environment is a key contributor to global greenhouse gas emissions, and that we need to continue innovating and finding ways to build greener and to provide our clients with the best solutions and sustainable construction methods. We also know that the transition to a lower carbon economy will require supporting infrastructure, especially for renewable energy. In this year's Sustainability Overview, we highlight how Bird teams from across the company are tackling these complex challenges, developing solutions that help our clients meet their sustainability goals, and finding greener ways of working and building that contribute to the company's goals as environmental stewards. We have witnessed how technology, collaboration, and innovation facilitate this process and improve the sustainability metrics of construction for our clients and our company.

Bird's ESG Program permeates every aspect of the business, and has been embedded in the 2022-2024 Strategic Plan. The Board of Directors is actively engaged in the company's sustainability journey, providing oversight and guidance as the three-year ESG Roadmap was developed with input from a range of internal and external stakeholders and experts.

We have also reflected on the Board's role in the broader ESG Program beyond our oversight duties and have adopted a written Board Diversity Policy to ensure that a reasonable proportion of candidates for Board positions are women or members of diverse groups. Our effectiveness in

guiding management and providing oversight for the ESG Program can only be enhanced through the broadened range of perspectives offered by increased diversity.

The oversight role of the Board includes assessing and monitoring how the company is responding to the opportunities and risks of ESG, including climate change, and remaining vigilant about the emerging needs of the company's clients in a variety of sectors as they all navigate their way through the rapidly changing regulatory landscape. Our culture of prudent pragmatism will ensure that Bird will continue to provide the exceptional value creation and customer satisfaction that has been our hallmark for over 100 years.

The Board recognizes the exceptional team of talented people who are dedicated to finding new ways to innovate and advance the way Bird builds and works. Their leadership, passion, and integrity are evident. We are invested in supporting the strategic evolution and growth of Bird's ESG Program and look forward to working together on this journey to a more sustainable future.

**Paul R. Raboud**  
Chairman of the Board



## A MESSAGE FROM

### ESG EXECUTIVE SPONSORS WAYNE GINGRICH, CHIEF FINANCIAL OFFICER, AND PAUL PASTIRIK, SENIOR VICE PRESIDENT, STRATEGIC DEVELOPMENT

The focus on ESG is growing at a rapid pace across all sectors, and we are seeing increased attention to ESG principles in both the pursuit process and construction requirements. This is particularly apparent with respect to the impact and potential of evolving sustainable construction methodologies, renewable green materials, and the role of technology.

There are many opportunities from a multitude of sectors across our industry to respond to these growing ESG demands, several of which are outlined in this Sustainability Overview. One of the many notable recent developments in this area was the commitment by the Government of Canada to achieve net zero emissions by 2050, along with their recent 2030 targets to aid in this journey.

This goal is supported by the most recent Federal budget, where continued investment was pledged to support Canada's efforts to fight climate change and protect the environment, including green bonds to finance investment in green infrastructure, and new measures to make it easier to adopt and invest in clean energy technologies, support the continued greening of our energy sector, and increase the impact of the Canadian Infrastructure Bank (CIB). The government also noted the need to revitalize building standards to encourage low-carbon construction solutions, supported by an investment of \$183.2 million over seven years to boost the development of innovative construction materials.

Specific to the CIB, \$10 billion will be invested to build new infrastructure, including a targeted \$1 billion investment towards the Indigenous Community Infrastructure Initiative (ICII), which is aligned to Bird's work with First Nation, Métis, and Inuit communities to explore opportunities for collaboration on future projects. This initiative is one of many that form part of Bird's commitment to Indigenous Relations in support of economic reconciliation (see page 58).

Bird is committed to contributing to expanding opportunities for a more sustainable construction industry by leveraging our proven capabilities and established relationships. A key component of this commitment is our continued integration of ESG principles throughout our business. To this end, we have undertaken a robust investigation of our policies, procedures, and practices to ascertain alignment with our ESG goals. This included a benchmarking exercise and in-depth research of industry best practices that could strengthen and enhance our approach to sustainability.

We completed a materiality assessment with input from internal and external stakeholders to map out priorities specific to our sustainability goals (see chart of material topics on page 5). These ESG-specific material issues guide our strategic priorities with respect to sustainability. We are also noting a heightened interest regarding more complete ESG reporting and disclosures, especially as this relates to our company profile within the investor community.

The result of all these efforts was the creation of an ESG Roadmap to facilitate the achievement of our ESG goals, with targeted actions and clear accountability across all areas of the business.

Sustainability at Bird is led from the top and driven by all team members as we strive to Work Green, Build Green, and Live Green. This is supported by a strong corporate governance culture, with robust oversight and enterprise risk management practices. Our Board has demonstrated an active interest in our sustainability journey and provided guidance to management as we evaluated and refined our ESG Program (see page 82 for more information about the oversight role of the Board).

The overall strategic direction for ESG is developed under the leadership of the CEO, COO, Executive Sponsors, and the ESG Executive Steering Committee. Through ESG Working Groups, initiatives are developed and operationalized by key leaders and subject matter experts from across the company. These ESG Working Groups have allowed us to understand efficiencies and create alignment, as their experience and insights ensure that best practices are embedded throughout the organization. To reinforce our program, a dedicated ESG team was established to facilitate the implementation of Bird's ESG Program, providing coordination across the business and reporting on the impact of our activities. This team also coordinates the

development and implementation of robust mechanisms for data collection and disclosures.

Establishing effective ESG governance structures, clarifying goals and responsibilities, and improving communication about the many innovative practices and technologies currently being employed across the business has been a rewarding process. It has been a reminder of our strengths in building a company that will continue to evolve and thrive over the next 100 years as we focus on sustainable business practices that truly make a positive impact to the companies, communities, and people with whom we engage and work.

Wayne Gingrich  
Chief Financial Officer

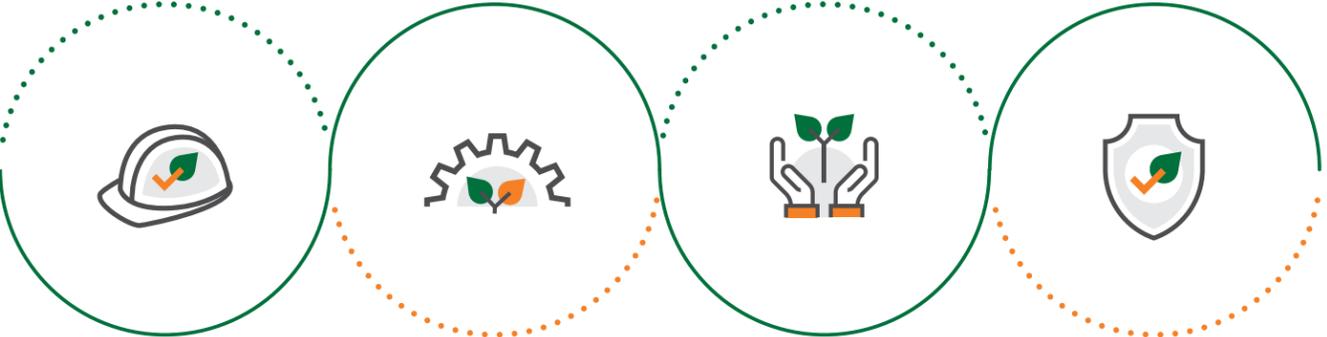


Paul Pastirik  
Senior Vice President,  
Strategic Development



# MATERIAL TOPICS

These material topics are discussed in detail throughout this Sustainability Overview. Many of these issues span across multiple functional areas of the business, and may therefore be referenced in numerous parts of this document. These material topics will be monitored and reviewed regularly and updated to reflect the changing ESG landscape at Bird, in the construction industry, and in Canada.



## BUILD GREEN

Sustainable construction

## WORK GREEN

GHG/energy performance

Environmental stewardship

Sustainable supply chain

## LIVE GREEN

Employee health, safety, well-being

Indigenous relations

Talent

Diversity, equity, inclusion

Community investment and engagement

Stakeholder engagement

## COMMITMENT TO GOVERNANCE

Climate risk and opportunity management

ESG integration and oversight

Business ethics and integrity

Data privacy and security

# MEET THE TEAM



**Terrance L. McKibbon**  
President and Chief Executive Officer



**Gilles Royer**  
Chief Operating Officer

### Executive Sponsors



**Wayne Gingrich**  
Chief Financial Officer



**Paul Pastirik**  
Senior Vice President,  
Strategic Development

### ESG Executive Steering Committee



**Brian Henry**  
Chief People Officer



**Peter Lineen**  
Executive  
Vice President, Health,  
Safety, and Environment



**Rob Otway**  
Executive  
Vice President,  
Buildings West



**David Keep**  
Executive  
Vice President, MRO and  
Commercial Systems

### ESG Working Group Members Drawn from Across the Company

- Operations
- Indigenous Relations
- Strategic Development
- Health, Safety & Environment
- Information Technology
- Risk Management
- People & Culture
- Marketing & Communications
- Finance

# 2021 HIGHLIGHTS

Total Revenue<sup>(1)</sup>  
**\$2.2B**

**91%**  
 Independent Board Members<sup>(3)</sup>

**27%**  
 Women on the Board<sup>(3)</sup>

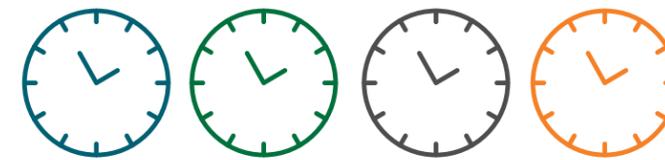
Record Backlog<sup>(1)</sup>  
**\$3.0B**

**66%**  
 Board Committee Chairs are women

**9%**  
 Indigenous representation on Board<sup>(3)</sup>



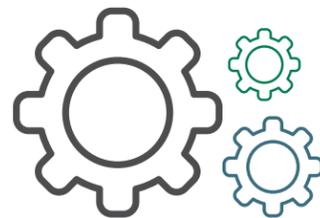
**5,000+** Total Employees<sup>(4)</sup>



**>10,130,000**  
 Total Internal Work Hours



Canadian suppliers engaged



**>\$87M**  
 Total spend with Indigenous subcontractors and suppliers



**1 LTI**  
 Lost Time Incident

**0.02 LTIF**  
 Lost Time Incident Frequency



**>\$223K**  
 Total scholarship spend<sup>(2)</sup>

**55+**  
 Indigenous-owned businesses supported



**10,250**  
 COVID-19 Inspections

Bird hosted its inaugural Virtual Investor Day



(1) At December 31, 2021  
 (2) Includes endowment to [Bird Construction/Paul and Geri Charette Endowment Fund](#)  
 (3) Board composition as of May 2022  
 (4) Salaried and hourly throughout the year



# BUILD GREEN

## Pursuing opportunities to utilize sustainable building materials and minimize resource waste

Bird is committed to sustainable construction. We have partnered with our clients to deliver complex and innovative building systems that meet LEED®, Green Globes, Passive House, and Zero Carbon building requirements. By using sustainable building materials and minimizing resource use and waste, we can realize both environmental and cost benefits. Over the last decade, Bird has delivered over 200 projects that are built to LEED® requirements or have acquired LEED® certification.

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Bird has LEED® accredited professionals across Canada and is a proud member of the Canada Green Building Council (CaGBC).



## Canadian Green Energy Retrofit

Bird is a proud project sponsor of the CaGBC and Delphi Group's Canadian Green Energy Retrofit Study. The study aims to identify how to scale up retrofits for large buildings (industrial, commercial, and residential) by considering both workforce and supply chain capacity to deliver affordable low-carbon construction products, technologies, and materials.

The study builds upon the research outlined in the recent Canada's Green Building Engine: Market Impact and Opportunities in a Critical Decade report released by the CaGBC, which considers the targeted interventions and investments from government and industry that will help Canada to achieve its 2030 GHG emission reduction targets, create new, highly skilled jobs, and generate greater economic income.

The project funding partners are the Canada Infrastructure Bank (CIB), the Ontario Construction Secretariat, Federation of Canadian Municipalities, and the Canada Mortgage and Housing Corporation.

Through our participation in the study, we continue to build our knowledge, which informs our service offerings and national teams, and ensures that Bird is positioned as a leader in providing retrofit services for our clients.

Read more about it [here](#).

## Alberta Union of Provincial Employees (AUPE) Headquarters Edmonton, Alberta

The new AUPE headquarters in Edmonton spans over 120,000 square feet, and is the first commercial building in the city that meets the design and construction requirements for LEED® Silver Version 4 certification and the WELL Building Standard from the International Well Building Institute (IBWI).

The widely used LEED® green-building rating system emphasizes energy efficiency, waste reduction, and water conservation. The WELL standard considers how building design and features can promote occupant health and wellness. Given that the project was constructed during the COVID-19 pandemic, new measures were instituted that focused on air quality and infection monitoring, non-toxic surface cleaning, and enabling social distancing. In addition to the new LEED® pilot credits that were issued, the WELL Health Safety Rating Certification (WELL HSRC) was released that addresses COVID-19 and the potential for other respiratory diseases. Five themes are considered within this new rating: cleaning and sanitization procedures, emergency preparedness programs, health services resources, air and quality management, and communication.

Adapting to the changing conditions and adopting the latest guidance from expert authorities has contributed to the construction of one of the healthiest buildings in Western Canada.

This project is an example of the successful outcomes that can be achieved through true collaboration. Bird worked with AUPE early in the process, consulting on constructability, site selection, and green building standards. A sustainability consultant worked closely with all stakeholders to determine the right standards and meaningful decisions in order to achieve the client's environmental goals.

**26%**

Reduction in annual energy costs\*

**44.69%**

Water use reduction\*

**11.4%**

Reduction in annual energy consumption\*

**100%**

Of the predicted stormwater on site is managed due to the bioswales

\*Based on energy model





## Ontario Police Modernization Phase 2

Multiple sites across Ontario

This project for the Ontario Provincial Police (OPP) consists of ten new Design-Build detachments across Ontario that are all targeting LEED® Silver. Covering a combined total of approximately 180,000 square feet, the new facilities feature up-to-date amenities to better support the demands of modern police operations. These efforts will result in enhanced community safety and increased support for Ontario's justice system. The sustainability features include the use of Certified Wood (FSC), Green Furniture, and Energy Star Appliances on all sites, as well as low-emitting VOC materials for sealants, adhesives, paints, coatings, and flooring. There are electric vehicle charging stations at eight sites. A 40% reduction in water use was achieved on each site by using water-efficient fixtures. 90% waste diversion was achieved at five sites, and 75% waste diversion at three sites. The remote OPP Moosonee facility, which is only accessible by air or rail, was the final detachment to achieve substantial completion in January 2021. The tenth detachment was added to the Public-Private Partnership (P3) project in 2021: a state-of-the-art 17,000-square-foot LEED® Silver facility that will serve the community of Cambridge.



**40%**

Water use reduction on each site through water efficient fixtures

**90%**

Waste diversion achieved at 5 sites

**75%**

Waste diversion at 3 sites



### Highlands School Edmonton, Alberta

This project entailed the modernization and full mechanical and electrical upgrade of the original 1914 school, including full renovations of classrooms, the library, and gymnasium. The 1956 extension was demolished, and a new 48,440-square-foot addition was constructed to provide much needed classroom space.

Targeting LEED® Silver, the project features solar photovoltaic panels that reduce energy costs by almost 25%, five stalls for green vehicles, and two stalls with EV charging stations.

**>80%**

Total waste diversion rate

**240 Tonnes**

Metal diverted from landfill

**1,980 Tonnes**

Concrete diverted from landfill (including demolition of 1956 building)

### The Burke

Toronto, Ontario

In 2021, Bird was awarded a 53-storey, residential tower in Toronto. The project will be completed for Concert Properties and is valued at approximately \$172 million. This will be a best-in-class building that demonstrates Bird's expertise in sustainable construction. It will be constructed to a LEED® Gold standard, leveraging green building practices and environmentally sound solutions.

### Alberta High Schools

The contract with Alberta's government for the Design, Build, Finance, and Maintain (DBFM) for five Alberta high schools achieved financial close in September 2021. The project has a total combined value in excess of \$300 million. Designs for the schools will include considerations for optimized building performance, energy conservation and other sustainable building features, including achieving a LEED® Silver Certification. All five high schools are scheduled for completion by the end of May 2024.



## Queen's Marque

Halifax, Nova Scotia

Located in the centre of the waterfront, the Queen's Marque is a defining project for Halifax. It includes an eight-storey commercial space designed to be one of the most progressive office buildings in the country, a ten-storey, 143-unit residential building, and Muir – Atlantic Canada's first five-storey ultra-luxury class boutique hotel with 110 guest suites.

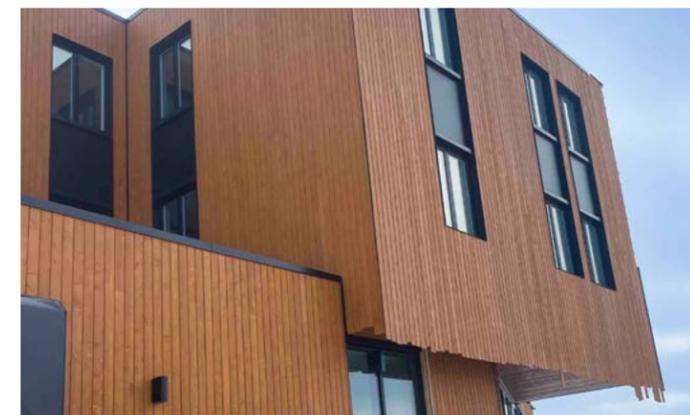
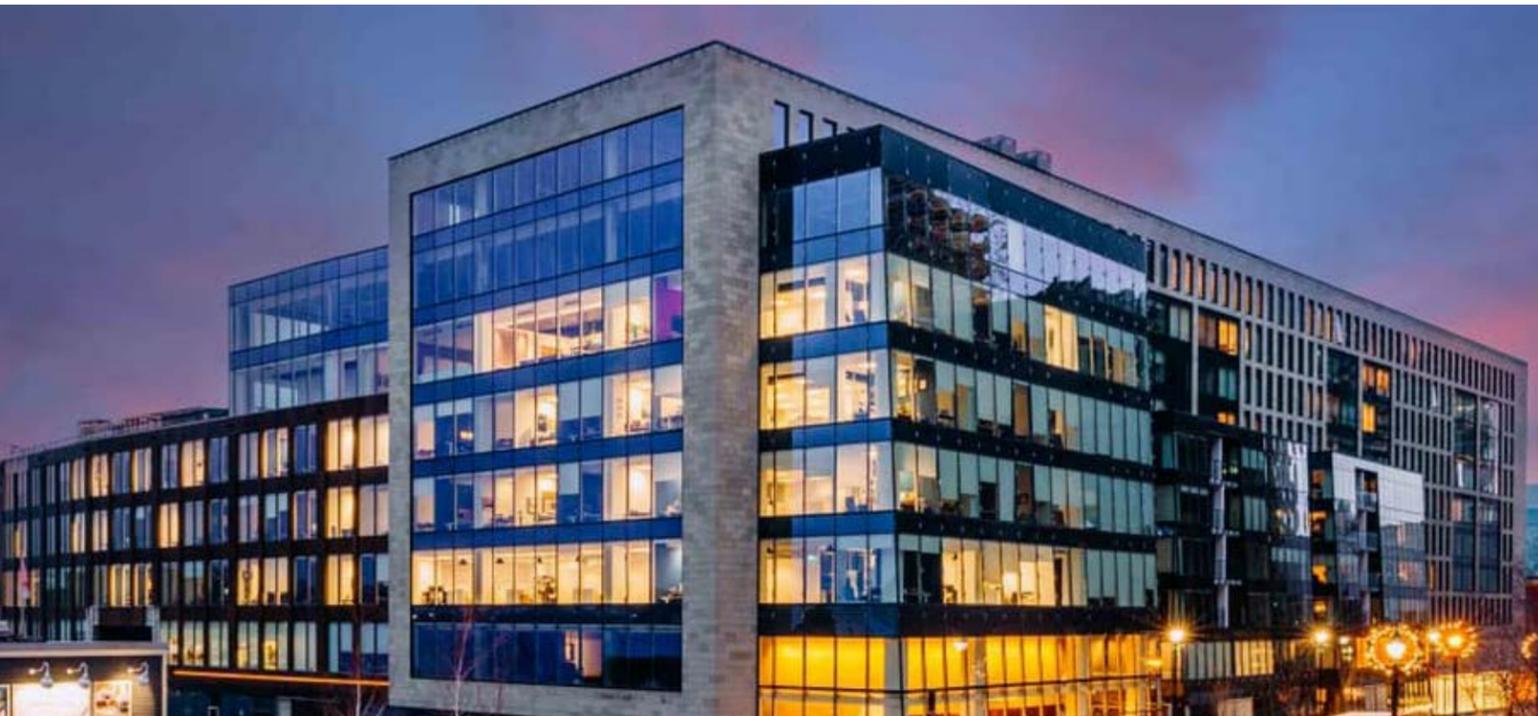
From harnessing the power of the sea to maximizing green roofing space, Queen's Marque is designed to be sustainable and forward-looking through eco-conscious practices and systems.

Sea water loop technology ties into a large-scale heat pump plant and is backed up by fully redundant gas-fired condensing boilers, providing energy efficient and environmentally-friendly cooling and heating. The office component of the facility utilizes chilled beams

to provide ventilation and cooling, and allows for free non-mechanical cooling.

Primary buildings were placed on a north-south axis for maximum energy efficiency. Queen's Marque also makes use of in-floor perimeter heating in areas featuring large expanses of glass, and double-pane low-e glass further improves energy efficiency. The xeriscaped green roofing materials vastly reduce irrigation needs.

Queen's Marque's highly efficient building systems place it at the forefront of energy efficient design. Energy modeling indicates that the building surpasses the 2015 National Energy Code by 43.8%, saving a total of 2.74 million kWh of electricity per year. This has allowed Queen's Marque to qualify for one of the highest incentives ever offered by Efficiency One.



## UPEI Centre for Climate Change

St. Peter's Bay, Prince Edward Island

The 45,000-square-foot facility in the town of St. Peter's Bay, PEI houses a state-of-the-art Climate Research Lab and a living laboratory that allows for unlimited access to nearby wetlands, forests and coastal habitats directly affected by climate change. It also includes offices, meeting rooms, classrooms, a cafeteria, a 50-bed residence, and a drone port. The multi-million dollar facility will be the first UPEI satellite campus located outside Charlottetown.

The energy efficient building will have the potential to achieve a near-zero carbon footprint. A geothermal heating system serves as the primary heating source. The building has been designed with low carbon emission materials, highly efficient mechanical systems, as well as renewable onsite energy through the photovoltaic field. Largely composed of a wood frame with Mass Timber beams, the building will be clad in wood with some steel elements, and will feature a triple-glazed curtainwall.



## HOW COLLABORATIVE CONTRACTING SUPPORTS SUSTAINABLE CONSTRUCTION

Unlike traditional delivery models, collaborative contracting models such as Progressive Design-Build Alliance Contracting, and Integrated Project Delivery (IPD) start by bringing all key project stakeholders together during the early project planning phase. With owners, designers, engineers, and constructors involved from the outset, each specialist provides their expertise and enables the team to achieve more. Early engagement allows us to define environmental goals, investigate their viability, and develop solutions that take into account cost of construction and provide the owner with a best value solution.

With a best-for-project mindset, the team can work towards shared and clearly defined goals, and the specialist knowledge that each person brings contributes to design optimization, cost and schedule improvements, safe and high-quality execution, and improved innovation. It is this type of approach that facilitates the use of cutting-edge technology that will transform our built environment. Considering every aspect of the project together, as one team, generates insights and ideas that lead to new ways of thinking, new ways of building, and new ways to achieve our envisioned sustainable future.

### MEET THE TEAM



"IPD is ideally suited for executing complex [Environmental](#) projects as the early collaboration and shared investment facilitates the successful realization of defined goals."

**Robin Bonk**  
Vice President Industrial Operations



### OPG Clarington Corporate Campus Clarington, Ontario

In October 2021, Bird was awarded the first phase of the Engineering, Procurement, and Construction contract with early collaborative contractor involvement for the Ontario Power Generation (OPG) Clarington Corporate Campus Project.

The project will establish a new corporate headquarters on a campus setting in the Municipality of Clarington located within the Durham Region of Ontario. Once complete, the campus will consolidate non-station staff from existing OPG offices across the Greater Toronto Area, Niagara, and Durham Region.

Developed in collaboration with Stantec and Indigenous firm Two Row Architect, designs for the campus will include optimization of building performance and energy conservation to align with OPG's long term strategic goals. The focus on enabling technology and innovation will ensure accessibility, flexibility, and a healthy, collaborative environment.

By building trust through communication and transparency, leveraging partnerships, and remaining mindful of shareholders and stakeholders, the design team strives to achieve the ultimate outcome of a physically, socially, and digitally connected workforce. This includes emphasizing diversity and ensuring extensive Indigenous consultation.

The first phase of the contract is expected to continue through most of 2022.

## FOCUSING ON NET ZERO

A key element of Bird's focus on sustainable construction is supporting the transition to a net zero carbon economy. Canada's commitment to achieving net zero carbon emissions by 2050 relies on coordinated action by all industries, including the construction sector.

Zero carbon buildings are highly energy efficient and produce onsite (or procure) carbon-free renewable energy to counterbalance the annual carbon emissions from building materials and operations. Zero carbon building standards can be applied to a range of buildings, including high-rise towers, arenas, warehouses, multi-unit residential buildings, and schools. Retrofits also provide tremendous opportunities to reduce the carbon footprint of existing facilities.

There are many technologies, processes, and materials that can contribute to the achievement of net zero buildings, both in terms of energy and carbon reductions. We are passionate about continuing to find ways to optimize the performance of buildings and minimize impacts on the environment. The projects highlighted within this section illustrate the potential impact of these innovations.

Zero carbon buildings are highly energy efficient and produce onsite (or procure) carbon-free renewable energy to counterbalance the annual carbon emissions from building materials and operations.





## Barrett Centre for Technology Innovations (BCTI)

Toronto, Ontario

This 93,000-square-foot net zero energy building at Humber College has achieved LEED® Platinum certification. The building achieves net zero energy through a conservation first approach, including solar radiation, daylight penetration, natural ventilation, and envelope optimization, supplemented by a 700-kW solar photovoltaic array located on an adjacent parking structure.

Sustainability and environmental stewardship measures include green rooftop teaching spaces, urban agriculture pods, and visible high-performance building systems. Materials were chosen for low environmental impact, occupant health and well-being, durability, and climate change resilience. For example, Brise Soleil shading devices on the south facade mitigate heat gain and glare, while a thermal chimney enables natural ventilation during more temperate seasons.

**100%**

Energy intensity reduction\*

**>85%**

Construction waste diverted from landfill

**40%**

Decrease in water consumption\*



All energy is supplied by renewables

\* Relative to reference building



## University of Calgary MacKimmie Complex Redevelopment Project

The innovative and sustainable design incorporated cutting edge technology and building analytics to deliver one of the most energy-efficient buildings on a Canadian post-secondary campus. Targeting Net Zero Carbon Building Certification, the Tower already achieved net zero carbon standards in 2020, and the team was awarded the 2020 Zero Carbon Green Building Excellence Award by the Canada Green Building Council.



Targeting Net Zero Carbon Building Certification



The Tower achieved net zero carbon standards in 2020



Awarded the CaGBC 2020 Zero Carbon Green Building Excellence Award



The building envelope is an essential component of net zero buildings. Many carbon-neutral buildings utilize a heavy-duty envelope with strategic window placement to reduce solar gain.

A different approach was pursued with MacKimmie, which has an all-glass envelope with nothing but an air gap to insulate the building. The approximately 1,600 operable windows of the interior and exterior facade maintain this cushion of tempered air by utilizing the data from 255 sensors integrated into the mullions. The windows open and close on a floor-by-floor basis to sustain the facade space temperature between 16 and 23 degrees Celsius.

The combination of natural ventilation and night flush systems allow mechanical HVAC systems to power down to conserve energy, as the effective utilization of the stack effect and high rise/low rise sequences moderate the internal temperature of the building.

All of the supply air in the tower is drawn from outside with no recirculated return air, enabling printer rooms and washrooms to be exhausted through the main air handling unit rather than requiring dedicated fans. The air handling unit does not have a conventional heating and cooling coil,



instead utilizing a tilt pipe between the supply and exhaust sides of the unit for heat recovery. Cooling and humidity are controlled through evaporative filter media, further enhancing the energy efficiency of the building's systems.

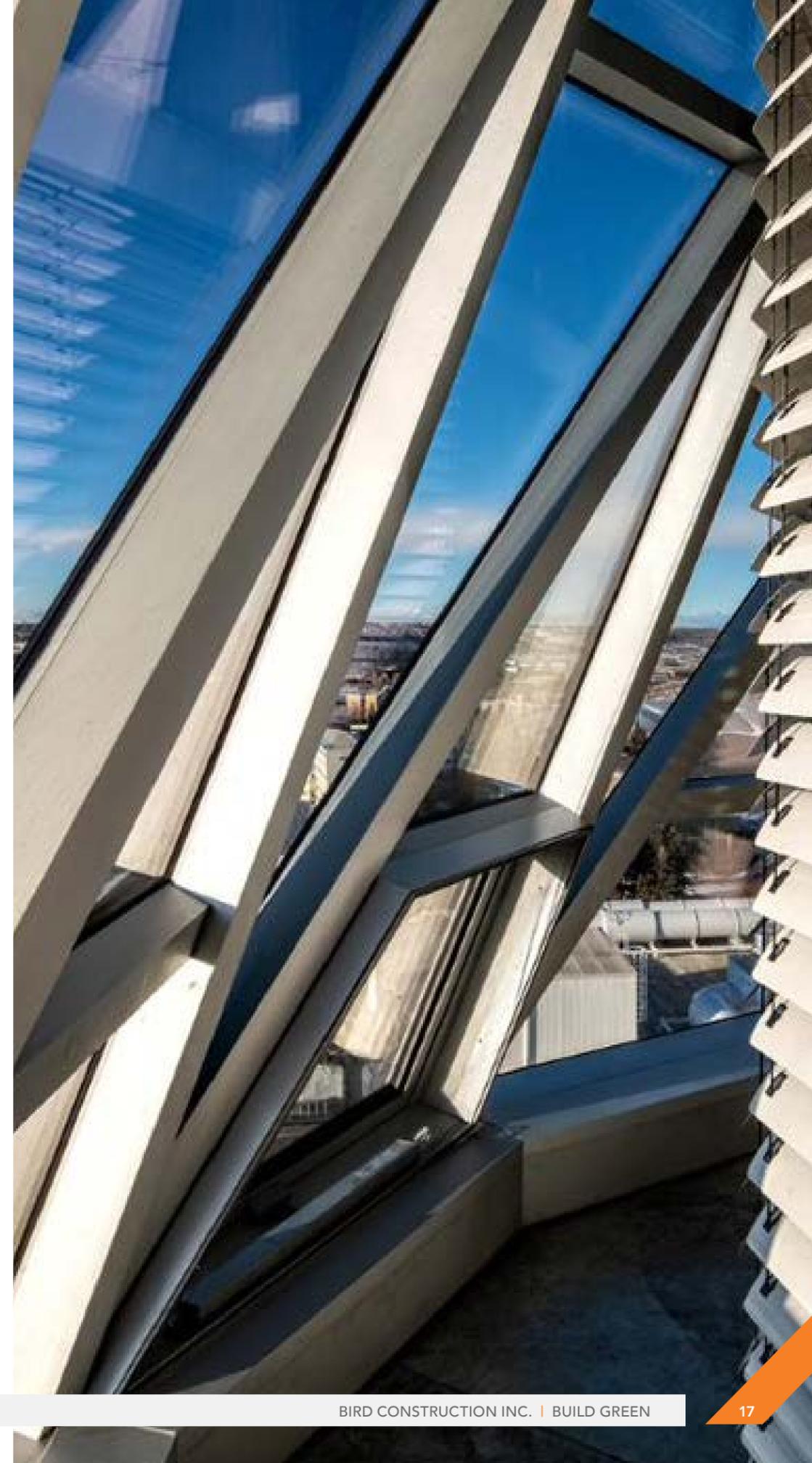
The photovoltaic system uses solar panels to generate clean energy to work as a carbon offset for the building. These photovoltaics are tied directly back to the metered switchgear, eliminating the need for batteries and reducing maintenance, while the meter enables the monitoring of electrical production volume.

Ongoing real-time monitoring through sensors situated throughout the building and its systems generates analytics that provide accurate insights enabling the optimization of building system performance. This technology was utilized throughout the project, and facilitated the complex integrations required during construction. The building analytics platform has been adopted by the University, and five buildings are currently online. Building analytics will be rolled out to the rest of the campus as well.

Read more about how the Centre for Building Performance can assist with optimizing building system performance [here](#).

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A different approach was pursued with MacKimmie, which has an all-glass envelope with nothing but an air gap to insulate the building.



## MASS TIMBER

Mass Timber is a renewable and sustainable low carbon building solution. Through sustainable forestry, wood-based materials capture carbon and offset total CO2e emissions over the lifespan of the asset.

Bird is a North American leader in wood construction with the in-house expertise to develop Cross Laminated Timber, Nailed Laminated Timber, wood-frame, and hybrid projects from concept to substantial completion. From high-rise wood frame housing developments to large-scale institutional buildings, the Bird team brings an in-depth understanding of the benefits and limitations of different Mass Timber and engineered wood products, and delivers efficient design strategies to maximize structural efficiencies.

Bird's strong North American network of material supply channels effectively service Mass Timber projects from coast to coast. Global relationships with designers, consultants, trades, and subject matter experts ensure that projects benefit from cutting-edge technologies, forward-thinking strategies, and value-maximizing processes. This results in buildings that improve communities, user experience, and the environment.

Total projects  
(2008-2021):

**37**

Total value  
(2008-2021):

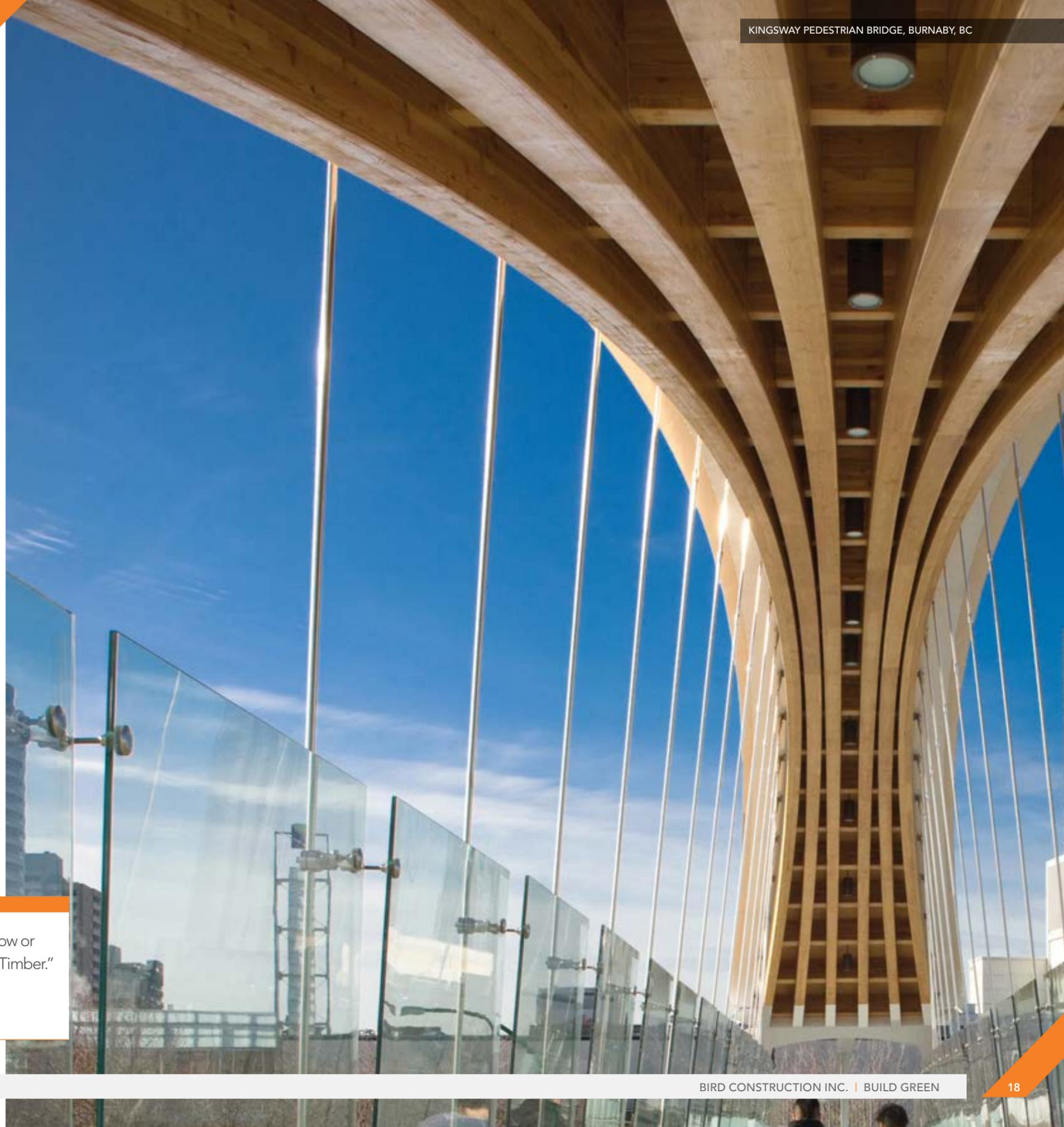
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### MEET THE TEAM



"One of the best ways to achieve low or zero carbon construction is Mass Timber."

**Patrick Crabbe**  
Director of Mass Timber





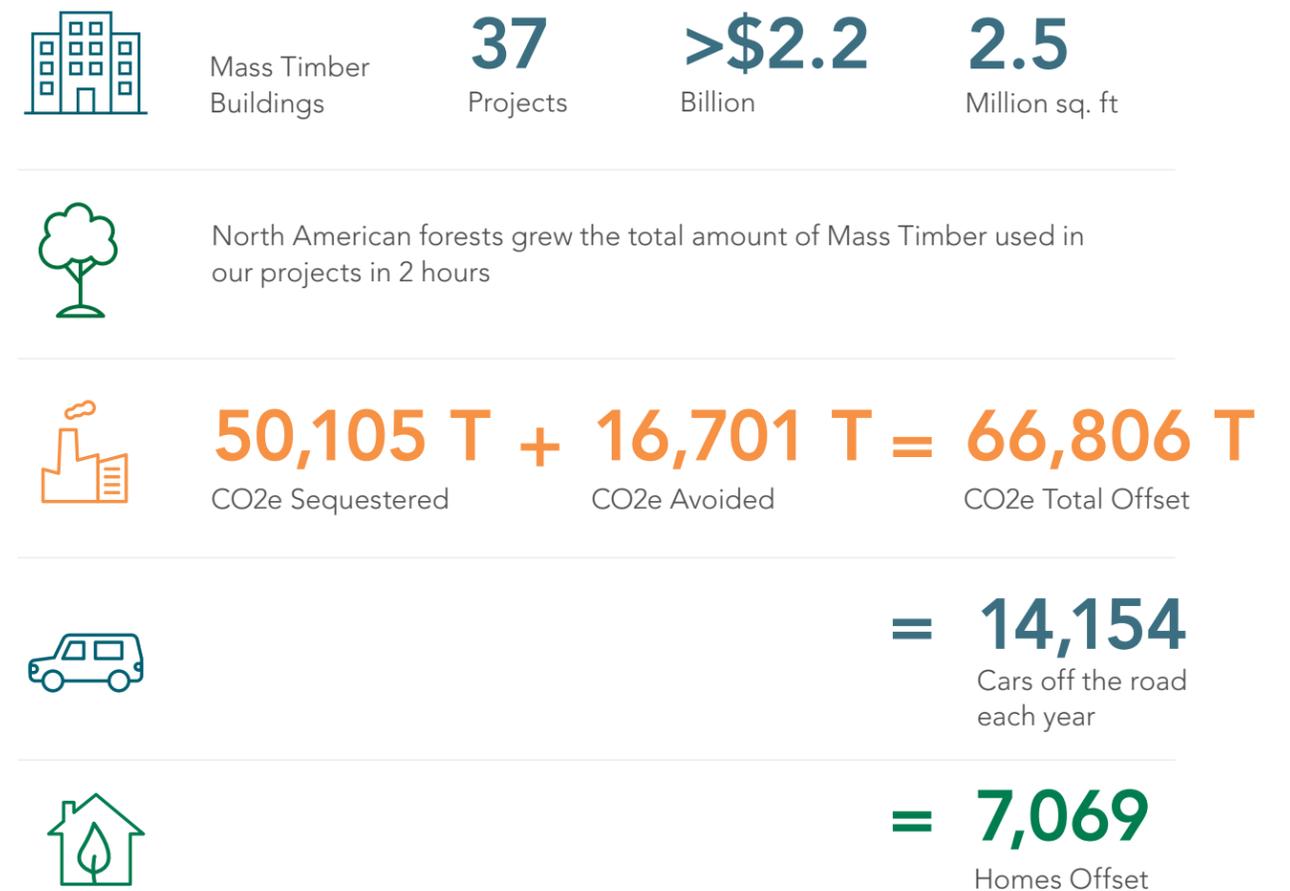
Mass Timber has many impactful environmental and carbon sequestration benefits. This versatile sustainable construction material has recently received additional attention amid the current global supply chain disruptions due to its rapid manufacture and installation terms. Bird's Director of Mass Timber spoke to the Daily Commercial News about the utility of Mass Timber in the construction of low-rise commercial buildings. The article can be accessed [here](#).



Bird is a proud partner of the Carbon Pricing Leadership Coalition. Administered by The World Bank Group, this voluntary organization brings together leaders from the largest and most influential governments, businesses, civil societies, and academic organizations to discuss carbon pricing, share experiences, and enhance the global, regional, national, and sub-national understanding of carbon pricing implementation.

Patrick Crabbe recently contributed a post about stewardship in the construction industry, which outlines how the industry can play a positive role in the reduction of GHG emissions by advocating for responsible sustainable construction. Read it [here](#).

## ESTIMATED CARBON OFFSETS FROM BIRD MASS TIMBER PROJECTS (2008-2021)



- The above is an estimate and not ISO certified
- Car calculation is equivalent to each car travelling 25,000 km/year
- The 16,701 tonnes CO2e is avoided emissions due to not using steel and concrete
- The total offset tonnes CO2e metric is a high-level comparison to 2.5 million sq. ft of steel and concrete construction
- The estimated total amount of wood utilized per completed project was calculated, and the total CO2e benefit was determined through the standard conversion of 1 sq. m /10.77 sq. ft of Mass Timber to 1 tonne of CO2 sequestered



**Bergen Gardens  
Memory Care • Assisted Living**  
Winnipeg, Manitoba

Bird is nearing completion of construction of one of Winnipeg's first cross-laminated timber (CLT) structures, a state-of-the-art assisted living and memory care project for Edison Properties Winnipeg. Glued-laminated timber (glulam) columns and beams will be utilized for the six-storey central structure, while traditional wood framing will be used for the two wings. Mass Timber elements will account for 108,000 square feet of the 216,007-square-foot facility, which includes indoor and outdoor greenspaces, and is expected to be completed in 2022.

**West Kelowna City Hall**  
West Kelowna, British Columbia

Bird was proud to be awarded the contract for the construction of the first city hall in West Kelowna since the City's incorporation in 2007. The three-storey fully accessible building is envisioned to be a vibrant community space that will provide direct civic services and a culturally-rich learning and gathering place. The 54,766-square-foot structure will also house the Okanagan Regional Library, which is an equity partner in this project.

Environmental sustainability is embedded into the design in order to minimize the environmental impact of the structure and ensure an efficient footprint, which includes considering the orientation, topography, drainage, heating/cooling, and electrical aspects of the building. Mass Timber elements are a key part of this strategy, and glulam and cross-laminated timber elements will form the superstructure of the building.

The collaboration between the City of West Kelowna and the Westbank First Nation (WFN) seeks to identify and provide employment, bidding, mentorship, and cultural and artistic opportunities for community members. Each subcontractor on the project will employ at least one WFN community member, skilled or unskilled, while they are on the site. An engagement working group comprised of Elders, Knowledge Keepers, Youth, and Community Members will provide input on the project.



Environmental sustainability is embedded into the design in order to minimize the environmental impact of the structure and ensure an efficient footprint, which includes considering the orientation, topography, drainage, heating/cooling, and electrical aspects of the building.



## East Hants Aquatic Centre Elmsdale, Nova Scotia

The Aquatic Centre in Elmsdale, Nova Scotia is one of the largest infrastructure builds in East Hants history, and is designed for the enjoyment of people of all ages and abilities. The facilities include a six-lane, 25-metre lap pool, an accessible leisure spray pool, a lazy river resistance moving-water pool, outdoor splash park, slide, climbing wall, hot tub, community room, kitchenette adjacent to the multi-purpose room, a public lobby, and a pool viewing area.

The large, exposed roof over the pool uses nail laminated timber (NLT) panels as Mass Timber performs well in high humidity environments. Bird, the ownership team, and the design team, were all committed to using local resources wherever possible: the wood for the showcase 16,145-square-foot NLT roof over the natatorium was harvested within 10 kilometres of the local sawmill. Bird's self-perform team manufactured the NLT panels straight from the sawmill planers and installed the roof.

The decision to use NLT panels was driven by the focus on building local capacity in the design and construction of wood systems. NLT is a legacy construction method, which gets its strength from the nails that fasten individual pieces of dimension lumber, stacked on edge, into a single structural element. The structural NLT deck saved building costs as it reduced the number of the purlins that would have been needed for a non-structural steel deck by half.

The 175 NLT panels of the roof deck were built in four weeks, installed in two weeks, and significantly reduced the roof construction schedule. The Canadian Wood Council's measurement tools showed that this construction approach, compared with alternative systems using non-wood products, resulted in potential carbon benefit equivalent to keeping 42 cars off the road for one year.

The architectural team took extra care to expose as much of the beauty of the wood, and eliminate clutter in recreation hall ceilings. Lights, ducts, sprinkler systems and other essential elements were carefully concealed and integrated. The interior views of the wood panelled ceiling are framed by the simple steel beam and purlin system. Beyond bearing the dead and live roof loads, the NLT panels provide structural stability for resisting the torsion of the roof frame.

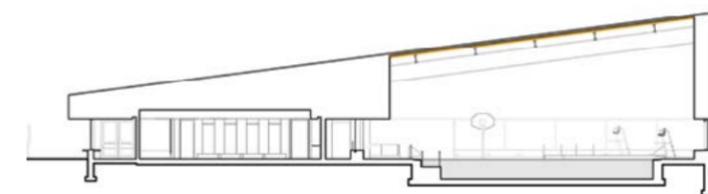


Bird assembled the 175 NLT panels in four weeks.



Bird installed the NLT panels in two weeks, significantly reducing the roof construction schedule.

Wood performs very well in aquatic environments due to its hygroscopic properties – it gains or loses water vapour to balance with the humidity of its surrounding environment without condensation occurring on the wood surface.





## POWERING THE FUTURE

Renewable and low carbon energy solutions contribute to global efforts to meet climate targets, support the energy transition, and achieve sustainable change. Bird has been supporting the construction execution on some of our country's largest infrastructure projects, from hydroelectric infrastructure, nuclear, and renewable power, to organic waste processing and waste-energy recovery projects for over half a century. Leveraging our civil, structural, and mechanical experience in developing and executing complex major projects, combined with extensive self-perform substation and high voltage services, are among the ways in which Bird is contributing to delivering cleaner energy solutions.

## TRANSITIONING TO NEW ENERGY TOGETHER



### RENEWABLE POWER

- Wind
- Solar
- Hydro and pumped storage



### LOW CARBON ENERGY

- Hydrogen (Green and Blue)
- Nuclear/Small Modular Reactors
- Biomass conversion
- Anaerobic digestion
- Renewable Natural Gas



### CARBON INNOVATION

- Carbon capture
- Carbon utilization
- Carbon storage



### ENERGY EFFICIENCY

- District heating and cooling
- Cogeneration
- Water reuse
- Biomass and waste to energy
- Real estate energy efficiency

## MEET THE TEAM



"As energy needs and infrastructure evolve throughout Canada and around the world, we are dedicated to offering construction solutions that will support local, national, and global initiatives. Through a collaborative approach with our clients and partners, and thoughtful investment in appropriate training and technology, we offer and execute solutions focused on moving towards a cleaner energy future."

**Tannis Proulx**  
Executive Vice President, Industrial Construction

## POWERING THE FUTURE >>> WIND

### Whitla Wind Farm MV Collector System

County of Forty Mile, Alberta

The Whitla Wind Farm is part of a Renewable Electricity Program that will generate enough electricity to power 67,000 homes in Alberta every year. The power will be generated by 56 Vestas: these 3.6MW wind turbines have a hub height of 105 metres and blade rotor diameter of 136 metres. Bird was awarded the contract to install the Medium Voltage (MV) Collector System that connects the wind turbines to the wind farm substation. The MV Collector System is comprised of a trefoil MV electrical cable bundled together with a ground cable and a fiber

optic innerduct. Bird employed its innovative trenching solution to complete this project, as it could perform the installation in a single trenchless pass with a 300 by 300 millimetre sand bedding. This specialty one-pass trenchless equipment is exceptionally environmentally friendly. It reduces the construction footprint, creates minimal ground disturbance, and enables fast regrowth of vegetation once the MV Collector System has been installed. The use of this cutting-edge technology enabled over a kilometre of the collector system to be installed per working day.



## POWERING THE FUTURE >>> SOLAR

### Solar Photovoltaic Power Plant

Northern Ontario

Solar power provides clean, renewable thermal and electrical energy and can be particularly useful in remote areas where connections to existing energy grids are difficult. This abundant source of energy can also play a role in realizing net zero energy goals and diversifying the sources of electricity we use. Bird recently completed

a renewable energy project across three locations in Northern Ontario. Stationary photovoltaic modules were installed on fixed racks oriented to the southern sky, and the 122,000 solar modules contribute a total of 24MW of clean electricity to the provincial power grid.

## POWERING THE FUTURE >>> HYDRO

### OPG Otto Holden Generating Station Overhaul Program

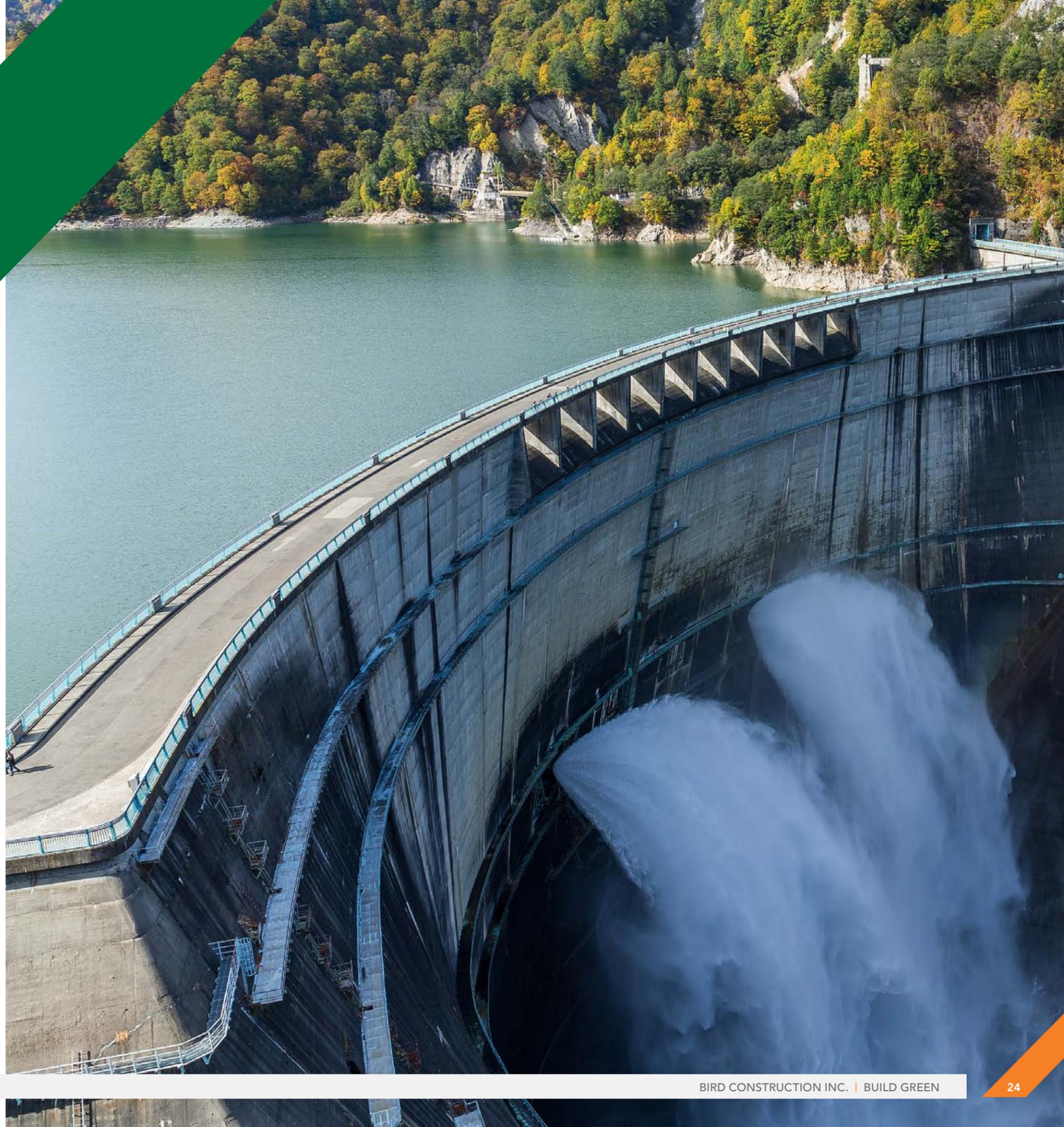
Mattawa, Ontario

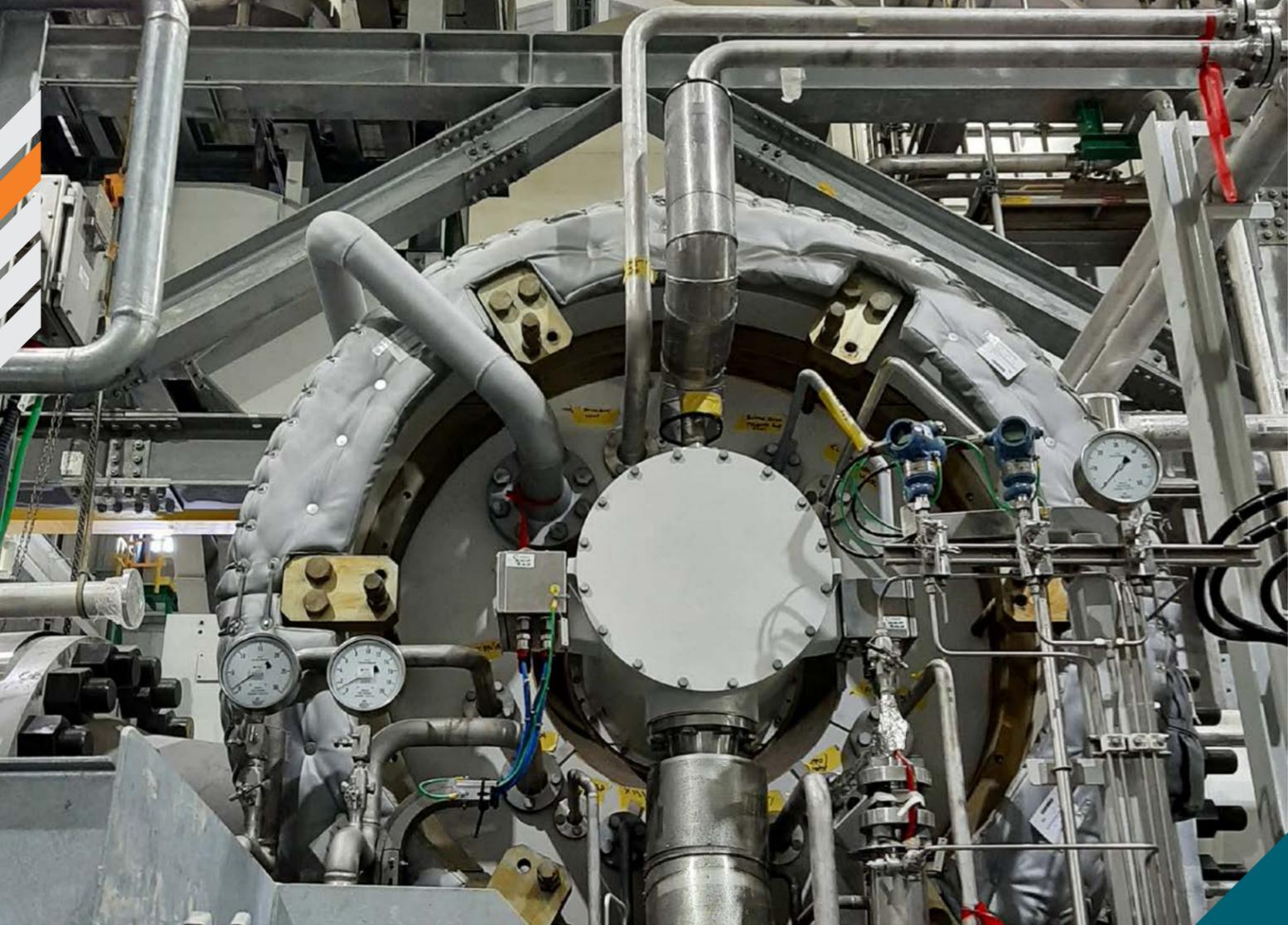
Hydropower is an emissions-free source of renewable power that is reliable and adaptable to changing needs. Among the many hydropower projects that our teams have worked on is this eight-unit hydroelectric generating station, which was overhauled under an Industrial Integrated Project Delivery (I2PD) model. The I2PD method is based on trust, shared risk and reward, collaborative decision-making, early involvement of the I2PD team, early definition of program goals, intensified planning, and open communication. I2PD incorporates specific methods and principles to deliver industrial projects with much greater certainty of outcome in the areas of safety, quality, schedule, and cost.

### Riel Station Synchronous Condensers

Winnipeg, Manitoba

Synchronous condensers are required to provide grid stability. Similar in comparison to horizontal generators, the Bipole III Riel Station Project synchronous condenser assemblies support the Manitoba Hydro grid with reactive power. Bird was responsible for civil design and all onsite construction. The project scope consisted of various civil, structural, electrical, mechanical and piping works.





We are proud to assist our clients with the implementation of sustainable solutions that optimize society's environmental infrastructure.

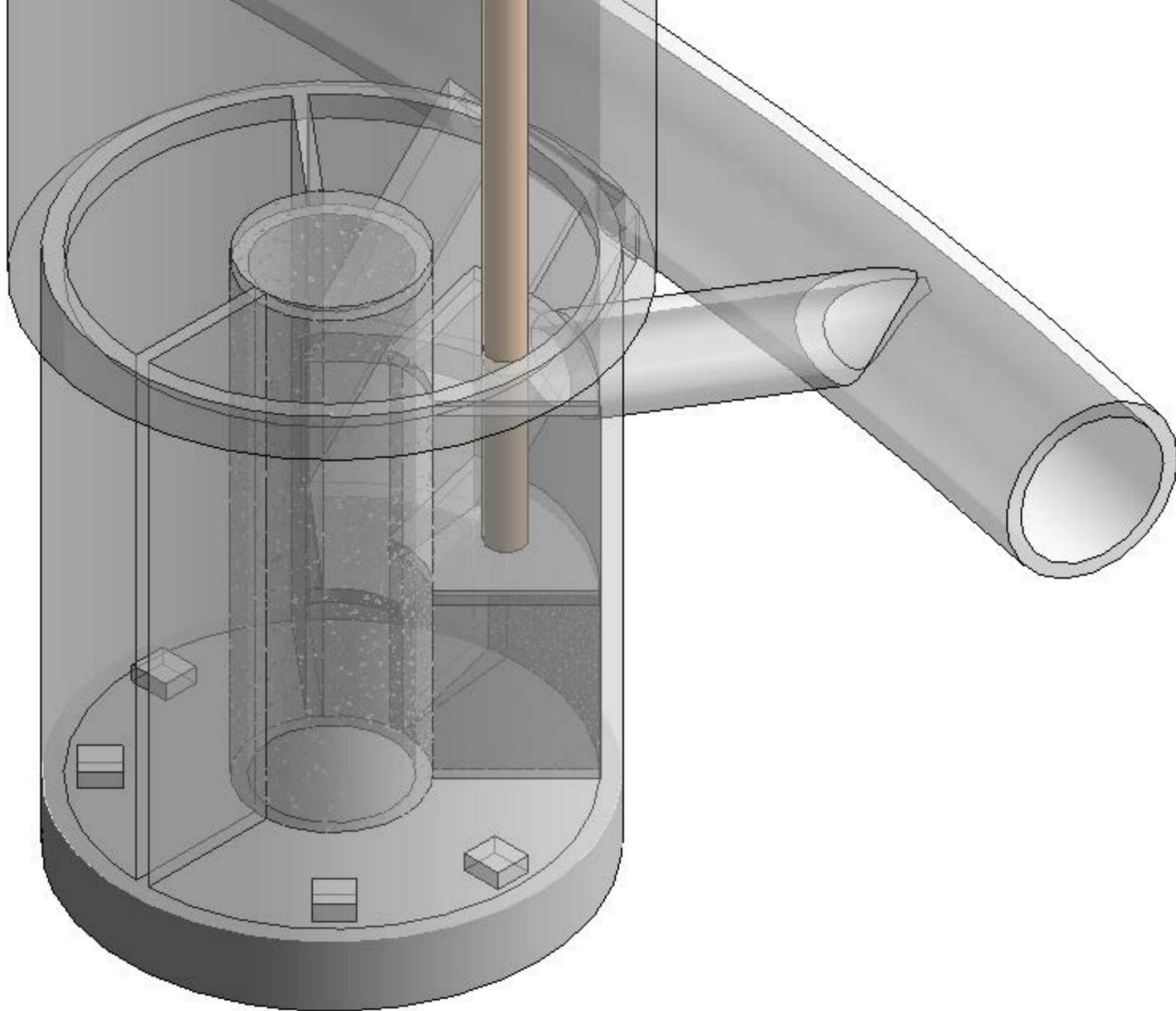
## POWERING THE FUTURE >>> HYDROGEN

We are transitioning to shape a colourful energy future through supporting the construction of blue, green and other types of hydrogen facilities. With access to existing CO2 transportation systems and storage facilities and low-carbon electricity sources, combined with low-cost feedstock, Canada is well-positioned to be one of the world's lowest-cost producers of low-carbon hydrogen. Supported by our multi-disciplinary service offerings, we provide solutions for the development of green hydrogen from the initial clean energy generation through to electrolysis and gas distribution.

As Canada's natural gas system eventually transitions to a blended hydrogen network, we are ready to support with any blending projects, including compressor station retrofits, industrial or commercial facility modifications, new facilities, or other modifications required to transition our critical infrastructure. We have experience in all major market sectors and resources across Canada, and can provide the expertise and construction services for the energy transition developments for our infrastructure.

## POWERING THE FUTURE >>> RENEWABLE NATURAL GAS

Bird is involved in the development of organic waste processing and RNG facilities for our public and private clients across Canada. We offer in-house expertise on organic waste processing design, technology, and construction that converts organic waste streams into biogas, and then upgrading the biogas to renewable natural gas quality before injecting it into the natural gas piping infrastructure. We are proud to assist our clients with the implementation of sustainable solutions that optimize society's environmental infrastructure and that support a lower carbon footprint.



## DEVELOPING UNTAPPED RENEWABLE ENERGY SOURCES

### Alliance with Noventa Energy Partners

In October 2021, Bird entered into an Alliance Agreement with renewable energy company Noventa Energy Partners to pursue opportunities for wastewater energy transfer (WET) projects across Canada. The WET projects will deploy the Huber ThermWin® System, for which Noventa Energy is the exclusive distributor in Canada and the United States. Wastewater is a relatively untapped renewable energy source that is underutilized in North America, and currently developing opportunities represent over \$500 million and 150MW of energy.

Our first project with Noventa is the recently announced Toronto Western Hospital WET project. This is the world's largest raw wastewater energy transfer project and, once complete, it will provide over 19MW of low-carbon thermal energy to the hospital facility, which is approximately 90% of the hospital's heating and cooling requirements. Over the next 30 years, the hospital will see a cumulative reduction in greenhouse gas emissions of more than 250,000 tonnes — displacing 1.35 million cubic metres of natural gas, 143,000 megawatt hours of electricity consumption, and 1.4 million cubic metres in water usage, the equivalent of 560 Olympic-sized swimming pools.

The milestone project for Toronto Western Hospital encompasses the construction of an underground vault that will house 16 Huber wastewater heat exchangers and five chiller/heat pumps, the excavation of a 38-metre-deep wet well that will be connected to the sewer main, and the retrofit of the hospital's existing heating steam system to a low-temperature hot water system and provision of chilled water cooling.

The Toronto Western Hospital project has been funded with the support of the Canada Infrastructure Bank, VanCity Community Investment Bank, and a grant from Canada's Low Carbon Economy Fund — a \$2 billion fund to support clean growth and reduced greenhouse gas emissions.

“Wastewater is a relatively untapped renewable energy source that is underutilized in North America and, working closely with our partner, we are excited to bring this valuable, sustainable solution to institutions across Canada.”

Terrance L. McKibbin  
President and CEO of Bird

**>250,000 Tonnes**

Cumulative reduction in greenhouse gas emissions

<b>= 1.35 M cu. m</b>	<b>= 143,000 MW Hours</b>	<b>= 1.4 M cu. m</b>
Natural gas displaced	Electricity consumption	Water usage



## POWERING THE FUTURE >>> NUCLEAR

### Bruce Power Major Component Replacement Office Complex and Training Facility Kincardine, Ontario

Bruce Power provides clean, reliable, low-cost, zero carbon nuclear power to the province of Ontario. Together with the Independent Electricity System Operator (IESO) and the Ministry of Energy, Bruce Power established the coordinated Major Component Replacement (MCR) Program, which aimed to refurbish five units at the plant over 13 years to ensure that electricity could be produced until 2064. The project was also seen as a force for local economic development, providing jobs and training to hundreds of people, and contributing to the establishment of the region as a hub of innovation for the nuclear industry.

In order to achieve these goals, a unique training environment was required where skilled personnel could gain hands-on, in-depth practice executing the highly technical MCR programs. The training would ensure that the MCR program was delivered safely, on time, and on

budget. Bird was part of a consortium led by Concert Infrastructure to design, build, finance, and maintain Bruce Power's new office complex and training facility. In addition to the training facility, the almost 129,170-square-foot complex included a two-storey office area with office space, classrooms, amenities, and facilities for 500 employees. Site development included site services, a stormwater pond, the extension of a municipal road into the site, parking, and landscaping.

Bird utilized various Virtual Design Construction (VDC) tools to enable the effective collaboration and management of the project with our own design team and the owner's engineering firms, including design firms from Switzerland, the USA, and Canada. By working together on a single platform, constructability and discipline clashes could be identified in advance, resulting in schedule and construction cost savings.



### Canadian Nuclear Laboratories (CNL) Advanced Nuclear Materials Research Centre (ANMRC) Chalk River, Ontario

The ANMRC is considered Canada's largest Integrated Project Delivery (IPD) project. It will be one of the largest nuclear research facilities ever constructed in Canada, and will enable world-class research in nuclear energy, health, environmental stewardship and global security. Overall, services provided at the ANMRC will be critical to the life extension and long-term reliability of existing reactors, including Canada's fleet of CANDU nuclear power reactors and other designs deployed around the world.

The approximately 108,700-square-foot research centre is a major part of the Chalk River Laboratories revitalization and will include the installation of 12 new nuclear hot cells, associated post-irradiation examination laboratories, and office space.

In November 2021, Bird announced that the validation phase of the contract had been successfully completed. By implementing Target Value Design to collaboratively understand objectives, constraints, and goals in the development of this facility, the joint venture team focused on the overall use of the facility in order to adapt the design to implement cost-effective ways to attain the desired outcomes. Construction of the technically complex research facility is anticipated to be completed in 2026.



## SMALL MODULAR REACTORS (SMR) SMART ACTION PLAN

Bird's nuclear construction projects portfolio extends over 40 years, from the construction of Atomic Energy of Canada's Whiteshell Nuclear Laboratories in Pinawa, Manitoba, through to our current joint venture project to construct the Canadian Nuclear Laboratories (CNL) Advanced Nuclear Materials Research Centre at Chalk River, Ontario. Bird's design and construction projects in Canada's energy sector include diverse projects performed in remote communities with significant Indigenous populations, industrial settings, and nuclear facilities. Some of Bird's most satisfying projects have significantly improved the lives of residents of Canada's North. These socially beneficial project experiences have propelled us to investigate alternate future solutions for fulfilling remote communities' basic infrastructure needs, including the critical need for safe, clean and reliable energy sourced from off-grid generation.

Small Modular Reactors (SMR) have the potential to provide a range of economic, geopolitical, social, and environmental benefits. Bird is committed to the Statement of Principles outlined by Natural Resources Canada's SMR Roadmap and will support the SMR Action Plan through our reputation, partnership resources, and national presence.

Bird's contribution to Canada's SMR Action Plan incorporates a progressive approach towards providing sustained economic opportunities and benefits to the local residents of remote Northern communities. While design and construction technologies have evolved greatly through the years, Bird has remained at the forefront in developing new integrated design-construction methodologies. Our diligence and passion for design-construction excellence has resulted in improved field work efficiencies, and subsequent reduction in total project capital cost and schedule. We have freely used our tested approaches to train successive generations of locally sourced construction workers and construction management professionals.

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"Canada is investing in the full suite of the energy technologies we will need to achieve net zero emissions by 2050. Nuclear energy is part of achieving these objectives. We also see tremendous potential to expand safe nuclear technologies – in Canada and around the world."

**The Honourable Seamus O'Regan, P.C., M.P.**  
Former Minister of Natural Resources

Bird's vision for SMR implementation centres on regional development of Canada's North, expertly executed through meaningful dialogue, and stakeholder communication and participation:

- Supporting Indigenous communities in preparing SMR project development plans and funding proposals.
- Supporting heavy industry in preparing SMR project development plans and funding proposals.
- Establishment of a SMR construction innovation and worker training hub at Bird's Edmonton fabrication facilities.

We are also collaborating with major nuclear sector clients to evaluate constructability and modularization strategies for SMRs, particularly in relation to building foundations and other civil works, as well as undertaking constructability reviews for site buildings and process systems. We are involved in the planning and execution for the full nuclear lifecycle, from supporting the mining and processing of uranium through to the responsible, long-term storage of nuclear waste.



## POWERING THE FUTURE >>> CARBON INNOVATION

Carbon capture technologies, including underground cavern storage, will be essential to developing low-carbon hydrogen in Canada, positioning the country to apply its resources and assets to become a major exporter of hydrogen.

Bird assists clients on their journey to achieving their carbon capture targets by retrofitting grey hydrogen facilities, as well as constructing new carbon capture systems. Strategically located within close proximity to the existing Alberta Carbon Trunk Line and other storage facilities, we assist with bringing systems together to support the reduction of greenhouse gas emissions.

Solutions vary from micro-generation daily power storage, hydrogen holding tanks to large underground storage (UGS) in depleted oil and gas fields, saline aquifers or salt caverns. With world-class CO<sub>2</sub> storage geology, Canada is in a strong position to responsibly develop the hydrogen infrastructure required to support a green hydrogen economy.

Bird was engaged early in the project planning process in support of the world's first commercial-scale carbon capture and storage (CCS) facility, and completed the deep undergrounds, civil, and project foundations. This facility has captured and stored over six million tonnes of CO<sub>2</sub>.



## ENVIRONMENTAL

Bird has over 50 years of experience with environmental construction and upgrade projects, executing projects across the full spectrum of our country's water and waste network. Our teams collaborate with technology providers and engineers to deliver progressive solutions. We are committed to delivering efficient facilities that improve our way of life and our impact on the planet, from water, wastewater, and biosolids processing, to waste management, organic waste processing, and composting facilities. It is part of our commitment to build green, work green, and live green every day.



### Capital Regional District (CRD) Residuals Treatment Facility

Victoria, British Columbia

The Residuals Treatment Facility (RTF) project is a major component of the overall Wastewater Treatment Project for the Capital Regional District in Victoria, B.C., which includes the core area municipalities of Victoria, Esquimalt, Saanich, Oak Bay, View Royal, Langford and Colwood, and the Esquimalt and Songhees First Nations.

The state-of-the-art facility will process 14,000 dry tonnes of residual solids from the McLoughlin Point Wastewater Treatment Plant and produce thermally dried Class A biosolids using anaerobic digestion processes. The resulting biosolids can ultimately be used as an alternate fuel source. The biogas generated through the digestion process is used as the primary fuel source for process heating. There is future potential for the excess biogas that is currently flared through a waste gas burner to be recaptured for further use. In addition to the biogas, the excess plant water generated from the dewatering equipment is filtered and reused in other areas of the plant. The operations building followed LEED® principles in the design and construction.

Bird is part of the joint venture that was awarded the design, build, finance, operation and maintenance contract, and has been involved in all aspects of the project. Bird led the financing for this project, as well as undertaking the initial planning, design and construction management, environmental approvals, site safety, and quality control.

Responsible environmental stewardship and respectful community engagement are core values for our teams. We always look for opportunities to work and build green:

- **Preserving history:** Archaeological training was provided to contractors during excavations to ensure the preservation of archaeological materials in the event of a discovery.
- **Indigenous engagement:** Bird encouraged subcontractors to train and retain members of the Esquimalt First Nation and Songhees First Nations through the course of construction on a full-time basis.



### Lloydminster Wastewater Treatment Facility

Lloydminster, Saskatchewan

This is the largest wastewater IPD project in Canada. Delivered using a CCDC30 IPD contract with our joint venture partner, Bird's substantial self-perform capabilities, and collaboration between in-house designers, engineers, and fabricators, assisted in determining the right fit for the City of Lloydminster.

The mechanical water treatment facility is centered around a membrane bioreactor, and includes large partially buried concrete tanks for the primary clarifier, equalization and fine screen chambers, bioreactors, and the membrane tanks. Process equipment will be housed in a pre-engineered process building. Bird is undertaking work on the process wing, headworks building renovation, and the administrative wing, amongst other

responsibilities. As part of the joint venture, Bird is self-performing a number of components including concrete, process mechanical, process electrical, construction management, and subcontractor management.

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This is the largest wastewater IPD project in Canada.



### City of Hamilton Biosolids Management Facility

Hamilton, Ontario

Featuring an innovative finance structure, this is one of the first projects of its kind supported by Infrastructure Canada and will act as a model for future municipalities. This project included the design, construction, financing, operation, and maintenance of a new 60,000 wet tonne per year biosolids processing facility that utilizes a thermal drying treatment process. The objective was to achieve a stable, long-term solution for biosolids management, which includes a 30-year operations and maintenance contract with renewal options. Bird played a key role in developing and maintaining relationships with the partners, operator, and client.

## STACK MODULAR

Bird's investment in modular construction, through our 50% partnership with Stack Modular, contributes to our overall environmental sustainability focus. As an off-site manufacturer, Stack Modular builds innovatively, with less footprint and smarter resource usage through pre-planning and waste reduction methods. Stack's goal is to challenge and reimagine steel modular design, bringing the most efficient design to the market.



Less material waste



Less labour



Less noise and disruption



Less risk



Less energy use

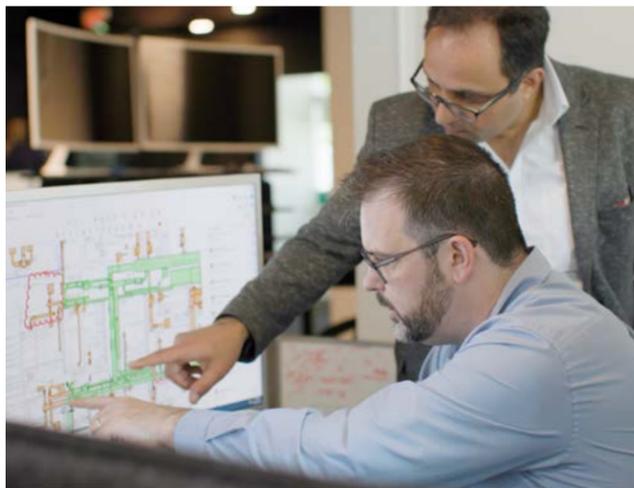




## DELIBERATE DESIGN

The challenges posed by extreme climate events necessitate resiliency in new building design that addresses increased energy demands on space heating and cooling, wind and storm resistance methods, and designing for deconstruction. An intelligent design is critical, and through continuous research and development, Stack has created a superior building envelope and weather proofing system that ensures safe transport of units across oceans and exceptional resilience to severe weather. The design also exceeds thermal performance requirements in major jurisdictions, which results in less energy use to heat and cool buildings. Stack's off-site manufacturing ensures that the thermal building design intent and all other quality assurance points are achieved through a controlled, indoor environment.

Having invested heavily in building envelope design to address thermal efficiency, Stack's research and development team is leveraging that success into researching methods to reduce the amount of steel in the framing and connection detail design, exploring the possibility of making the units lighter and more flexible without compromising on seismic requirements.



## MATERIALS SOURCING

With access to over 5,000 vendors, Stack has commenced discussions with key suppliers to introduce environmental criteria into vendor selection, with the intention to identify opportunities for improving the carbon impact of product offerings. Many of Stack's suppliers have already undertaken evaluations within their own supply chains and work is underway to address this challenge.

## STEEL

Stack's modular buildings are constructed with light-gauge structural steel which, like all steel, can be recycled indefinitely, making it the most recycled material in the world and an excellent material for re-use. While global steel demand continues to grow year over year, requiring new material to be produced, the process for steel production has undergone significant regulatory developments and technological innovation to reduce the impacts to the environment. The industry continues to innovate with research underway to convert all gases from steelmaking into renewable fuel sources, to power not just the steel plants but to reduce the fossil fuel use of all sectors. Where possible, Stack sources steel framing from manufacturers that prioritize the de-carbonization efforts of the steel producers.

## WASTE DIVERSION AND REUSE

Waste diversion is a key metric at Stack. The highly replicable nature of modular manufacturing allows for re-purposing of many materials from one project to the next, ensuring that excess is not discarded. Operating in a major, global manufacturing hub means that most materials that would be otherwise destined for the landfill elsewhere are raw materials for many other local suppliers.



## TECHNOLOGY

Building Information Modeling (BIM) and Virtual Design Construction (VDC) facilitate design analytics, clash detection, pre-production mock-ups, materials lists and supply chain bill of materials to be done up-front to ensure optimized design and disciplined use of materials resulting in less waste and less energy use. Another useful tool is the HoloBuilder, pictured above, which is an in-factory 3D camera system that enables third party and client inspections without the need to travel to the factory, facilitating real-time collaboration across vast distances.



## LIFECYCLE

Stack's modular light-gauge structural steel frame unit supports sustainable construction through a long usable life and precise construction of off-site manufacturing that improves the performance of the buildings, reducing energy costs to the occupant and lowering emissions. This is further supported by BIM design drawings and off-site QA/QC record-keeping, which make up the turnover documentation for each building. This provides a detailed outline of the building's components, which allows for effective deconstruction of the building when it reaches end of life. Stack's units are designed as structurally independent and fastened together at accessible points, allowing each building to be disassembled at end of life and repurposed or broken down and recycled. The high recyclability rate of steel allows for a recapture of this resource back into the economy.



## BC Housing Corporation

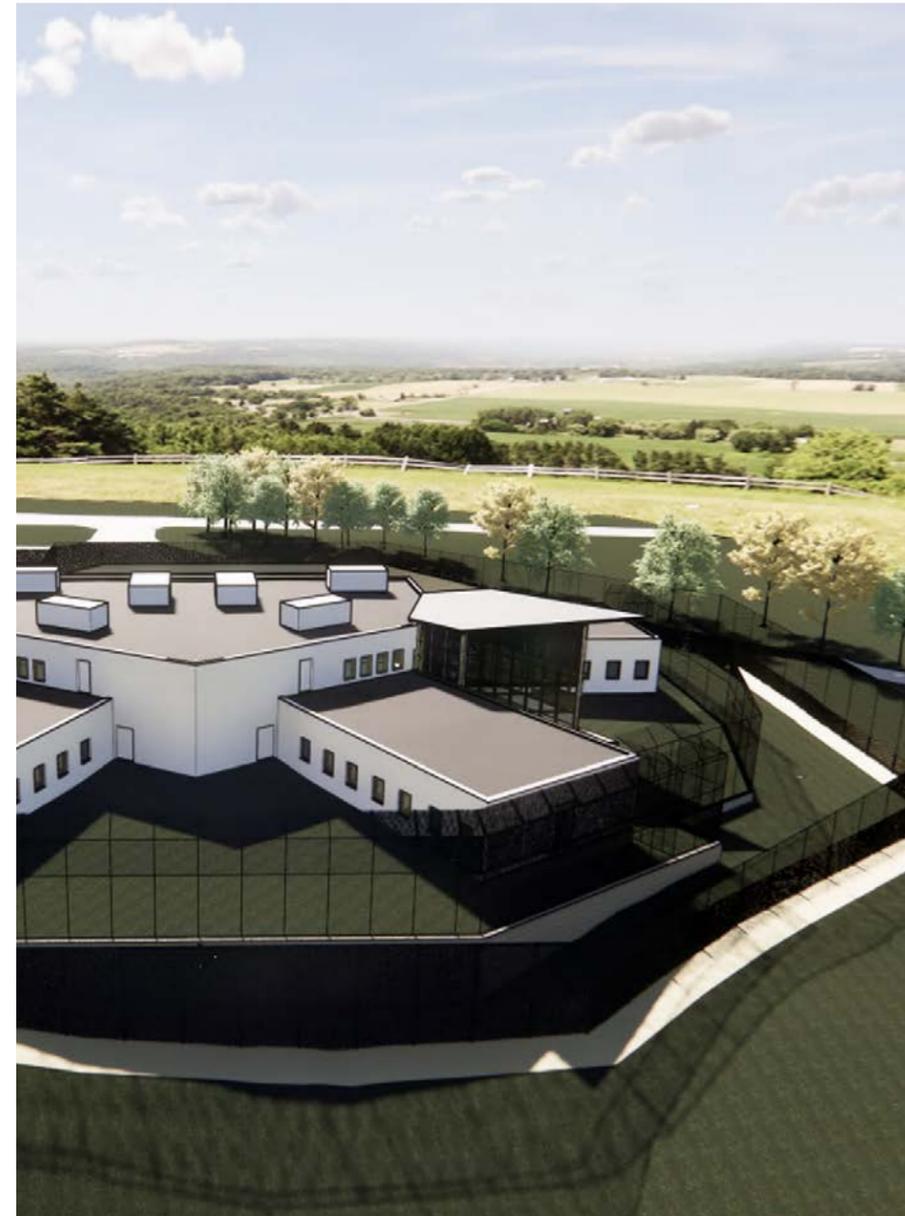
Vancouver, British Columbia

Bird and Stack are collaborating with additional partners on the design for a social housing tower for Indigenous individuals experiencing or at risk of homelessness in Vancouver, BC. The proposed hybrid build combines site-built and offsite construction and is envisioned as a transformation lodge to help those transitioning from homelessness to find a culturally safe path to recovery and stability. At this stage of design, the new 14-storey social housing tower will contain over 100 modular studio units complete with bathrooms, kitchens, a living area, and storage. The ground and second floors will be utilized as service spaces and offices for tenant support workers, as well as accommodating a shared laundry facility and a common dining area. Outdoor amenity spaces will also be provided on nine decks, along with a large outdoor rooftop area.

When completed, the Passive House Certified Supportive Housing project will be the tallest modular structure in Canada, and will include:

- High-performing envelope
- Highly insulated exterior wall, roof, and floor assemblies
- Passive House-Certified Energy Recovery Ventilation supplying fresh air to all units
- Air sourced heat pump for cooling and heating
- Highly efficient in suite and commercial kitchen equipment
- Passive House certified windows





## Kenora Jail and Thunder Bay Correctional Centre Expansion Ontario

Underpinning Bird and Stack's proven ability to provide rapid delivery solutions, the partnership was awarded the contract for the accelerated builds at Kenora Jail and Thunder Bay Correctional Centre. Our teams are bringing together experience and local expertise, reaffirming our commitment to building meaningful partnerships with regional communities including engagement with local Indigenous communities. This includes a formal Indigenous Benefits Plan that incorporates employment, procurement, and design input. Among the measures included is a mandate that all subcontractors must employ at least one Indigenous person as part of their workforce. To date, Indigenous workers have accounted for 15% of the workforce hours on this project.

**15%** Indigenous workforce hours

The Kenora Jail and Thunder Bay Correctional Centre expansions leverage Bird's integrated conventional site construction and Stack's innovative modular construction solutions. When complete, the additions will address capacity pressures and provide additional space for effective programming and improved services, including literacy, technology, skills development, and other culturally relevant programs that support safe community reintegration.



## Modular Building Institute Award

In 2021, we highlighted a significant milestone in the Bird/Stack Modular strategic partnership: our first completed project as partners. The Aqsarniit Hotel and Conference Centre is a full-service hotel and conference centre located in Iqaluit, Nunavut, and is comprised of a 5,005-square-foot conference centre, 94-room full-service hotel, lounge, restaurant, commercial space, and gym. The award-winning property is owned by the Qikiqtaaluk Business Development Corporation, a wholly Inuit-owned development corporation.

One of the more challenging components of the build was engineering it to meet the highest energy efficiency standards in one of the world's coldest climates. Among the features that sets this build apart is the design of the structure, which utilizes outboard insulation to optimize thermal performance and assists in creating an energy-efficient building envelope that is not only environmentally friendly, but also reduces annual energy costs by approximately 10%. To date, the Aqsarniit Hotel and Conference Centre has exceeded energy performance targets.

In 2021, Bird and Stack Modular were awarded first place by the Modular Building Institute for "Permanent Modular Hotel Over 10,000 sq.ft", based on the criteria of architectural excellence, technical innovation and sustainability, and cost effectiveness. The completion of this project, and the recognition that it is receiving, demonstrate that turnkey modular builds can rival the most advanced onsite projects without compromise.

"This hotel is a great example of an innovative, socially, and environmentally responsible build, incorporating local labour, constructing with a low waste method, and delivering a highly energy efficient solution."

**Terrance L. McKibbon**, President and CEO of Bird

"It was exciting to see our first project come to life alongside our partner, Bird. Being recognized on a global scale through this prestigious award signifies our unique value offering."

**Jim Dunn**, President and CEO of Stack

The Aqsarniit Hotel and Conference Centre

Photo Credit: Bill Williams



## PREFABRICATION

The prefabrication team offers assistance early in the design phase to develop specialized modular solutions and off-site fabrication assembly strategies that provide cost certainty, quality, schedule control, and reduced project risk. The offsite fabrication and assembly of specialty modular skid units mitigates site safety risks and improves overall usage and waste of consumables.

Offsite fabrication and modularization contribute to our sustainability goals through:

- Waste minimization and lower waste removal costs
- Improved project schedules as fabrication and module assembly occur in parallel with site development and piling programs
- Improved quality due to a controlled module yard environment
- Reduced site execution risk, including reduction in traffic to remote project sites
- Improved safety performance
- Increased productivity
- Reduced site laydown space requirements
- Reduced onsite power consumption
- Recyclability of steel

## 84.76 Tonnes

Ferrous metals recycled in 2021



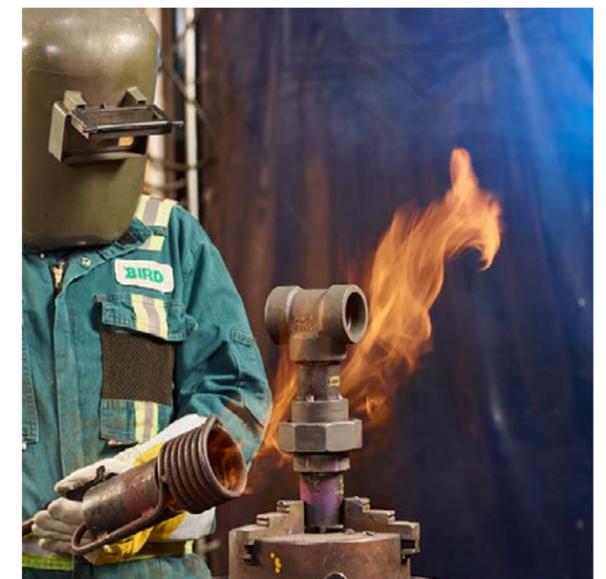
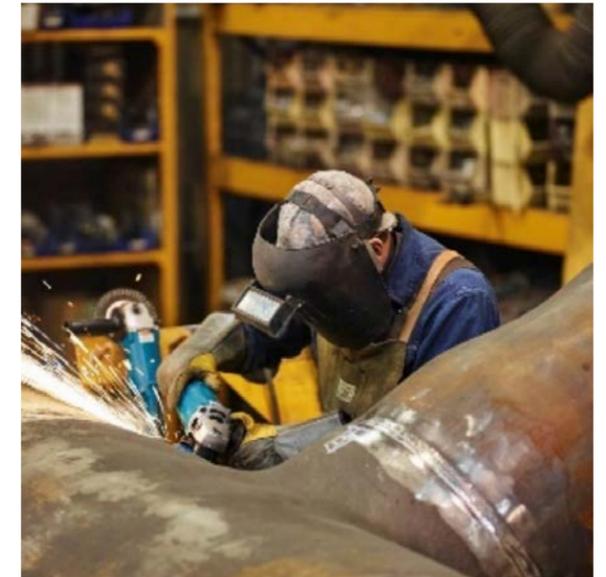


## PREFABRICATION IMPROVES SAFETY AND EFFICIENCY, AND REDUCES WASTE

Fumes associated with production cutting are captured in a fume collection system, reducing harmful exhausts and capturing any hazardous particulates. Clean air is released after the filtration process is completed. These collectors help to prevent safety risks and health problems caused by dust, fumes, mist and smoke, and improve worker safety and comfort.

The recyclability of steel makes it a very sustainable material. Scrap metal recycling plays a critical role in reclaiming valuable secondary materials for reuse into new products, helping us to conserve natural resources and reduce landfill waste. All of our scrap metal is sent for recycling, and additional bins are utilized to recycle remaining materials, resulting in minimal landfill waste. In addition, scrap bins are organized between ferrous and non-ferrous materials to support recycling and product reuse.

Our shop uses an electronic consumable distribution system that promotes the efficient use of consumables and reduces overall waste. This improves productivities and provides better visibility and control.



## PREFABRICATION SOLUTIONS IN 2021

- Our fabrication team designed a solution for steel utility racks for a wastewater treatment plant that would traditionally have been stick-build site erected work. We revised the design and fabricated and assembled the racks at our facility, thereby taking advantage of the benefits of modularization.
- Nine complex mechanical buildings were completed for three compressor station upgrades. These buildings were fabricated and commissioned in our yard, and included a utility gas skid, an instrument air skid, and a heat medium skid.
- We constructed a turnkey e-house building for an original equipment manufacturer in our facility and transported it to an Ontario site as a “plug and play” unit. This approach demonstrates the advantages of modularization, which provides a more efficient and faster means for delivering complex components using our controlled shop environment.





# WORK GREEN

## DIGITAL CONSTRUCTION

By effectively leveraging technology to deliver innovative solutions for sustainable construction, we can build smarter, more efficient facilities that meet the needs of clients and communities. Fully connecting the physical and digital world reduces unknowns and provides deeper insights, resulting in higher consistency and an enhanced quality of work. Electronic management, communication, and follow-up of all project drawings, images, submittals, deficiencies, progress tracking, schedule visualization, and quality considerations ensure that all project stakeholders reference a single source of the truth at any time, helping to keep projects on time and on budget, and reducing our carbon footprint. By building common platforms and core processes, and leveraging best practices, we create a collaborative environment for safe execution, efficient reporting, and strong data security based on reliable information.

Fully connecting the physical and digital world reduces unknowns and provides deeper insights, resulting in higher consistency and an enhanced quality of work.



Maximize energy efficiency



Reduce material waste



Enhance safety



Reduce risk



## BUILDING INFORMATION MODELING (BIM)/ VIRTUAL DESIGN AND CONSTRUCTION (VDC)

BIM/VDC is a set of technologies, processes, and policies enabling multiple stakeholders to collaboratively design, construct, and operate an asset in virtual space. At its core, BIM/VDC creates a single, dedicated environment based on all the digital information available for a project, which enables visualization of all design and construction activities through an integrated process. By leveraging project information for constructability, coordination, and communication, site performance is improved and efficiency is enhanced throughout the build for all project stakeholders.





**Working in virtual environments that simulate project activities offers a range of benefits:**

- Efficient logistics planning by simulating challenging logistics activities
- Schedule visualization (4D scheduling) enhances construction schedules
- Fully immersive construction experience for all trades improves communication and collaboration
- Full integration between drawings, project images, and shop drawings improve insight and oversight
- BIM significantly boosts coordination among project teams
- Automated quantity takeoffs reduce waste
- Progress tracking in a model environment provides greater schedule certainty
- Laser scanning for better quality control and as-built model/drawings delivery
- Reduction of overall risk of design conflicts and revisions
- Clash detection for reduced rework
- Supports safe and productive execution
- Integration with facility maintenance services to maximize lifespan.

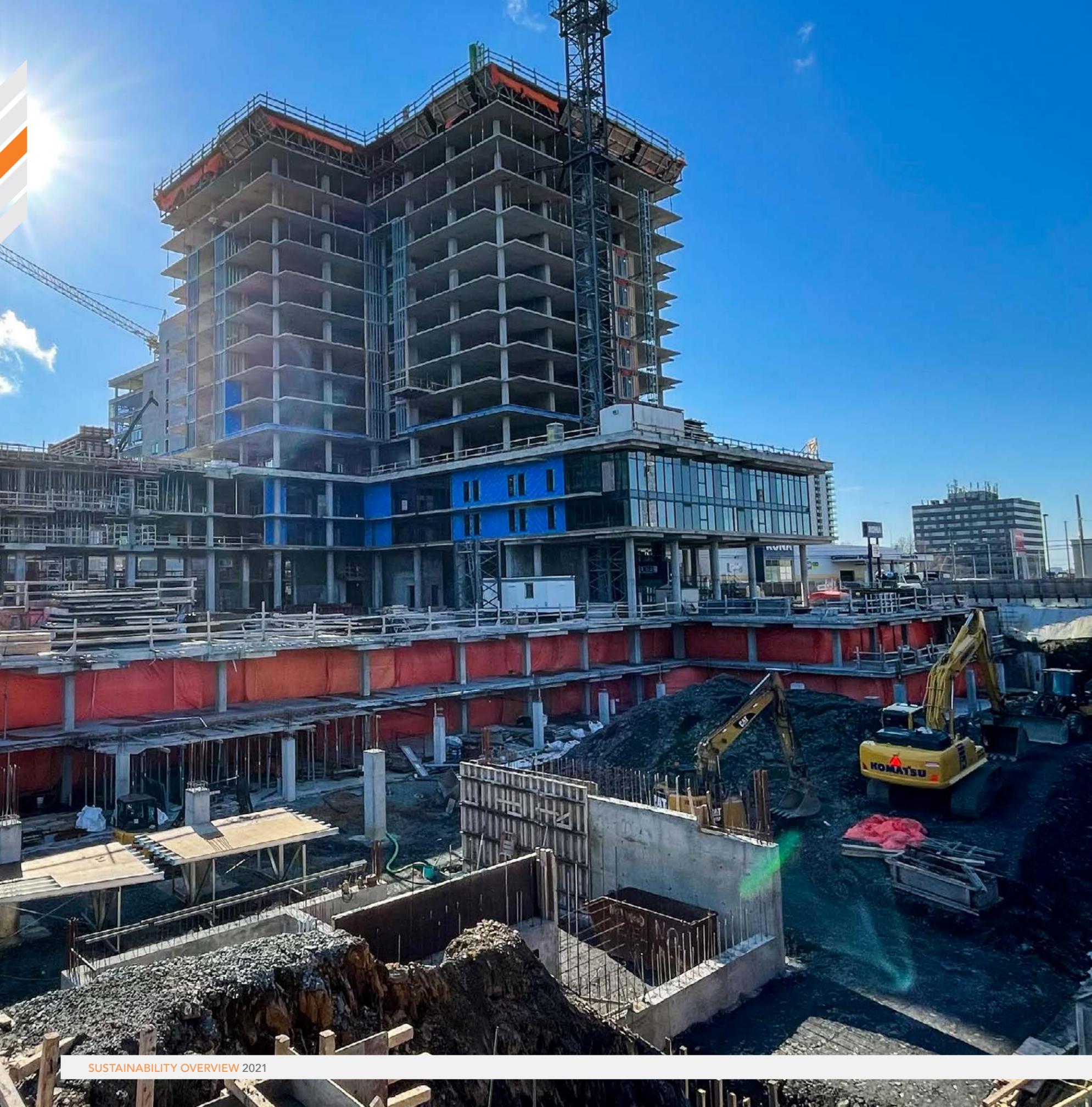


Considering a project in its totality from every angle before setting foot on site provides a new level of optimization as it promotes the consideration of alternatives and the identification of opportunities without additional risk. Advances in technology show the potential impact of different materials, the advantages of new approaches, and gains from process and design tweaks.

**Greener solutions such as modularization, prefabrication, or Mass Timber can be tested and assessed within the digital environment.**

Throughout the lifecycle of a project, Bird's digital construction processes support project delivery through enhanced clarity, improved quality, and transparent communication of project activity to maximize efficiency on site. After completion, the digital model improves total cost of ownership through simplified operations and maintenance. If specified, the model provides the owner with a complete set of detailed information relevant to the asset's construction, enabling repairs and replacements to be anticipated through maintenance schedules rather than manual inspections.





The utility of digital construction extends beyond the design and construction phases of a project. A key consideration in sustainable construction is the performance of a structure and its systems over the lifespan of the asset. Optimized operations and energy management depends on reliable and timely information. A comprehensive digital asset at handover forms the foundation for a responsive approach to sustainable management.

### Richmond Yards Halifax, Nova Scotia

This mixed-use development is located in the heart of the Halifax Peninsula and will include approximately 74,676 square feet of office space, 46,000 square feet of retail space (including eight live/work studios), 500 residential units, and a parkade containing 600 underground and 50 surface parking spaces.

Designed to be highly walkable, the neighbourhood will be linked to bike lanes and public transit hubs and is designed for people to live, work and create all in one central location. Common outdoor green space will be available for public use and events.

Digital construction processes are being utilized to connect all the teams tasked with executing this project, from the architects and designers, to the crews and trades on site. Detailed planning, schedule coordination, and clash detection are just the start. These processes enable teams to track progress and communicate efficiently every step of the way, and can result in significant cost savings.



## INTEGRATING TECHNOLOGY TO BUILD GREEN

Digital construction includes the integration of various technologies and processes, each contributing to the creation of a more accurate and useful digital representation that can transform what is built in the real world. It can detect issues that may impact safety, such as gas leaks. It can incorporate the use of drones to reduce or eliminate the need for hazardous surveyance. It can monitor temperature fluctuations that may affect construction processes. All of this data is brought together within a single platform that empowers our teams to work safely and effectively as we strive to build green and work green.



### DRONES

Drones can remove the human element from hazardous excavations, capture highly accurate and up-to-date site information to monitor construction progress, and understand site constraints in real time to ensure safer sites, stronger collaboration, and better communication.



### LASER SCANNING

Bird uses highly advanced laser scanning technology, which allows for the accurate capture of site conditions. For existing building projects, laser scanning can capture as-built data that may be missing or inaccurate on existing plans, which is invaluable data for the project teams. During the course of a project, laser scanning can track construction progress against the digital model by importing the point cloud into the construction environment. At the project handover, an accurate as-built model is produced that can be used for future expansions.



### SENSORS

The strategic use of sensors can significantly reduce risks during construction, and provide valuable data post-occupancy to ensure that building systems are operating at maximum efficiency. By connecting sensors to platforms such as SkySpark, real-time monitoring can ensure that potential problems are identified quickly and accurately, and immediate mitigating steps can be taken.

Our teams utilize sensors on sites across the country for a variety of purposes, including temperature and humidity monitoring and control, leak detection, and concrete sensors to ensure consistent curing, amongst others.



## ESG IN ACTION : DIGITAL CONSTRUCTION

Sharing best practices across the business forms part of Bird's learning and development program, connecting teams from coast to coast and encouraging expertise exchange that can make our processes more efficient and sustainable. One example of this is the "Quality Lessons Learned" series that shares insights from site around a range of topics.

Given our climate, temporary heating and hoarding on site requires significant resources, both financial and energy related. Even slight improvements and efficiencies can have a notable impact on resource use. The key elements for consideration include the smart selection and deployment of equipment, efficient enclosures, thermostatic control, and air circulation within the enclosure. Among the measures deployed on site are sensors to monitor and regulate temperatures, thermal cameras to identify areas of potential heat loss and ensure temperature consistency, drones equipped with thermal imaging capabilities to monitor larger areas, sensors in concrete to assess ambient heat, and freeze-detection sensors to prevent events such as burst pipes.

Bird has a deep bench of experience across sectors and disciplines that ensures custom solutions can be found for any challenge. Our prefabrication team provided two skidded packages for a major oil sands client to aid with advanced leak detection. The Negative Pressure Pulse package consisted of a collapsible, man-portable platform, housing instrumentation, and tubing designed to provide valuable test data of negative pressure pulse waves associated with pipeline leaks. The Fluid Leak Simulation package consisted of a trailer-portable skid that housed piping, tubing, instrumentation and a programmable logic controller, coupled with a set of injectors that were used to successfully simulate a leak by injecting water into the ground near a sensor array.



# CENTRE FOR BUILDING PERFORMANCE

## Smart solutions for smart buildings

Bird's bespoke cutting-edge technology is paving the way for the future of smart buildings. Our Centre for Building Performance (The Centre) facilitates seamless construction delivery that minimizes environmental impacts throughout the construction process. The Centre supports the lifecycle of a building asset by integrating all building systems data to provide visibility into a building's performance, ensuring it performs as designed. Our platform can be used following construction to manage planned and unplanned maintenance throughout the life of the building. These insights generate analytics, reports, and trends through a single customized dashboard for asset owners.

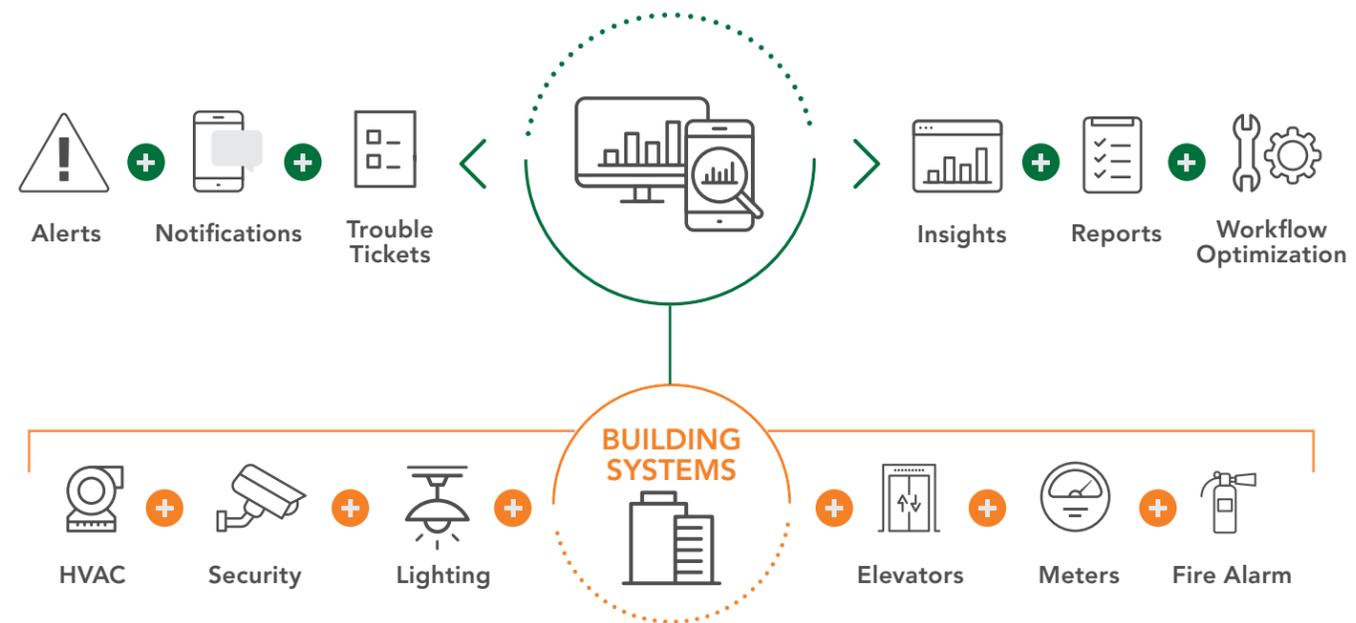


### MEET THE TEAM

"The Centre is essentially a general contractor for sustainability-driven technology with specialists who effectively implement those tools to optimize outcomes. We work with owners, designers, and vendors from the early planning stages to integrate the right equipment, systems, technologies, and processes to meet our clients' long-term sustainability and operational objectives. Verifying that everything works as designed and utilizing data to optimize performance maximizes the efficiency and lifespan of building systems and reduces resource waste. With the tools to measure, verify, and calculate energy consumption, greenhouse gases, and associated costs, we help our clients to actively manage their environmental impact. All of this makes the Centre a valuable resource for sustainable solutions in new-build and retrofit projects."

**Krista Wright**  
Director, Centre for Building Performance

## THE POWER OF INTEGRATION Systems Working Together to Provide Valuable Insights



### BENEFITS AT A GLANCE

Integration of Complex Systems

Real Time Data & Reporting

Alerts & Notifications

Operating Cost Savings

Project Team Collaboration

- Multi-system integration
- Targeted building technology solutions
- Optimized sustainability of building systems
- Reduced operating costs through efficient building management
- Remote management capabilities
- Automated problem detection and notification
- Energy performance data
- GHG data



Building performance solutions can reduce overall capital budgets by optimizing building systems and infrastructure while ensuring a high-performance building and faster occupancy handover. Post occupancy, in-house designed solutions provide valuable insights that help simplify building management and maintenance decisions, reducing operating costs and improving efficiency. Bird is all about building smart and building smart buildings.

### KEY ANALYTICS TRACKED ON OUR STANDARD DASHBOARD:



Energy consumption (including equipment in operation KWH consumption, comparison data over time)



Performance, including equipment performance anomalies



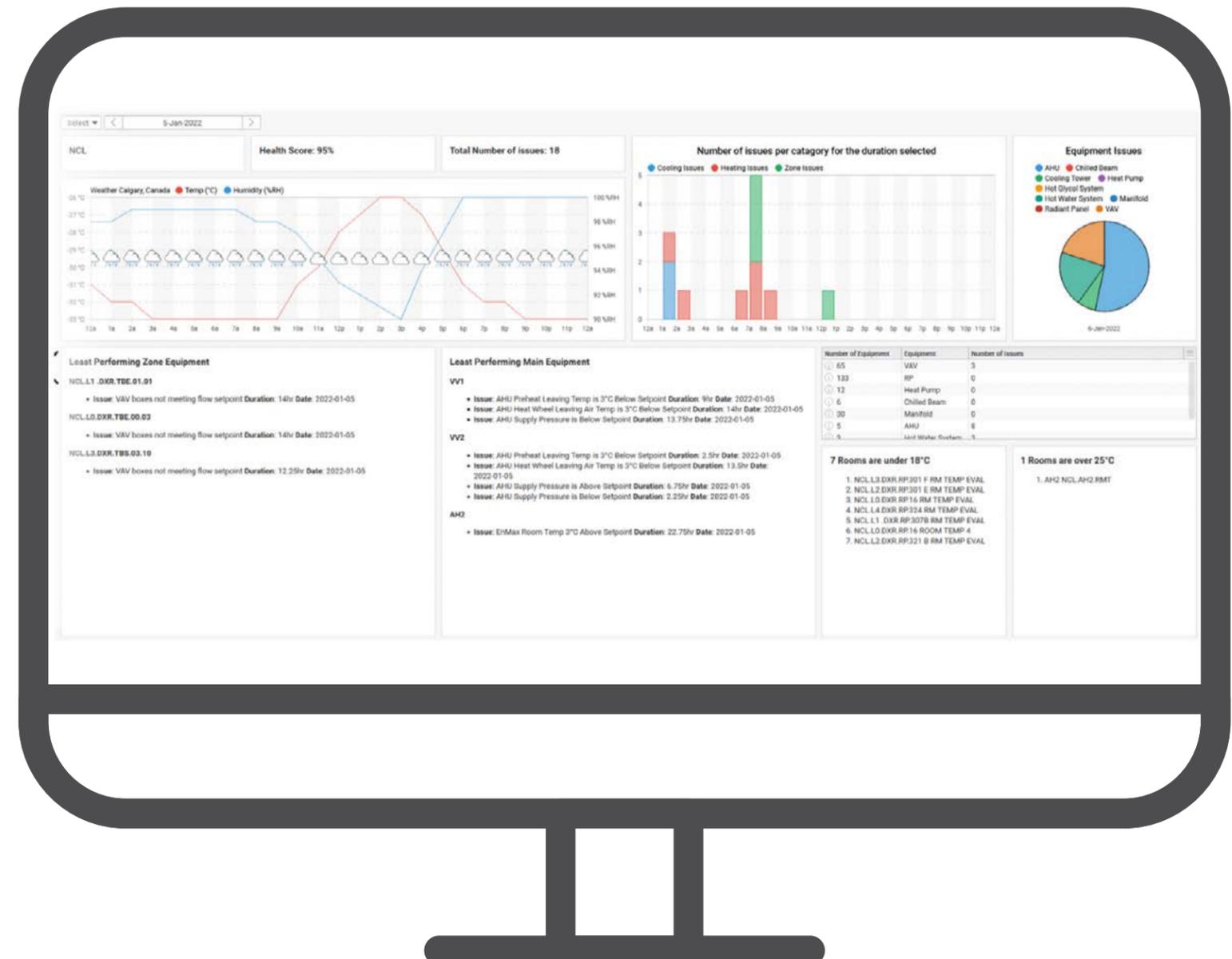
GHG emissions (carbon dioxide, methane, nitrous oxide)



Conversions of gas/energy in the different forms of emissions, and relatable equivalents for context



Cost impacts, including calculated costs of issues



## Okanagan College Health Building

Kelowna, British Columbia

The new 30,000-square-foot Health Sciences Centre is an integrated learning facility that includes programs such as early childhood education, practical nursing, pharmacy technician and human service work. The design aesthetics of the building were developed through a collaborative approach, which included engagement from representatives of the College's Indigenous Committee and members of the Westbank First Nation.

The building has a strong focus on sustainability and occupant wellness. Pursuing LEED® Gold, the Zero Carbon Building Standard, and Silver certification in the WELL Education Pilot Program, will help the College reduce its greenhouse gas emissions and deferred maintenance costs. The Centre for Building Performance connected the mechanical, electrical, and HVAC control systems, and continues to carefully monitor energy performance, including energy consumption per square foot, in order to track compliance with energy targets.

The location of this facility is on a previous landfill site that sits below the water table, requiring deployment of an extensive well point dewatering system. The glue-laminated clerestory structure and cross-laminated timber panels, as well as the facility's interior finishes including millwork, veneers, guardrails and artwork, were prefabricated offsite prior to installation. In 2021, a nine-metre sculpture created by local Indigenous artist Clint George was officially unveiled. Read more about it [here](#).





## Bethany Riverview Seniors Care

Calgary, Alberta

Bethany Riverview is a four-storey, 200,000-square-foot facility designed with seniors' care in mind. In addition to 90 rooms designed for dementia care residents, 118 rooms designed for long-term care residents, and two bariatric resident rooms, it also includes the Rotary Atrium – a beautiful space filled with wandering paths, benches, and lush greenery – that provides a year-round oasis and hub for activities and gathering.

Bethany Riverview's complex, modern design features several technology benefits. The lighting control system shifts lighting within the facility between yellow and blue hues depending on the time of day – a feature that helps balance circadian rhythms and provides a sense of calm to residents. Sensors and analytics were used to monitor the building systems, ensuring that heating and cooling issues were constantly maintained, and issues resolved quickly well ahead of causing negative impacts on residents.

Ongoing analytics on the building systems continued to ensure optimal performance through monitoring and early problem detection, and resulted in significant annual operational savings.

## SUPPLY CHAIN MANAGEMENT

Our supply chain practices and asset management processes are aligned to our core values. We endeavour to work with partners that share our commitment to:

- Conduct business in an ethical and transparent manner
- Prioritize safety at all times
- Prioritize and report on sound labour practices
- Stipulate that there is no forced or child labour at any point in the supply chain
- Employ a diverse workforce
- Seek opportunities to work with Indigenous businesses and communities
- Promote, track, and report on environmental sustainability initiatives
- Utilize local resources responsibly and sustainably
- Minimize environmental impacts where we work
- Integrate social procurement practices into buying decisions

## GUIDING PRINCIPLES



### Competitive, Ethical, and Sustainable

Complete all transactions in a fair, equitable, and accountable manner



### Value

Consider all elements of the value matrix when procuring goods and services



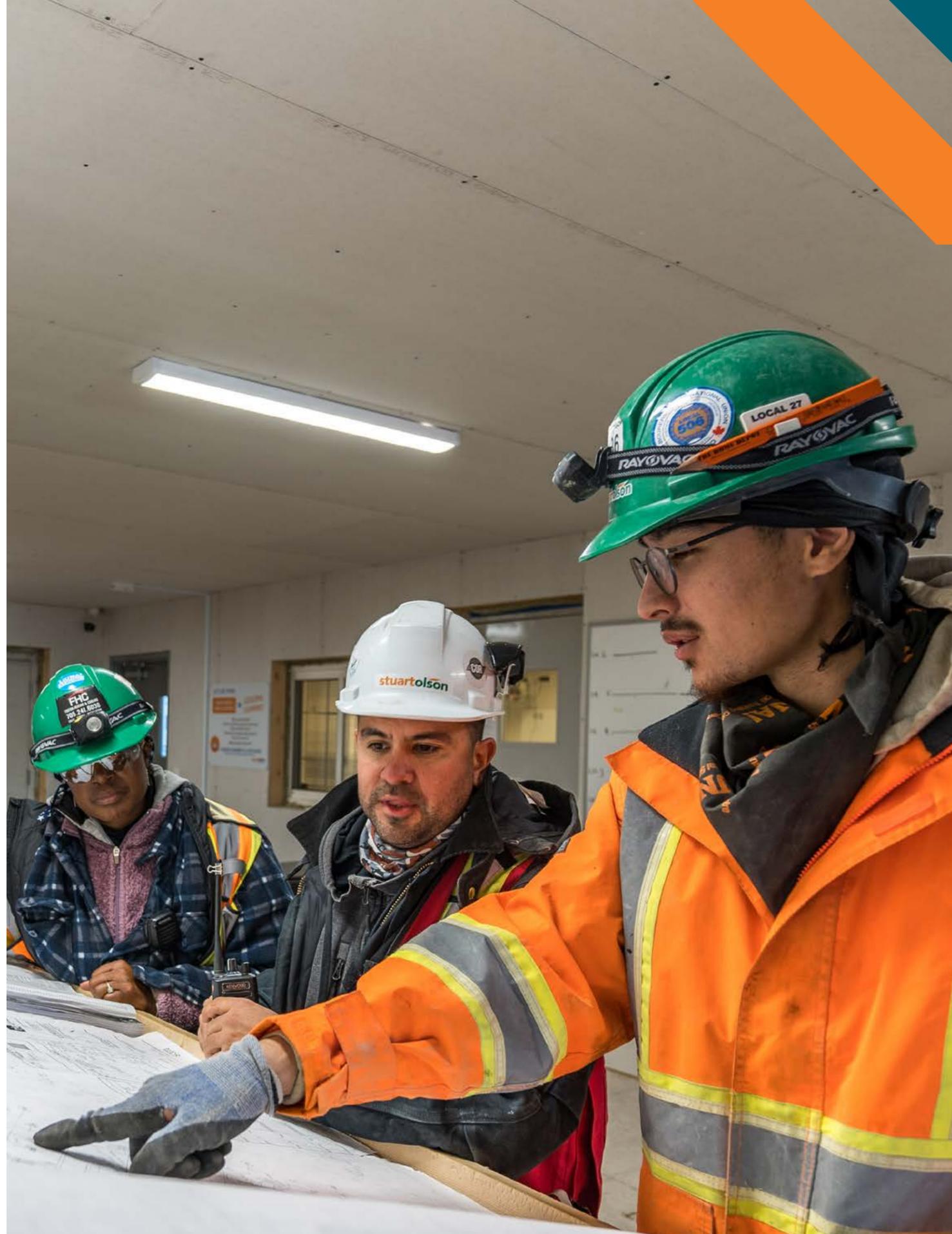
### Trust

Build and maintain mutually beneficial relationships with our internal and external customers and vendors



### Efficiency

Drive continuous improvement and standardization throughout supply chain management processes



## Scaling Up Social Procurement

Procurement can go beyond being a purely financial transaction. It can be a powerful tool for building healthy communities. In addition to taking into account the cost and quality elements of purchases, best value considerations can provide economic, environmental, cultural, and social impacts in the communities in which we work and live. This includes supporting Indigenous and minority-owned business, talking to our suppliers about their policies, and buying local.

Bird Construction is a proud Buy Social Engage Member, and we are working with our teams across the country to consolidate our social procurement processes and practices. This forms part of our comprehensive ESG Program, which will embed our values throughout every aspect of the business. More information about our existing diversity and inclusion policies can be found [here](#), while a snapshot of our robust ethical governance and accountability policies can be seen [here](#).



Social Purchasing  
Partner

## ESG IN ACTION

### York University Markham Centre Campus

Markham, Ontario

The new York University campus in Markham aims to meet the education, research, and innovation needs of an underserved region of Ontario. The first phase is approximately 400,000 square feet and will accommodate 4,200 students in the 10-storey building. Targeting LEED® Silver as a minimum sustainability standard, the design of the building and landscaped areas includes several features that respond to the needs of Indigenous communities within and around the university campus.

The project team is working with York University to ensure that the construction project is a catalyst for economic growth in the communities of Markham and York. The social procurement program, one of the first at a Canadian university, aims to intentionally secure goods and services in a way that benefits the surrounding community by driving positive social change and inclusive economic opportunities, particularly for historically disadvantaged and marginalized equity-seeking people and their communities. This includes hiring local skilled labor, taking on apprentices, and supporting area businesses.

To date, more than \$1 million has been spent at businesses headquartered and operated in the region. Read more about this initiative [here](#).



### Tracking our fleet

Telematic vehicle monitoring systems have been utilized in our fleet since 2017, and have now been installed across 95% of our fleet countrywide. This enables the GPS tracking of vehicles, monitoring of idling times, and recording of fuel consumption. This information feeds into preventative maintenance programs, assists with issue detection, and informs procedures aimed at reducing our carbon footprint.

**95%**

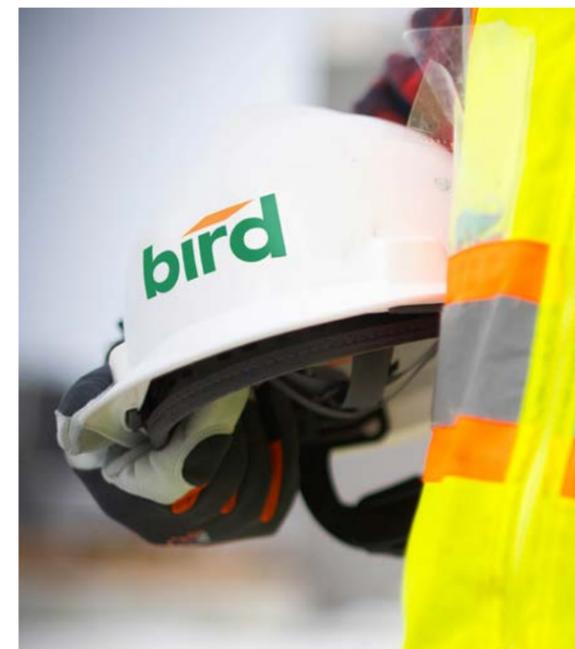
Coverage by telematic vehicle monitoring systems



### Tire Management Pilot Program

Our heavy civil team is participating in a tire management pilot program that utilizes sensors in the tires of off-highway and fleet vehicles (including haulers and loaders) to safely maximize tire lifespan. The monitoring covers every aspect of the tires, from sidewall and rim, to tread and ply. Hours worked, pressure, and age are all tracked. Through a combination of monitoring and rotation, tires can achieve 98% usage before being recycled.

It is just one of the sustainability initiatives introduced by our teams as we seek ways to use resources diligently, intelligently, and sustainably.



### PPE Recycling Pilot Program

Our Industrial maintenance team has implemented a successful recycling pilot program for all their obsolete personal protective equipment. Everything from gloves and hardhats, earplugs to glasses, are collected and recycled, reducing waste to landfill and contributing to making our operations greener. In 2021, the team recycled over 8,000 kilograms of PPE, the equivalent weight of over 3,500 bricks or one pick-up truck.



# LIVE GREEN

## HEALTH, SAFETY, AND ENVIRONMENT

**Safety is an essential component of our DNA. It affects everything we do.**

Bird is recognized for best-in-class Health, Safety, and Environment Management (HSE) systems and industry-leading safety performance. Our health and safety culture is rooted in our commitment to work in a spirit of collaboration with all employees, trade partners, clients, and suppliers to foster a healthy and safe work environment that every worker deserves and that ensures everyone goes home safe every day.

We uphold our high standards through an engaged workforce and vigilant processes that create a culture of complete accountability and personal responsibility. Bird encourages everyone to offer ideas and suggestions to help continuously improve the HSE Program. In our latest employee engagement survey, 98% of respondents indicated that they believed a manager will act on safety concerns. This is an indication of how deeply safety is embedded in our culture, and the certainty that everyone is invested in exceeding safety expectations.

By ensuring that everyone remains motivated and meaningfully engaged in safety through practical, standardized, and effective HSE programs, we can maintain a healthy safety culture that is supported by fair, accurate, and timely decision-making.

**> 10,130,000**

Total Internal Work Hours

**1**

Lost Time Incident

**0.02**

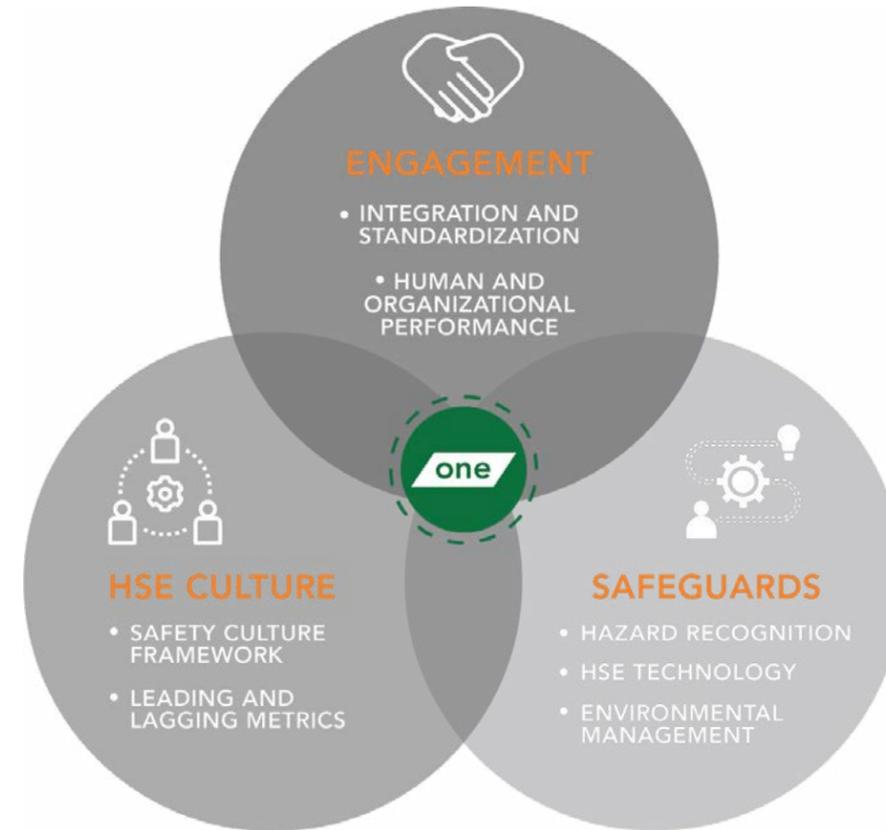
Lost Time Incident Frequency

**6,451**

Tool Box Talks

**10,250**

COVID-19 Inspections



**ENGAGEMENT:**

Our workforce is motivated and meaningfully engaged in safety through practical, standardized, and effective programs.

**CULTURE:**

Our teams thrive in a healthy safety culture that is supported by fair, accurate, and timely decision making.

**SAFEGUARDS:**

We equip our workers to ensure safeguards are always present and we measure our success on the effectiveness of those safeguards. Our safeguards are both safety and environmentally focused.



At Bird, personal ownership is not just a vision or a philosophy. It is a daily routine practiced with discipline and rigour on all our job sites.

- Robust orientation and training programs
- Ongoing communication and engagement activities
- Employee-led site safety programs to recognize peers for safety accomplishments or milestones
- Daily hazard assessments on every site every day
- All workers are encouraged to actively contribute to efforts to continuously improve our safety program and overall collaboration and effectiveness

**MEET THE TEAM**



“Technology can enhance site safety and strengthen safety processes, but nothing is as effective as well-trained, competent, and vigilant people taking personal accountability for their own safety and the safety of those around them.”

**Peter Lineen**  
Executive Vice President, Health, Safety, and Environment



## National Construction Safety Officer (NCSO™) of the Year



Kayla Smith, Project HSE Advisor, was recognized in 2021 for her quick response to a site emergency. Her safety training and prompt action led to an emergency being mitigated in an efficient manner.

While conducting a site tour to provide additional oversight on a high-risk job, Kayla was called to assist a worker from another contractor who had experienced a free fall of approximately 20 feet. When she arrived on the scene, she found the worker conscious, but in extreme pain and with serious injuries. Kayla immediately dispatched site emergency services and took command of the scene, clearing out the area, attending to the injured worker and ensuring that the worker remained conscious, and giving necessary instructions to bystanders to ensure the emergency response team's downtime was limited – all of which expedited the rescue's turnaround time. She also assisted in ensuring

the flow of information was correctly disseminated to the relevant parties. Kayla's composure and command of the scene led to the emergency crew transporting the worker out safely and without delay or further injury.

Kayla was awarded the Alberta Construction Safety Association's **National Construction Safety Officer ("NCSO") of the Year Award** in April 2021. This achievement recognizes individuals who are dedicated to their careers in safety, and go beyond managing projects and initiatives, partaking in extracurricular activities such as training and volunteering. An NCSO™ is a valuable resource for a company's management, ensuring the diligent implementation and administration of its health and safety programs.

Kayla's practical, calm, and effective response to the incident demonstrated the engagement and vigilance upon which our safety culture is built.

### New Brunswick Construction Safety Association Safety Professional of the Year.

Alex Webb of Bird's New Brunswick district was awarded Safety Professional of the Year from the New Brunswick Construction Safety Association for his outstanding contributions to Bird's safety culture. Recognized as a leader on site, Alex continuously strives to meet industry best practices and provide a safe environment.



### Thorough Safety Procedures

A Bird maintenance crew working on a project in Cold Lake, Alberta discovered a stored energy hazard while performing maintenance on a block valve.

The group was tasked with working on a valve on a site piping system. Before proceeding, the team asked if the routine would be within the isolation limits, as they determined the block valve could possibly have trapped pressure. The operator and the crew jointly walked down the piping system to ensure that it was safely isolated. During their walkdown, fluid was found in the system, meaning an incident could have occurred if not mitigated properly. This fluid was then discharged, and the work proceeded safely. Our team demonstrated that following proper safeguard procedures and not accepting a verbal confirmation can lead to failing safely.

They adopted a respectful, questioning attitude and ultimately ensured the task was done safely in a de-energized state. In many cases a safe environment is not the absence of incidents, but rather the presence of effective safeguards and controls.

### Effective Emergency Response

The importance of vigilance and robust training for emergency procedures and rescue plans was underscored last year at a major industrial site. Three Bird team members observed an injured worker from another contractor on site laying at the bottom of a set of stairs in an isolated, low visibility area. Emergency services were immediately notified via radio, and on-site members of Bird's Construction Management Team provided support. The effective manner in which emergency response procedures were put into practice is a testament to our safety culture: one in which the teams on and off the field are encouraged to take ownership and responsibility for everyone's safety.

The quick-thinking and fast-acting Bird workers were recognized by the client for their calm and effective response to the situation.





We are proud to be recognized for safety excellence. Here are a few of the safety accolades Bird teams received in 2021.



### 2021 Canadian Safety Achievement Awards

The team was awarded the **General President's Safety Excellence Award**, the **William Warchow Safety Leadership & Innovation Award**, the **Tripartite Zero Injury Turnaround Award**, and the **365 Daily Maintenance Award**.

### Distinguished Achievement in Health and Safety

Bird's team in Ontario received the **Distinguished Achievement in Health and Safety** from the Ontario General Contractors Association for the second year in a row for achieving a zero-injury frequency.

### 2021 Alberta Construction Safety Association Achievement Awards

The team received the **Lakeland Regional Trailblazer Award**, which is presented to organizations that demonstrate their commitment to enhancing workplace safety and their dedication in promoting health and safety within the communities they serve. The team also secured an **Alberta Construction Safety Award** with Catherine Connauton, Regional Safety Lead, being awarded the **Pacesetter Award**. This award recognizes a safety professional for outstanding service to their teams, and for their commitment and leadership in promoting health and safety in their communities.

### New Brunswick District recognized at 2021 NBCSA Awards

The New Brunswick Construction Safety Association (NBCSA) awarded Bird's local team the **Best Practice Award** for their ongoing work with an electronic mobile safety software, which has enhanced the accessibility of project documents, expediting records requests for auditors, inspectors, and officers. Since implementing the software, the time required for corrective actions has been lowered by 56%.



### Environmental Controls

Effective hazard identification, assessment, and control are critical components for safe production. From project plans and regulatory requirements, to waste management, consumption, spills and emissions control, to best-in-class training, we are committed to performing our work in the safest manner possible as we generate the quality outcomes our clients expect.

Bird's stringent environmental controls aim to leave the environment in the same manner in which we found it. Through daily checklists, tracking and reporting, several ongoing construction controls are adhered to, including:

- Water management through dewatering authorizations to ensure no impact to environmentally sensitive areas or fish and wildlife habitats
- Vehicle and equipment maintenance and idling policies
- Environmentally-friendly product use
- Erosion and sediment control
- Waste segregation
- Secondary containment and proper storage of controlled products fueling procedures
- Proper waste disposal to mitigate wildlife attractants
- Wildlife monitoring.

## COVID-19 UPDATE

The COVID-19 pandemic continued to disrupt global health and the economy in 2021. Bird's vigorous approach to health and safety measures mitigated major disruptions to the business. We increased health and safety initiatives to meet or exceed guidance from applicable public health authorities. Adding to our repertoire of robust protocols, Bird released a vaccination and testing policy to continue to work together to reduce the threat of COVID-19.

The duration of the pandemic and the associated impact to future financial and operational measures are unknown at this time. As a result, the corresponding impacts to key variables including our workforce, supply chain, project pursuit and awards cycle, and project site measures are uncertain. The situation remains extremely fluid; however, we have responded appropriately to the challenges presented to date and are well positioned to continue responding to fluctuating scenarios.

**10,250**

COVID-19 inspections  
in 2021

**17,330**

COVID-19 inspections  
over course of pandemic





## INDIGENOUS RELATIONS

### Building relationships and supporting Indigenous communities through investment and engagement

Bird strives to be a positive contributor to the overall well-being of Indigenous Peoples and groups with whom we interact across Canada. We demonstrate this commitment by building respectful relationships founded on open communication and seeking collaborative business opportunities with Indigenous partners. We invest in skills development initiatives and scholarships that support the aspirations of Indigenous Peoples pursuing careers in the construction industry. Our national Indigenous Engagement Policy aims to ensure a consistent and culturally appropriate approach that respects the diversity of the Indigenous landscape in Canada, while supporting the Truth and Reconciliation Commission Call to Action #92.

We invest in skills development initiatives and scholarships that support the aspirations of Indigenous Peoples pursuing careers in the construction industry.



## A MESSAGE FROM

### PAUL PASTIRIK, SENIOR VICE PRESIDENT, STRATEGIC DEVELOPMENT

Authentic engagement remains the cornerstone of our approach to Indigenous Relations. We are committed to listening and learning in all our interactions with Indigenous partners and communities, and to delivering our projects in a socially responsible way that is mindful of human rights and local residents.

Over the past year, we have entered into new partnerships, built upon existing relationships, and undertaken a range of initiatives with and within Indigenous communities across the country. Among our new partnerships and joint ventures with Indigenous partners is the Memorandum of Understanding with Fishing Lake First Nation and Beardy's and Okemasis Cree Nation in Saskatchewan, which aims to provide value-added opportunities to promote and strengthen relationships between industry and Indigenous communities and businesses.

We have shared some highlights from the year in this report, such as the establishment of the Bird Construction/Paul and Gerri Charette Endowment Fund, which ensures the ongoing financing of a new bursary offered to Indigenous students across the country. We have seen the impact that education can have and are delighted to be able to assist with facilitating access for students wishing to pursue further studies. The formation of this endowment fund is also a

testament to the enduring relationships forged at Bird: Paul Charette, currently an Independent Director on Bird's Board of Directors, previously served as Chair of the Board for 20 years after leading Bird as President and CEO.

We have maintained successful initiatives that are providing practical training to people interested in pursuing careers within construction, such as the Gitxaala/Bird Introduction to Carpentry Program. I am also pleased to share that Bird received the Top Employer of Indigenous Apprentices Award from the Alberta Apprenticeship and Industry Training (AIT) and the 2021 Employer Partnership of the Year Award from the BC Career Development Association.

Valuing diversity and respecting the knowledge and insight shared by Indigenous employees, partners, and stakeholders is central to Bird's culture. Reflecting upon our own learning and seeking to ensure that we continuously strive to deepen our understanding and knowledge, Bird has extended the internal Indigenous Cultural Awareness Training Program to all full-time legacy Stuart Olson and Commercial Systems employees, and have seen great interest from people in learning more about Indigenous cultures – 84% of Stuart Olson and Commercial Systems employees have already completed this training.

Our internal commitment is further strengthened by the relaunch of our National Indigenous Advisory Committee. This committee is made up of representatives from across the organization, who provide recommendations to the Executive team regarding strategic Indigenous initiatives that have company-wide impact, while ensuring the promotion of the Indigenous Relations Policy and its four pillars.

I am proud of the work our Indigenous Relations team members do in developing and maintaining open communication and dialogue with communities and partners across the country, and pursuing opportunities for us to work together, build respectful understanding, and contribute to development and economic reconciliation in Indigenous communities.

**Paul Pastirik**  
Senior Vice President, Strategic Development



**>\$87M**

Total spend with Indigenous subcontractors and suppliers

**+55**

Indigenous-owned businesses supported

**>\$223K**

Total scholarship spend

**>\$78,000**

Community investment spend

Training extended to

**100%**

of employees post integration with Stuart Olson



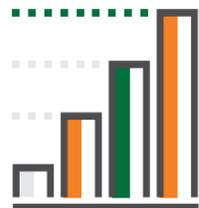
## BIRD'S NATIONAL INDIGENOUS ENGAGEMENT POLICY IS BUILT ON FOUR PILLARS:



1. Building respectful relationships and promoting open communications and cultural awareness



2. Being proactive in employing a qualified workforce that strives to be representative of the Indigenous communities in which Bird works



3. Seeking to increase business opportunities for Indigenous partners and build capacity in the Indigenous business community



4. Investing in community programs that support Indigenous cultural awareness, skills development, and business capacity



### Top Employer of Indigenous Apprentices Award for 2020

We were proud to receive the Top Employer of Indigenous Apprentices Award for 2020, presented by Alberta Apprenticeship and Industry Training (AIT) in 2021. This award recognizes employers who have an outstanding commitment to recruiting and training Indigenous apprentices, which helps to strengthen and diversify the apprenticeship and industry training system, now and into the future.



### 2021 Employer Partnership of the Year Award

Bird was awarded the 2021 Employer Partnership of the Year Award and acknowledged for outstanding efforts to create inclusive workplaces and innovative employment programs in partnership with an Indigenous community at the BC Career Development Association Top Achievement Awards.

### MEET THE TEAM



"My main focus for sustainability is this: Truth before Reconciliation. That means learning about the complete history of the relationship between Canada and Indigenous People so that we can sustainably move forward together."

**Jeff Provost**  
Indigenous Business Relations Manager Corporate



## PARTNERSHIPS

Bird contributes to economic reconciliation by employing Indigenous Peoples, supporting development opportunities, purchasing from Indigenous businesses and partners, and conducting mutually beneficial engagement. The relationships depicted on the map include alliances with Indigenous Governments, project-specific partnerships with Indigenous Governments and/or Indigenous economic development corporations, partnerships with privately-held Indigenous companies, and majority Indigenous-owned incorporated businesses in which Bird is a minority partner. The map is not inclusive of all of the expanding partnerships with Indigenous communities across the country.



Canadian Council for  
Aboriginal Business 

Bird is proud to be part of the Canadian Council for Aboriginal Business' Progressive Aboriginal Relations (PAR) certification process. It confirms corporate performance in Indigenous relations and indicates to communities that participating companies are good business partners, a great place to work, and committed to prosperity in Indigenous communities. Our PAR certification evolved to include all Bird business units in the fall of 2018, and in the summer of 2020 Bird was recertified PAR Bronze level.



Bird's membership in the Aboriginal Procurement Champions Group provides assurance that procurement opportunities are made available to those businesses that are independently pre-certified as being at least 51 per cent Indigenous owned and controlled. In 2021, we supported more than 55+ Indigenous-owned businesses, spending over \$87 million with Indigenous subcontractors and suppliers.



### Okanagan Indian Band IPD Project

Bird has been selected as the successful proponent for the Okanagan Indian Band water system upgrade project. This is the first IPD project in Canada for an Indigenous owner group, and it will be executed in cooperation with local trade contractors and local Indigenous workers. This project will provide clean drinking water for the Indigenous community. We look forward to sharing more about this exciting project next year.

### MEET THE TEAM



“Relationship building and seeking to understand where and how Indigenous communities want to be engaged is where our work begins. Once we understand each other the open conversations can happen, and synergies between community needs and industry needs can be identified. Industry is a fast-paced environment, where time and cost pressures tend to create urgency; we seek to balance Indigenous community priorities and industry goals to seek sustainable outcomes. Reconciliation is a journey; we must be patient with the process and take the time to listen and learn.”

**Rebecca Kragnes**

Indigenous Business Relations Manager - Industrial West



### MOU with Fishing Lake First Nation and Beardy's and Okemasis' Cree Nation

Bird is pleased to have collaborated with two First Nation communities in Saskatchewan to develop a three-way partnership, commemorated through a recent ceremonial signing of a Memorandum of Understanding (MOU).

Our relationship with Fishing Lake First Nation and Beardy's and Okemasis' Cree Nation is rooted in respect, understanding, cultural values, friendship, and family. This strategic partnership has the goal and intent to provide value-added opportunity, to promote and strengthen Indigenous community business, and to build meaningful community engagement between industry and Indigenous communities.



## Skills Development and Training



### Gitxaala/Bird Introduction to Carpentry Program

Meaningful community relationships are important to Bird. In March 2020, Bird entered a joint venture agreement with the Gitxaala Nation, an Indigenous community from the unceded territory on the Pacific Northwest coast of BC.

Employing local Indigenous talent where we work is a pillar of Bird's Indigenous Engagement Policy, which is why, in collaboration with the community, the Industry Training Authority (ITA), and the British Columbia Regional Carpenters Council (BRCC), we developed an eight-week Introduction to Carpentry program. This Program was designed for Gitxaala Nation members to start a career as a carpenter on a concrete and paving project.

The course, launched in 2020, includes a practical training component and learning about safety. A second cohort completed training in 2021. Successful graduates were offered carpenter apprenticeship positions. In total, 21 people have completed the program, and 16 individuals have been hired by Bird. Ten people have completed their Level 1 carpentry training. A video about the program and its impact can be viewed [here](#).



### Building Foundational Welding Skills

The Canadian Welding Bureau (CWB) Welding Foundation, together with Bird, invested \$15,000 in the Lake City Secondary School (LCSS) in Williams Lake, British Columbia, to upgrade their welding shop. This included new equipment and consumables that would benefit more than 450 students from Grades 8 to 12. Teaching students how to work safely using industry-approved techniques, materials, and tools will help students build foundational skills prior to entering the welding trade, and will hopefully inspire them to pursue rewarding careers in construction.



### Paul First Nation Insulator Pre-Employment Training Program

The Bird/Stuart Olson Insulator Training Program was developed in collaboration with Paul First Nation, TransAlta, and the Government of Alberta. The intent of the program is to develop a local workforce and provide new career paths for Indigenous Peoples by providing opportunities for training through meaningful collaboration. In August 2021, the two-week training program was delivered in the community at the local school, and included practical hands-on skill training and in-class learning, presentations from Alberta Apprenticeship and Industry Training, Indigenous tradesman Joe Cardinal, and Faron Bull, Councilor of Paul First Nation. Upon completion of the program, successful participants were offered employment as first year Apprentice Insulators at a power plant project, and are well on their way to gaining all of their apprenticeship hours.



*"Bird is proud to support the communities where we work by contributing to educational programs that help build our industry's pool of skilled trades workers. It is exciting to see new students enter welding education programs at Lake City Secondary School knowing that the training will help them develop rewarding and meaningful careers. Future workers will be equipped with the skills and knowledge to work on projects that strengthen Canada's infrastructure and economy."*

**Tannis Proulx**

Executive Vice President, Industrial Construction  
Member of the CWB Group Board of Directors since 2020



# Internal Training and Awareness

## Indigenous Cultural Awareness Training Program

In 2017, Bird developed an online Indigenous Cultural Awareness Training Program in cooperation with NVision, an Inuit-owned company. The aim is to educate management and employees and enable them to deliver on Bird’s commitment to its Indigenous Engagement Policy, strategies, and plans, and is mandatory for all staff. This action is the first step each Bird employee takes to promote positive relationships with Indigenous individuals, businesses, and communities as the company continues to make investments in people, projects, and partnerships.

In 2021, the Indigenous Cultural Awareness Training program was rolled out to all Stuart Olson and Commercial Systems employees, ensuring that 100% of Bird employees now have access to the program. To date, 84% of these newly-enrolled employees have already completed this training.

## Expertise Exchange

This series of virtual sessions facilitates the sharing of knowledge and experience across teams, functional units, and geographies to support a connected company with a culture of continuous learning and development.

A thought-provoking and impactful session entitled **Truth & Reconciliation: Sharing the History and Shaping the Future** was held last year. Indigenous Relations managers provided insight into how to lay the foundation for meaningful engagement, including the importance of making space and listening. A Residential School Survivor shared their truth, and reflected on the importance of not forgetting while moving forward.

## MEET THE TEAM



“One step along the path to Reconciliation is to gain an understanding of the history and culture of Indigenous communities. Bird employees and management benefit from the Indigenous Cultural Awareness Training curriculum; many have commented that the training is a real eye opener to Indigenous history and now want to learn more. Sustainable relationships are based on mutual respect and understanding.”

**James Thorbourne**  
Bird Industrial East Indigenous Relations



## JEDI Indigenous Reconciliation Awareness and Kairos Blanket Exercise

The Kairos Blanket Exercise uses Indigenous methodologies to build understanding about our shared history as Indigenous and non-Indigenous Peoples in Canada. This impactful participatory exercise explores important themes such as biases while participants work towards reconciliation.

In partnership with the Joint Economic Development Initiative (JEDI), a leading Indigenous organization dedicated to working with partners to foster Indigenous economic development, leaders from the Bird Atlantic offices took part in the Kairos Blanket Exercise in 2021 as part of a four-day Indigenous Reconciliation Awareness Module. The aim was to educate participants on Indigenous history and the continuing impact of colonization on Indigenous Peoples in order to implement reconciliation within the workplace.

The thought-provoking and often emotional experience provided by the exercise is an important part of Bird’s ongoing journey towards a deeper understanding of reconciliation and how we can build meaningful and effective relationships with Indigenous partners and communities.

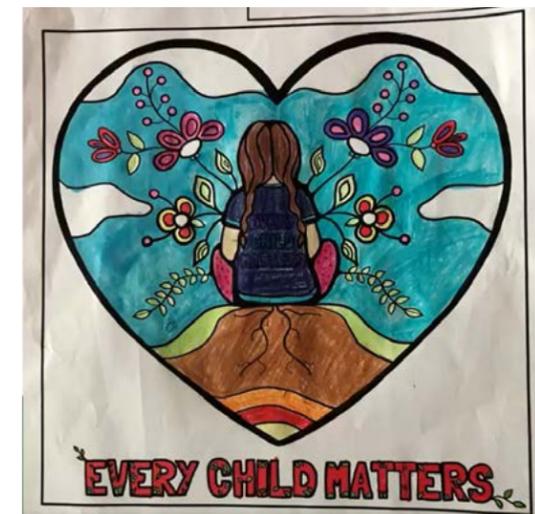
To learn more about this initiative, click [here](#).



## National Day for Truth and Reconciliation

On September 30, Bird teams across the country observed the National Day for Truth and Reconciliation to recognize the legacy of the Canadian Indian Residential School system. We have collected a snapshot of the many activities that took place:

- Bird donated \$10,000 to the Orange Shirt Society, a non-profit organization dedicated to supporting Residential School reconciliation in Canada.
- Many Bird sites and offices across the country displayed Every Child Matters flags and hard hat stickers as a reminder for us all to listen, learn, and reflect on the impacts of Residential Schools.
- Bird purchased 110 shirts from "Shirts and Quirks" owned by Kennedy Bruno, a young Indigenous entrepreneur from the Samson Cree Nation.
- The Winnipeg team partnered with Lacoste Garden Centre to plant trees and install flower planters in front of Clifton School, where children spent the day learning, listening, and sharing about Residential Schools and Indigenous Peoples. Our team also donated benches to create an outdoor learning space in honour of the children of Residential Schools.
- From coast to coast, Bird employees participated in a variety of educational events, ceremonies, and initiatives to support our journey towards truth and reconciliation.



## National Indigenous History Month Activity Sheets

During National Indigenous History Month, Bird created Indigenous Learning and Activity Sheets that were shared with employees' children. This offered a valuable opportunity to encourage dialogue and learning within our families. A video compilation of their creations can be viewed [here](#).





## Community Giving and Sponsorships

### Indigenous Sculpture Unveiled at Okanagan College

In 2021, the Four Food Chiefs Indigenous sculpture created by local Indigenous artist Clint George was officially unveiled at the new Health Sciences Centre of Okanagan College in Kelowna, British Columbia. The nine-metre sculpture depicts the Syilx Okanagan oral history (or captik) on how food was given. We were proud sponsors of this captivating art installation, along with GEC Architecture and Faction Projects. Learn more about the sculpture [here](#).



### Alberta Indigenous Games

Since its inception in 2011, the Alberta Indigenous Games (AIG) have grown to become the largest annual Indigenous multi-sport Summer Games in Canada. In August 2021, Indigenous youth from across Alberta came together to engage in one week of competitive team sports, traditional games, special events, education, and cultural connection.

Bird was a proud sponsor of the games, providing funding for four youth scholarships. A number of Bird employees donated their time to volunteer at various events throughout the week such as soccer, volleyball, handgames, and softball, as well as assisting with food running, registration, and swag preparation.

The AIG recorded an unprecedented number of participants last year: over 2,000. We were honoured to have taken part as a company to demonstrate our allyship and commitment to reconciliation.

### MEET THE TEAM



"We have been building relationships and collaborating with local Indigenous communities for years. Supporting events and initiatives, and ensuring equitable employment opportunities, are just two of the many ways in which we are actively engaging with Indigenous partners and communities."

**Boyd Humby**  
Manager, People and Culture, Bird Heavy Civil



### Golfing for Good

- We were pleased to be the dinner sponsor at the Oteenow Employment and Training Society and Tribal Chiefs Employment and Training Services Annual Networking Golf Tournament.
- Bird was proud to be an Executive Sponsor for the Joint Economic Development Initiative (JEDI) Annual Golf Tournament in Fredericton, NB. JEDI is an Indigenous organization dedicated to supporting Indigenous participation in New Brunswick's economy. They also work closely with partners from Indigenous communities, organizations, government, and the private sector to foster Indigenous economic development in New Brunswick.
- The Northern Alberta Annual 2021 Bird Golf Tournament raised almost \$4,000 for the Awasisak Indigenous Health Program at the Stollery Children's Hospital in Edmonton.



### Fishing Lake First Nation Powwow

Bird participated in the Fishing Lake First Nation Powwow, a great opportunity to connect with Elders, Chief and Council, and many community members.



### Beardy's and Okemasis Cree Nation: Eagle Sponsor for 2021 Powwow

Bird was honoured to attend Beardy's and Okemasis Cree Nation's 2021 Powwow to show support for the talented dancers and connect with Elders, veterans, dignitaries, volunteers, and Chief and Council. We were proud to be an Eagle Sponsor for Beardy's and Okemasis Cree Nation 2021 Powwow.



### Office Supply Donations to Local Communities

An ongoing company-wide initiative donates laptops, office supplies, and furniture to local communities. An example of this is our recent donation of repurposed laptops to our valued partner, Paul First Nation. The laptops are being used to help community members complete the online portions of the Paul First Nation Pipeline Construction Training course being delivered by LIUNA Local 92 and supported by the Government of Alberta First Nations Training to Employment Program.

## Scholarships



### Bird Heavy Civil Scholarships

The Bird Heavy Civil Indigenous Scholarship is an annual program that awards three scholarships per year to Indigenous students to assist with their career development. We congratulate the 2021 recipients and wish them great success.

- Benjamin Pope is currently studying to be a Commercial Pilot at Gander Flight Training.
- James Adey is part of Qalipu First Nation and is currently enrolled in the Engineering program at Memorial University of Newfoundland.
- Jobe Flowers is a Nunatsiavut member and is enrolled in the welding program at the College of the North Atlantic.

### Bird Construction/Paul and Gerri Charette Endowment Fund

The Bird Construction/Paul and Gerri Charette Endowment Fund was established to ensure the ongoing financing of a new bursary offered to Indigenous students across the country. The Charettes generously seeded the fund with \$100,000, which was matched by Bird. The vision is to advance reconciliation and empower Indigenous individuals and communities by removing barriers to education for learners, while promoting a culture of respect and inclusion. For the 2021-2022 school year, the first distribution of the Bird Construction/Paul and Gerri Charette Fund will include four bursaries of \$2,500 each.

Paul Charette is currently an Independent Director on Bird's Board of Directors, having previously served as Chair of the Board for 20 years after leading Bird as CEO and President.



### Scott Ferguson Memorial Scholarship

The Scott Ferguson Memorial Scholarship was established in the memory of our colleague and friend, Scott Ferguson. He passionately devoted his career to bridging the gap between Indigenous communities, government, and industry.

The 2021 Scott Ferguson Memorial Scholarship was awarded to Lana Howse, a member of Buffalo Lake Metis Settlement. Lana is in her final year of the Indigenous Bachelor of Social Work program at Portage College in Alberta, and is actively involved in her community as part of the Youth Justice Committee, Church Board, and fundraising for families.



## COMMUNITY CONNECTIONS

Bird is committed to contributing to the communities in which we live, work, and build in a manner that is socially responsible, mindful of human rights, and respectful of local residents. Through donations, scholarships, fundraising activities, and volunteer work, Bird employees consistently demonstrate a passion for giving back. Bird supports national charities, health care foundation initiatives, food and clothing banks, community festivals and events, youth and community sports, and much more.

Through donations, scholarships, fundraising activities, and volunteer work, Bird employees consistently demonstrate a passion for giving back.



## A PASSION FOR GIVING BACK



### Supporting Food Security

The team working at the [Lloydminster Wastewater Treatment Facility](#) set an initial goal to collect 2,500 lbs of food donations for **The Olive Tree**, a Lloydminster organization that supports school lunches and seniors programs, as well as supporting people in need in the community. In three short weeks the Bird team, craft on-site, some trade partners, and suppliers raised over 3,300 lbs of food and a \$500 cash donation. This was the largest single donation by one provider since the inception of The Olive Tree.



Thirty Ontario district employees volunteered their time over the course of three days at **Eden Food for Change**, working alongside Eden's professional Chef to prepare meals for those in need. Eden Food for Change is committed to increasing access to good food in a dignified manner, developing food skills to encourage healthy eating, and empowering the community through education, outreach, and advocacy.



Our teams in British Columbia came together to donate more than \$6,000 to the **Greater Vancouver Food Bank** to support families and small businesses affected by the global pandemic. They also purchased over \$15,000 in products and gift cards for the team.



### Lending a Hand to Families

Bird was proud to support the sixth **Annual Adopt a Family event**, organized by the Children's Centre, which pairs donors with families in need to assist in making their holidays brighter. This year the team adopted two seniors and three local families to help make their Christmas merry and raised over \$12,000.



Bird teams are working on three major projects in British Columbia, and together with our subcontractors, collectively raised over \$10,000 for the **local food bank and toy drive**. The teams also donated nearly \$2,500 to the local Humane Society.



## A PASSION FOR GIVING BACK



### Lending a Hand to Families

**Santas Anonymous**, organized by the Grand Centre Lions Club in Cold Lake, brings volunteers together every year to ensure local children up to 14 years of age receive gifts under the Christmas tree. In 2021, our Cold Lake team worked together to raise over \$6,000 to purchase 500 toys.

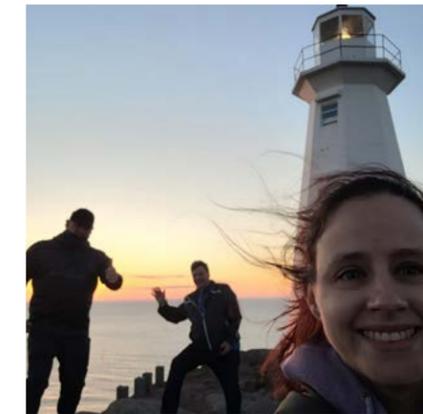


**A Safe Place** is a 35-bed emergency shelter for women, with or without children, fleeing from abuse. They provide safety, essential needs and support to promote healing, self-confidence and understanding, both in shelter and through community outreach programs. Our team heard that the Women's Crisis and Shelter Intake in Sherwood Park was in need of various items for their office and shelter to support their growing staff and facility. They took the opportunity to lend a hand to donate some surplus items to support a great cause in the local community.



Bird sponsored the Canterbury Foundation's second annual **Promise of Hope** online auction, matching all winning bids up to \$10,000, with all proceeds going to the Canterbury Foundation. The Canterbury Foundation has worked for 47 years to provide the "Promise of Home" to seniors in Edmonton, aiming to expand the life enrichment programs to promote mental, physical, and spiritual health; ensure the ongoing development of the state-of-the-art dementia and end-of-life care, allowing seniors to stay in familiar surroundings as they age; and ease the financial effects of critical safety response.

### Championing Health and Wellness



Team members across the country participated in the **Sunrise Challenge** in support of the Centre for Addiction and Mental Health by rising with the sun for one week. The goal was to raise \$20,000 across all groups, and Bird's fundraising efforts totaled over \$70,000.



The **Annual Festival of Trees** is a major fundraising event for the Northern Lights Regional Health Foundation and serves as the Foundation's largest source of unrestricted revenue, supporting operations and health initiatives. Bird's donation of \$10,000 to the 32<sup>nd</sup> Festival of Trees fundraiser contributed to the event's fundraising total of \$410,000.



## A PASSION FOR GIVING BACK

### Championing Health and Wellness



Our #FireBirds participated in the Heatwave for SickKids volleyball tournament and amidst fierce competition raised money and awareness for the **SickKids Foundation**.

The St. John's team participated in the Big Brothers Big Sisters of Canada annual **Go Girls Golf Tournament**, raising money to support the "Go Girls! Healthy Bodies, Healthy Minds" mentoring program.



Teams across the country support funding for cancer research by engaging in local campaigns. This year, we are highlighting two campaigns from the East Coast:

- The St. John's team participates in the **Polka Dot Trot** every year in support of the Dr. H. Bliss Murphy Cancer Care Foundation. This 5km walk raises funds to support and uniquely connect those affected by all forms of cancer. This year, the team raised over \$2,000 in support of cancer patients and programs across Newfoundland and Labrador.
- The Bird Heavy Civil teams in St. John's, Wabush, and Montreal proudly supported the **Terry Fox Foundation** in its ongoing work to fund innovative cancer research programs by taking part in the Virtual Terry Fox Run, and exceeded their fundraising goal of \$2,000 dollars.



Our teams from coast to coast raised awareness and over \$7,450 in support of men's health during **November**.



## PEOPLE AND CULTURE

We foster a safe, inclusive, and respectful workplace where our employees grow and thrive. With innovative tools, continuous learning, and industry-leading employee experiences, our team of high-performing and highly engaged individuals is prepared to deliver the best.



**5,000+** Total Employees

Salaried and hourly throughout the year

## WOMEN AT BIRD

**30%**  
Salaried employees

**19%**  
Leadership

**28%**  
Promotions

**18%**  
New leader training participants

## DIVERSITY AT BIRD



**36%** European origins

**35%** North American origins

**25.5%** African, Asian, Caribbean, or Latin, Central and South American origins

**3.3%** Indigenous Canadian origins

Full-time salaried employees in 2021 who chose to disclose their ethnic origins

### MEET THE TEAM



"We are committed to sustaining a culture where every team member feels seen and heard, and believes that there are meaningful opportunities for development and career growth."

**Brian Henry**  
Chief People Officer



## DIVERSITY, EQUITY, AND INCLUSION

Bird values the importance of creating inclusive, respectful, and equitable working environments. A diverse workplace has been shown to improve employee satisfaction, create a larger talent pool, and spark creativity and innovation. We need to reflect the diversity of Canadian society in our workforce, and believe in proactively managing the special measures outlined in the Employment Equity Act. Bird is committed to promoting employment equity by providing a workplace environment that treats all employees with respect and dignity.

A key part of our culture is ensuring that every person feels part of the organization. We know that differing points of view and experiences can drive goodness, and we work hard to create an environment for true collaboration. The company does not discriminate in employment opportunities or practices on the basis of race or colour, national or ethnic origin, religion, age, family or marital status, gender identity or expression, genetic characteristics, pardoned conviction, disability, sexual orientation, or any other prohibited ground.

We are developing a three-year strategy that will consolidate current initiatives related to employment equity and diversity within Bird, and coordinate strategic priorities and activities related to diversity and inclusion across the company. Additional resources have been dedicated to the development of this strategy to further advance the company's current measures to ensure safe, respectful, and equitable working environments. These include the Respectful Workplace Policy and Employee Code of Ethics, which all team members are required to follow. You can learn more about our governance framework [here](#).

### Partnering with CGLCC

Bird is proud to have joined the Canadian LGBTQ+ Chamber of Commerce. It is a step towards realizing our goal to be a better ally and promoting Bird as an inclusive company. The first Diversity and Inclusion Workshop was held in 2021, and created the opportunity for learning, reflection, and understanding how we can improve. Additional resources have been shared across the business so that our teams can continue to implement positive change.



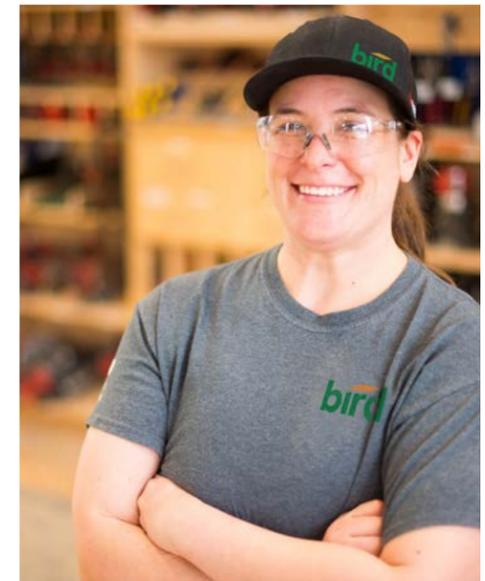
### National Strategy for Supporting Women in Trades

Bird is an official #Champion4Change, signing on as an early adopter in support of SWIT – a National Strategy for Supporting Women in Trades released by the Canadian Apprenticeship Forum. The aim is to increase the participation and retention of women in skilled trades careers to 15% by 2030.

Skilled trades are an essential part of our business as there aren't enough skilled workers in Canada to meet the demand. As a company with a large range of trades across the country, participation in this initiative represents an opportunity to make a big difference. Women in trades are a key underrepresented group that bring unique skills to these professions and it is important to us to improve the diversity of our team.

As part of our campaign to attract, retain, and employ more women in the trades, Bird has pledged to:

- Hire and train more women to work in trades
- Ensure a respectful and inclusive workplace
- Submit annual reports outlining the impact of our efforts, including public disclosure of the number of women apprentices and journeypersons in our organization.



**4%**

Female apprentices and journeypersons



### Careers Next Generation Visionary Partner

CAREERS is an industry-led, not-for-profit foundation that connects high school students to paid internships and job opportunities with employers in health, skilled trades, information and communications technology, and industrial technologies. The foundation partners with government, educators, communities, and industry to develop the skilled workers of the future.

Bird is proud to be a Visionary Partner of CAREERS, and we have pledged \$150,000 over the next three years to support young people as they launch rewarding careers in the skilled trades.

### YOUR PLACE by LNG Canada

Bird is pleased to be a part of LNG Canada's YOUR PLACE program, a unique tuition-free, four-week training program delivered by Women Building Futures. This comprehensive workforce development plan includes new career opportunities, especially for local First Nations and women across BC. To date, Bird has hired 13 apprentices from this program and we look forward to welcoming more YOUR PLACE graduates to our team.



Bird is pleased to partner with Women Building Futures to provide employment opportunities for apprentices and journeypersons across Canada.

### Women Building Futures (WBF)

Bird is pleased to partner with Women Building Futures (WBF) to provide employment opportunities for apprentices and journeypersons across Canada. The success of WBF has provided work for women who are underemployed or unemployed, with a focus on removing common barriers to financial independence. We hope that this partnership with WBF will continue to inspire more women to explore career opportunities in maintenance and construction related trades, transportation industries, and training to support transformative change.

We are thrilled to announce that Bird's Indigenous Business Relations Manager, Rebecca Kragnes, has been appointed as a Director on the Board of Directors for WBF, and recently joined the Human Resources and Compensation Board committee. Rebecca is a Red Seal-certified journeyperson electrician. Her contributions to Bird, the industry, and the community have been significant and we look forward to celebrating her continued accomplishments with WBF.



### Buildings Careers That Fit with Capital Region Housing and NAIT

The Londonderry Affordable Housing Project will add 240 much needed units to the Capital Region Housing (CRH) Edmonton Housing Program, as the CRH has a growing waiting list of over 6,000 people seeking affordable housing. As part of our commitment to working with our clients toward innovative solutions for the social housing demand in our community, a unique labour engagement initiative was implemented on the Londonderry project, in partnership with the Northern Alberta Institute of Technology (NAIT).

We committed to hiring 5% of the workforce from within the CRH affordable housing programs for employment on the project for the duration of construction, a commitment that has been maintained despite the challenges presented by COVID-19. In order to enhance the value, impact, and success of the program, we teamed up with CRH and NAIT to inspire, engage, and educate potential candidates as they explore opportunities for potential trade employment required on the project. As a result, the program has inspired local vendors to donate required PPE to the new recruits helping to support them in the launch of their career in construction.



### Industrial Insulator Training Program

This innovative and complementary training program was created as a jump start for exceptional candidates interested in the insulation trade. The 8-week program provides students with the skills required to begin working in the insulation trade immediately and will support the foundation required to work towards a trade certification. Upon graduation, qualifying students are hired as second year apprentices.

The program was designed to accommodate entry into both union and non-union streams of the insulator industry. Since launching the program, 30 students have completed the training. The first intake was for the non-union sector, in partnership with Northern Institute of Technology (NAIT), in Edmonton, Alberta. The second session was in partnership with the Insulators Local 110 Union and was held at our Fort McMurray office. The 2021 session was delivered to the Paul First Nations community. Four students graduated from the program and were employed by Bird after completion.





## A CULTURE OF LEARNING

Bird's open and transparent learning culture promotes continuous improvement and shared accountability. We believe that commitment to our employees' success leads to collective success, and our goal is to provide quality training that is beneficial, accessible, affordable, and timely. Bird encourages all employees to take an active role in their own self-development by continually seeking to improve their skills and education. As a result, Bird offers tuition reimbursement to help share the cost of external, work-related educational programs. A variety of training materials, both on-demand and scheduled, are provided through Bird's intranet portal.



**+30**

Hours training per employee <sup>(1)</sup>

**9,454**

Courses available

**74**

Participants in Bird Site Management Program <sup>(2)</sup>

**50+**

Senior leaders participated in sensitivity training

**47**

Managers completed mental wellness support training across 11 sites <sup>(3)</sup>

(1) Minimum target for 2022

(2) Total participants since 2016

(3) Superintendents, General Foreman, HSE, QA/QC, General Managers, Project Managers



### Leadership Development

Bird is invested in developing the leadership potential of employees.

- **Taking Flight**, a mid-level management program started in 2018, builds the leadership capacity of staff who manage people. In 2021, in-house resources were augmented to further develop these programs.
- **The Bird Site Management Program (BSMP)** was established in 2015 and is specifically tailored to better equip site leaders in providing effective leadership at the field level in an industry driven by constant and accelerating change. BSMP is a critical development program for our site staff and an excellent opportunity to increase engagement and drive commitment to their own and Bird's future success. The platform allows for the imparting of key skills and knowledge by internal and external speakers, as well as the sharing of feedback on the challenges faced by the participants in the course of their jobs and how to overcome them. To date, 74 people have completed the course, and a new cohort of 25 site leaders will be participating in 2022.

### Sensitivity Training for Leaders

At Bird, ensuring a safe, inclusive workplace is everyone's responsibility. Leaders in particular play an important role in modeling behaviours that reflect a psychologically safe workplace, including setting a tone of zero tolerance for harassment of any kind.

In 2021, members of the senior management team, including Executive leaders, participated in a facilitated sensitivity training course. The immersive, interactive workshop included raising awareness of workplace issues and boundaries, strategies for how to respond to various situations and achieve healthy resolutions, and analysis of case-based scenarios.

In 2022, ten additional courses will be rolled out to people managers countrywide, and a pilot course for superintendents will be launched as well.



## Mental Wellness at Bird

Mental health can affect the way we think, relate to others, and impact our interactions with the world around us. Early recognition of mental health challenges, referrals to the right resources, and adequate treatment can help people get on the path to recovery and go back to their usual work quickly.

Bird developed a pilot training program for leaders that focuses on supporting a leader with their own mental wellness, their team's mental wellness, and an individual's mental wellness. It covers topics such as understanding what mental health is and a leader's role in the workplace; leadership practices that have a positive impact on mental health; creating a healthy team environment free from stigma where it is safe for people to be themselves and where negative biases are challenged and overcome; navigating the mental health challenges of individuals on their team one person and one conversation at a time; and partnering to effectively support the path of recovery, absence, and return to work. The pilot was completed in June 2021, and is now fully operational. Facilitated training sessions have also begun on our sites.

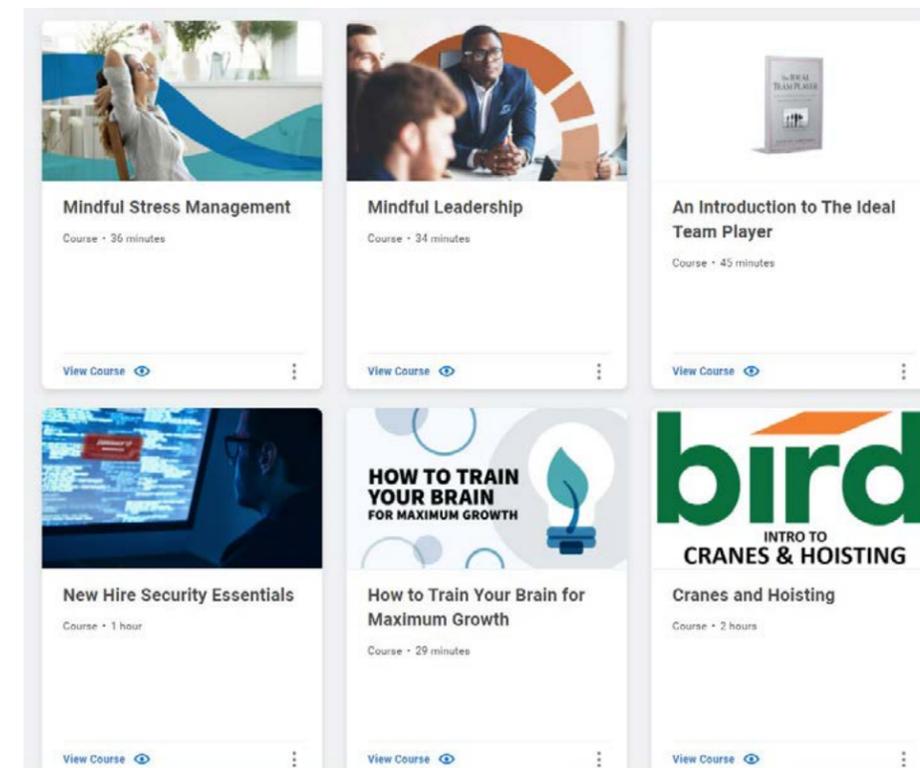
## Peer-to-Peer Knowledge Sharing

Engaged teams and subject matter experts across the company are continuously innovating, amassing a wealth of knowledge about best practices, effective processes, and useful technologies. Our culture of teamwork facilitates peer-to-peer training and information sharing. For example, weekly **Quality Lessons Learned** presentations share best practices from site situations, such as the example we shared about [using sensors](#) to achieve improvements and efficiencies for temporary heating and hoarding on site.



## THE EXPERTISE EXCHANGE

The **Expertise Exchange** is an ongoing series of virtual sessions that facilitate the sharing of knowledge and experience across teams, functional units, and geographies to support a connected company with a culture of continuous learning. Topics of recent sessions include fabrication and modularization, collaborative contracting, and **Truth & Reconciliation**, which was highlighted [here](#).



Teams can also create and post courses on our internal learning hub, **Workday**, that provide training and information on company-specific processes and initiatives. People from across the company regularly share news about innovations, conferences, and courses across Bird's various internal communication platforms, maintaining our culture of information sharing and continuous learning.



## STAKEHOLDER ENGAGEMENT

Bird regularly communicates with internal and external stakeholders on a range of issues, endeavoring to deliver clear and informative messages about the company and its operations. Bird's communication policy emphasizes transparency, inclusivity, and integrity, in keeping with the company's core values and mission statement. Bird is continually seeking new ways to engage with stakeholders, utilizing a range of methods and media to reach the widest possible audience.



**136%**

Increase in total messages received via social media compared to 2020

**118,008**

Total Audience

**4,470,455**

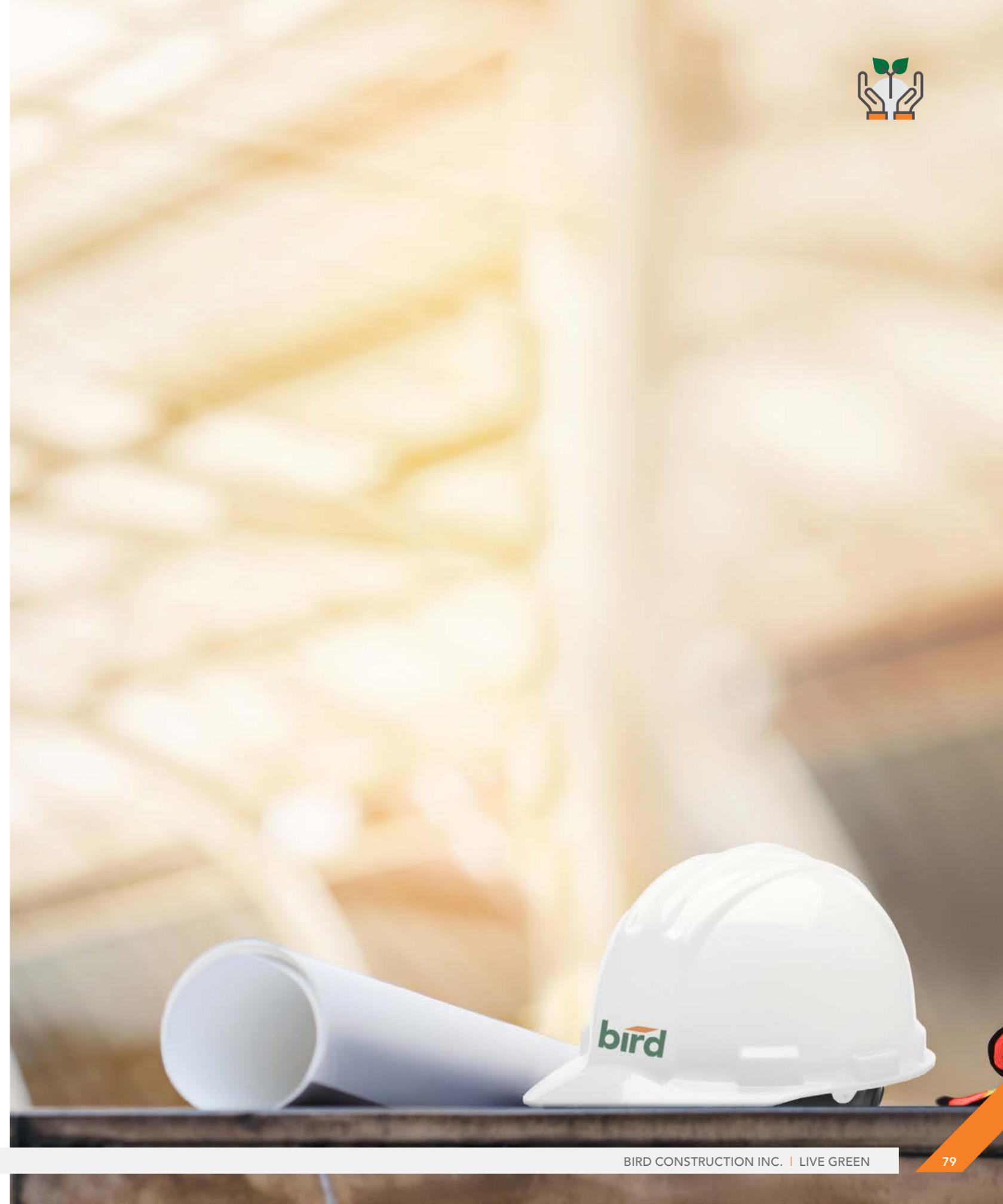
Impressions

**145,883**

Engagements

**65,117**

Post Link Clicks





# CONVERSATIONS WITH INVESTORS & COMMUNITIES



## Inaugural Virtual Investor Day

In September 2021, we hosted our inaugural virtual Investor Day. The event featured presentations from Bird's senior executive leadership team and Chair of the Board of Directors. Topics covered included operational priorities, ESG and people strategy updates, financial overview and outlook, and an overview of the Company's 2022-2024 Strategic Plan, followed by a live Q&A with our investors. Recordings from the event can be viewed [here](#).



## #OurBestBuildYet

To announce the transformational acquisition of Stuart Olson in late 2020, we created the #OurBestBuildYet video to celebrate the coming together of two great Canadian companies and reveal our new brand. The video was recognized by the Society for Marketing Professional Services, receiving a 2021 SMPS Marketing Communications Award (MCA) in the External Video category. View the [#OurBestBuildYet](#) video [here](#).



## Bird: Building Canada for 100 Years

Bird celebrated 100 storied years in the construction industry in 2020. To commemorate this milestone, we collected a 100 memorable projects from across the decades, showcasing the role the company has played in the development of Canada, from providing key infrastructure, to building military bases, complex industrial facilities, and thousands of residences. The publication was researched, written, edited, and designed entirely by Bird staff, and was distributed to all Bird employees and key clients and business partners. The Society for Marketing Professional Services recognized the book during the 2021 SMPS Marketing Communications Award (MCA) in the Book/Monograph category. Read [Bird: Building Canada for 100 Years](#) [here](#).

## PUBLIC AND COMMUNITY

- Press releases
- Website
- Social Media communications
- Trade publications
- Mainstream media channels
- Ongoing engagement with Indigenous Peoples
- Public consultation for projects
- Volunteer initiatives
- Sponsorship and participation in community events
- Company donations to charities and community groups
- Tradeshows
- Conferences
- Industry panels
- Community procurement sessions

## INVESTORS AND SHAREHOLDERS

- Annual and quarterly reports
- Annual Information Form
- Management Information Circular
- Quarterly earnings calls
- Website and social media
- Investor relations conferences and presentations
- Annual general meetings



# CONVERSATIONS WITH EMPLOYEES



## Engagement Survey

Our teams are our strength. A culture of open and respectful communication allows our teams to thrive while bringing their whole selves to work every day. Sustaining a collaborative and supportive environment is key to our continued success, and understanding the experiences of all our teams from coast to coast facilitates genuine engagement and positive change. As part of this process, we completed our first engagement survey as a combined organization in June 2021, achieving an 84% participation rate.



## EMPLOYEES

- Regular communication from Executive leadership
- Executive roadshows
- Monthly newsletter
- Quarterly broadcasts
- SharePoint news portal
- Social Media communications
- Employee meetings
- Employee feedback surveys
- Safety reports
- Engagement events
- Service awards
- Annual performance reviews
- Learning and development opportunities
- National internal conferences

# CONVERSATIONS WITH INDUSTRY

## BUILDING



## GOOD

**Building Conversations.  
Building Green. Building Good.**

Bird and Chandos Construction entered into a three-year strategic partnership for the Building Good initiative. This thought leadership initiative aims to catalyze owners and industry partners to change the way the architecture, engineering, and construction (AEC) industry designs and builds for the betterment of people and the planet. Through this partnership, Chandos and Bird will drive sustainable change through the promotion, discussion, and execution of Building Good's three focus areas – Industry Transformation, Equity and Inclusion, and Sustainability. Through Building Good's key channels, including the Building Good blog and podcast, partners and industry guests will discuss AEC's biggest challenges, innovative solutions, and the opportunities that these changes bring AEC organizations, government, and the public.

Gilles Royer, Chief Operating Officer, shared his thoughts on the natural alignment between the initiative's vision and Bird's commitment to sustainability, equity, and inclusion. Read it [here](#).



CARBON PRICING  
LEADERSHIP COALITION

## Stewardship in the Construction Industry

Bird is a proud partner of the Carbon Pricing Leadership Coalition. Administered by The World Bank Group, this voluntary organization brings together leaders from the largest and most influential governments, businesses, civil societies, and academic organizations to discuss carbon pricing, share experiences, and enhance the global, regional, national, and sub-national understanding of carbon pricing implementation.

Patrick Crabbe, Bird's Director of Mass Timber, recently contributed a post about stewardship in the construction industry, which outlines how the industry can play a positive role in the reduction of GHG emissions by advocating for responsible sustainable construction. Read it [here](#).

## CLIENTS

- Client events and presentations
- Client feedback surveys and interviews
- Regular one-on-one meetings

## INDUSTRY

- Partnering agreements
- Industry association participation
- Co-op programs and apprenticeships



# COMMITMENT TO GOVERNANCE

## OVERSIGHT AND ACCOUNTABILITY

Bird endeavors to be at the forefront of industry efforts to be responsible, responsive, and innovative corporate citizens. A strong culture of ethical conduct is central to good governance at Bird, and our core values inform the behaviour of our team members: with each other, with the communities and stakeholders we engage with every day, with clients, and with investors. Our collaborative culture is based on courtesy towards each other, openness to new ideas and perspectives, and an ethos of honesty and fairness. The company and its Board are committed to conducting their activities in accordance with the highest standards of business ethics. These standards are intended to provide guidance regarding ethical issues, to assist in recognizing and dealing with ethical issues, to provide mechanisms to report unethical conduct, and to help foster a culture of honesty and accountability.



## MEET THE BOARD



**Paul R. Raboud**  
Chair of the Board



**J. Richard Bird**  
Corporate Director



**Karyn A. Brooks**  
Corporate Director  
Chair of the Audit Committee



**Paul A. Charette**  
Corporate Director



**Bonnie D. DuPont**  
Corporate Director  
Chair of the Human Resources  
& Governance Committee



**J. Kim Fennell**  
Corporate Director



**Jennifer F. Koury**  
Corporate Director



**Terrance L. McKibbin**  
President & CEO



**Gary Merasty**  
Corporate Director



**Luc J. Messier**  
Corporate Director  
Chair of the Health, Safety,  
& Environment Committee



**Arni C. Thorsteinson**  
Corporate Director

## BOARD OF COMMITTEES

The Board exercises its duties directly and through its three standing committees.

### The Audit Committee assists the Board in overseeing:

- The integrity of the Company's financial statements and financial reporting process
- The integrity of the internal control systems relating to financial reporting
- The relationship with the Company's external auditors
- Compliance with financial and legal regulatory requirements.

### The Human Resources and Governance Committee assists the Board in overseeing:

- Development of and compliance with Human Resources policies and practices
- Development of compensation and benefit policies
- Policies and procedures designed to provide for effective and efficient corporate governance
- Succession planning for the CEO and other key officers.

### The Health, Safety and Environment Committee assists the Board in overseeing:

- Corporate and business unit safety performance
- Health, safety and environmental trends and events that could impact the Company
- Actions and initiatives undertaken to mitigate health, safety and environmental risks
- Compliance with the Company's safety systems and with health, safety and environmental laws and policies.



## BOARD DIVERSITY

The Bird Board of Directors strongly supports the principle of boardroom diversity and has adopted a written Board Diversity Policy. As part of a robust director recruitment process, and in accordance with the Board Diversity Policy, the Human Resources and Governance Committee and Board are committed to identifying nominees who, in addition to meeting the skills and experience sought by the Board, have a broad range of perspectives. Diverse perspectives contribute to innovation and growth opportunities, and the Board believes that diversity may be achieved through a range of factors including business experience, geography, age, gender, visible minorities, Indigenous Peoples, persons with disabilities, sexual orientation and other personal characteristics.

With a view to enhancing Board diversity, the Board ensures that a reasonable proportion of candidates for Board positions are women or members of diverse groups. To the extent that a search firm is engaged to help identify candidates, the firm will be specifically directed to include women and other diverse candidates.

Three of the eleven Directors, Ms. Karyn A. Brooks, Ms. Bonnie D. DuPont and Ms. Jennifer F. Koury are women, representing 27% of the Board. In addition, one of Directors, Gary Merasty, is an Indigenous person. Two of the three Board committees are chaired by women: Ms. Karyn A. Brooks chairs the Audit Committee, and Ms. Bonnie D. DuPont chairs the Human Resources and Governance Committee.

**91%**  
Independent Board  
Members <sup>(1)</sup>

**27%**  
Women on  
the Board <sup>(1)</sup>

**66%**  
Board Committee  
Chairs are women

**9%**  
Indigenous  
representation  
on Board <sup>(1)</sup>

(1) Board composition as of May 2022



## LIVING OUR VALUES: ETHICS AND CONDUCT AT BIRD

Bird requires that all employees, direct service providers, and agents of the company observe the highest levels of personal and professional ethics. Every employee agrees to abide by Bird's **Code of Ethics**, which outlines the importance of honesty, fairness, and respect. All people must be treated with respect and dignity, and Bird strives to provide a healthy and open work environment free from harassment and violence. The company prohibits discrimination, abuse, and harassment and clearly outlines expected conduct in the **Respectful Workplace Policy**. Issues such as conflicts of interest, handling confidential information, and rules about insider information are all clearly addressed in the **Insider Trading and Blackout Policy, Competition Laws and Compliance Policy**, and the **Disclosure Policy**.

Bird observes high standards of business, professional, and personal ethics in the conduct of its duties and responsibilities, and we aim to exceed the regulatory requirements regarding accounting and business practices, securities laws, internal controls, and auditing matters. In order to ensure that Bird maintains its ethical ideals, the company has a clear **Whistleblower Policy** that protects any individual who reports an actual or potential violation or suspected violation of any company requirements or standards. It is contrary to the values of Bird for anyone to retaliate or discriminate against any person who makes such a report. Anonymous reports can be made to an independent third party that is available 24 hours per day, 365 days per year. All employees receive a copy of the **Whistleblower Policy** during the onboarding process, and are provided with the opportunity to ask questions about the policy.

Bird maintains rigorous protocols to protect the **information security** of internal and external stakeholders. The Information Technology team works diligently to secure system and network resources, and protect the availability, integrity and confidentiality of clients, partners, employees, and company information in a cost-effective, risk-based approach. Bird has access-controlled secure rooms with multiple layers of security such as independent infrastructure, security systems, and physical reinforcements, in accordance with federal government regulations. Used primarily for government contracts, including defense and policing projects, strict security controls are observed, such as security clearances for all staff working on the project.

More information about our corporate governance framework can be found [here](#).



## RISK MANAGEMENT

Bird recognizes that the management of risk through Enterprise Risk Management (ERM) is an integral part of sound corporate governance. The company's **ERM Policy** affirms our commitment to the management of risk as an important component to the delivery of the company's strategic plan, and the effective implementation of our ESG Program.

### The maintenance of a robust ERM framework ensures that:

- Current and developing material risks that could impact the achievement of the company's strategic plan or sustainability, including risks of fraud, bribery and corruption, and regulatory and legal compliance specific to the Bird's operating environment, are identified and understood.
- Appropriate and effective risk management systems are maintained and used to manage risks.
- Regular reviews are conducted to evaluate the effectiveness of the company's ERM.

Bird's Enterprise Risk Management process sets out the top risks to the organization, including an assessment as to the likelihood of occurrence and potential to impact the company's top strategic priorities, as well as the key mitigations implemented to address them. The process for identifying and evaluating these key risks was a written survey of Bird's Senior Management Team, conducted in June 2021, as well as Executive review and Board engagement. Special notice was taken of risks that have become heightened due to external conditions and other developments and events (such as the pandemic), as well as an increased risk awareness regarding specific strategic objectives, such as ESG.



## CLIMATE CHANGE RISK

### Risks in Transitioning to a Lower Carbon Economy

The transition to a lower carbon economy has the potential to be disruptive to traditional business models and investment strategies. Bird's private and/or public sector clients may shift their infrastructure priorities due to changes in project funding or public perception of sustainable projects. This risk can be mitigated to an extent by identifying changing market demands to offset lower demand in some sectors with opportunities in others, forming strategic partnerships and pursuing sustainable innovations. Government action to address climate change may involve economic instruments such as carbon and energy consumption taxes as well as restrictions on economic sectors, such as cap-and-trade and more stringent regulation of greenhouse gas emissions that could also impact Bird's current or potential clients operating in industries that extract, distribute and transport fossil fuels.

### Financial Risks

As new climate change measures are introduced or strengthened, the company's cost of business, including insurance premiums, may increase, and Bird may incur expenses related to complying with environmental regulations and policies in countries or regions where it does business. Such costs may include purchasing new equipment to reduce emissions to comply with new regulatory standards or to mitigate the financial impact of different forms of carbon pricing. In addition, Bird may incur costs related to engaging with governments, regulators and industry organizations for new mandates on infrastructure projects, proactively and regularly monitoring regulatory trends and implementing adequate compliance processes. Although the company intends to actively monitor all applicable climate change laws and regulations and to fully comply with them, and to be proactive in promoting and supporting climate change mitigation actions, inadvertent compliance shortfalls could result in penalties and reputational damage that may impair the company's future prospects.

### Market and Reputational Risk

Investors and other stakeholders in Canada and worldwide are becoming more attuned to climate change action and sustainability matters, including the efforts made by issuers to reduce their carbon footprint. Bird's reputation may be harmed if it is not perceived by its stakeholders to be sincere in its sustainability commitment and its long-term results may be impacted as a result. In addition, Bird's approach to climate change issues may increasingly influence stakeholders' views of the company in relation to its peers and their investment decisions.

### Weather Related Risks

Many of the company's construction activities are performed outdoors. The probability and unpredictability of extreme weather events and other associated incidents may continue to increase due to climate change and there may continue to be longer-term shifts in climate patterns. Although weather risk may be mitigated through contractual terms or insurance, construction projects are susceptible to delays as a result of extended periods of poor weather, which can have an adverse effect on profitability. These negative effects can arise from late completion penalties imposed by the contract, the incremental costs arising from loss of productivity, compressed schedules, overtime work utilized to offset the time lost due to adverse weather or additional costs to modify methods to perform work in unanticipated weather.

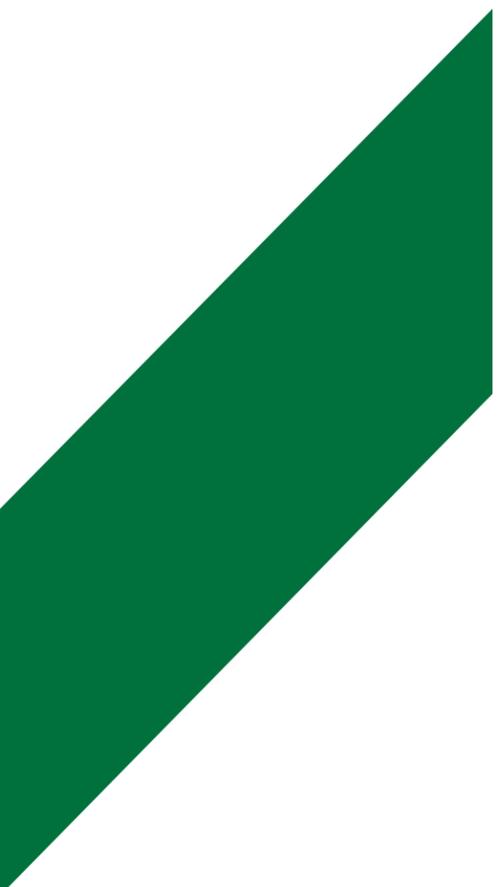
These climate change risks are outlined in our Annual Information Form, which is accessible [here](#).

## FORWARD-LOOKING INFORMATION

Certain statements and other information included herein, which express management's expectations or estimates of future events or the company's future performance, may constitute "forward-looking information" or "forward-looking statements" (collectively, "forward-looking information"). Forward-looking information is often, but not always, identified by the use of words such as "believe", "seek", "expect", "may", "will", "should", "anticipate", "target", "plan", "intend", "potential", and similar expressions.

Forward-looking information is necessarily based upon a number of estimates and assumptions that, while considered reasonable by management, are inherently subject to business, economic and competitive uncertainties and contingencies. In particular, this report includes such forward-looking information and the company cautions the reader that forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the company to be materially different from the company's estimated future results, performance or achievements expressed or implied by forward-looking information. Although management believes this forward-looking information is reasonable based on the information available on the date such statements are made and processes used to prepare the forward-looking information, such statements are not guarantees of future performance and readers are cautioned against placing undue reliance on forward-looking information. The company expressly disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, events or otherwise, except as required by applicable law.





**bird**

**2021**

Sustainability Overview

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www.bird.ca

