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Elsa Hernández Manrique, professional engineer

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Coming North Building a home and a career

BORN AND RAISED in Mexico and the daughter of an engineer, Elsa Hernández Manrique followed in her dad's footsteps. She graduated from the Monterrey Institute of Technology and Higher Education in Mexico and started her career as an onsite inspector for bridge and highway projects.

When her husband accepted a position in Lethbridge in 2018, the couple left Mexico and settled in Alberta. After receiving her work permit, she still needed to become licensed as a professional engineer by the Association of Professional Engineers and Geoscientists of Alberta (APEGA).

"The life of a newcomer is not always easy," she says. "It requires you to adapt to new environments, new language, new people — you practically start all over. Professionally speaking, in my case, I had to adapt to a different construction business, different standards, different ways to build. The relationship between clients, contractors, and the government is also different.

"We don't have a similar institution like APEGA in Mexico. When I was looking for a job, many employers preferred applicants who were registered with APEGA or eligible to be a member of APEGA," she says.

She went online, learned more about becoming a registrant, and realized she didn't meet all of the requirements needed to get licensed. She had work to do. But she wasn't ready to start down that path just yet.

"The process is not complicated," she says. "But, for a newcomer, some things take priority over others."

Despite not being licensed, she could still work in

Alberta needs skilled talent to meet the demands of the future.



The Association of Professional Engineers and Geoscientists of Alberta engineering under the supervision of a professional engineer, which led to her securing a position with Associated Engineering in 2020. The company supported her application process and she earned her P.Eng. designation in 2024.

She believes that APEGA's certification process ensures clients can have confidence in those who have P.Eng. designations. They know these certifications come only after a well-defined process is completed.

"When I arrived in Canada, I didn't understand the function of APEGA in the engineering practice," she says. "But, in Alberta, working alongside Canadian professionals, it became clear to me why APEGA regulates the engineering profession.

"Why is it so important? It's to protect the public. APEGA's function is to license professionals and check that we meet the professional, ethical, and technical standards. So, that creates trust — in the companies and the individuals who practise engineering."

Although earning a degree is the first step in an engineer's career, it's just the foundation. To protect the public, engineers must also gain practical experience, show competency, and adhere to ethical standards before taking on responsibilities such as authenticating work. APEGA plays a critical role in this process, ensuring accountability and oversight to maintain high standards and protect public safety.

Hernández Manrique is so committed to her professional development and the engineering community that she volunteers for APEGA's Lethbridge Branch. It's her small way of giving back and embracing her new life and her growing engineering career.

apega.ca/newcomers

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EXCELLENCE IN INNOVATION

S WE REFLECT on another remarkable year for the consulting engineering industry in Alberta, I am proud to present the 2025 edition of *Alberta Innovators*. Our theme this year is "Value through Engagement" which highlights the critical importance of collaboration and connection in driving innovation and excellence in our field.

This year, we've witnessed wonderful engagement across our industry, resulting in groundbreaking projects that showcase the ingenuity of Alberta's consulting engineers. From advancements in carbon capture technologies to sustainable infrastructure developments, our members consistently demonstrate their ability to deliver exceptional value through meaningful partnerships.

Our industry continues to play a pivotal role in supporting Alberta's position as an economic powerhouse, contributing to projects that balance economic growth with environmental stewardship, improving the lives of everyday Albertans and building sustainable and resilient infrastructure. As we look at the many award-winning projects featured in this magazine, it is easy to see how our members are innovators, committed to developing solutions that ensure Alberta's prosperity now and into the future.

With the potential challenges from tariffs on Canadian goods, the importance of interprovincial collaboration has never been more apparent. As we move forward, CEA will continue to work with our sister and national organizations across the country to advocate for policies that promote interprovincial collaboration and strengthen our position on the national and global stages. Together, we can turn these challenges into opportunities for growth and innovation in Alberta's engineering sector.

Looking ahead, CEA remains committed to advocating for sustainable and predictable funding for our industry. We continue to work closely with government bodies and stakeholders to ensure that the value of consulting engineering is recognized and supported at all levels.

I want to express my heartfelt gratitude to our member firms, dedicated committees and hardworking staff. Your unwavering commitment to excellence and engagement has been the driving force behind our collective success.

As we navigate the evolving landscape of our industry, let us continue to amplify our strengths, attract new opportunities and accelerate innovation. Together, we will shape a future where Alberta's consulting engineers lead the way in creating sustainable, resilient and innovative solutions for the challenges of tomorrow.

Thank you for your continued support and engagement.



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Todd Simenson ACEC Liaison Stantec Consulting



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EARLY PLANNING LEADS TO SUCCESS

ONGRATULATIONS TO THE winning firms and individuals in this year's Showcase Awards program. Today we celebrate the success of our industry over the past year. We highlight specific projects and careers that demonstrate the commitment of individuals, project teams, owners and consultants to deliver innovative solutions in the planning, design and construction of this province's infrastructure. This program is the culmination of work that started many months ago through the planning and actions of CEA staff and industry participants. The success depends upon their early work. It required event marketing; the industry's preparation and submission of projects to be reviewed; careful evaluation by judges; planning of facilities, meals and speakers: articles to be written for this magazine; ticket sales, photography and planning for follow-up publicity.

Similarly, to an even greater extent, most of the projects in this year's awards program started years ago. They started with an identified need by owners. communities and public sector entities to build something new or maintain existing infrastructure. They each started with a plan, a scope of project, a budget and a schedule. Within each of those steps, expectations were identified, re-evaluated and perhaps modified. As the projects moved from planning and design and into construction, there were undoubtedly unforeseen issues that arose, whether they were site conditions, weather impacts, supply of materials or other variables that created the need for management of the changes. From beginning to end, successful projects require close communication and collaboration between project owners and their engineering consultants. Successful outcomes are the destination

of a path that started with early work and planning.

Over the past year in CEA, we have heard about many of the challenges being faced within our industry's client groups. Project outcomes in relation to budgets and schedules often seem uncertain for owners due to the continuing uncertainties around us — inflation, material and labour shortages, and government funding, to name a few. Risk aversion by owners through their procurement and project delivery processes seems more heightened now than ever before. The owners' concerns are shared by our industry. How can we best identify, assess, mitigate or respond to these uncertainties to achieve better outcomes?

The answer — start early. Engaging consulting engineers early and building strong collaborative relationships between engineers and owners throughout the process, from planning concepts to completion of construction, pays dividends. Early definition of the project scope and risks allows owners and consultants to establish clear budgets and schedules to set projects on the best path toward expected outcomes. Engineering design typically only costs about one to two per cent of project lifecycle costs and is a small investment which can have substantial impact on the cost of constructing and maintaining infrastructure. Small investments made early in the project planning and design stages establish the foundation for addressing uncertainties to achieve success.

Our association is proud to showcase the wide variety of projects in the 2025 program. These projects demonstrate the success of innovative teams working through project challenges from beginning to end. Thank you to everyone who submitted projects, to our judges on making the difficult decisions to select the winners and to our member firms who continue to support CEA and this awards program.



KEN KOZAKEWICH, MBA, P.ENG. CHIEF EXECUTIVE OFFICER AND REGISTRAR

BUILDING A RESILIENT FUTURE: INFRASTRUCTURE INVESTMENT AND PROCUREMENT REFORM

NFRASTRUCTURE IS THE backbone of our society, supporting economic growth, environmental sustainability and social well-being. Despite its importance, infrastructure is often overlooked — only discussed when failures occur. Roads, bridges, power grids and water systems are expected to function seamlessly, yet the increasing frequency of extreme weather events in Canada highlights the urgent need for proactive investment in resilient infrastructure.

The Association of Consulting Engineering Companies – Canada (ACEC) and its provincial member association, Consulting Engineers of Alberta (CEA), are committed to advocating for a future-oriented approach to infrastructure investment. This vision emphasizes prevention, long-term strategic planning and procurement reform to ensure that Alberta and Canada's infrastructure remains resilient, adaptable and cost-effective.

INVESTING IN RESILIENCE BEFORE DISASTER STRIKES

Prevention is the most effective strategy for managing infrastructure challenges. Designing infrastructure with resilience in mind can mitigate the effects of extreme weather, natural disasters and evolving societal needs. Examples of proactive solutions include climate-resilient stormwater systems, seismic retrofitting of critical infrastructure and smart energy grids that can withstand extreme conditions.

Technology also plays a crucial role in prevention. Predictive analytics can help identify potential vulnerabilities before they become failures, while digital twins — virtual models of infrastructure assets — allow engineers to simulate and optimize infrastructure performance. Consulting engineers, including those within Alberta, are at the forefront of these innovations, ensuring that the province's infrastructure is equipped to handle the challenges of the future.

CREATING DATA-BASED POLICY

Strategic infrastructure planning must align with Canada's broader societal, economic and environmental goals. The National Infrastructure Assessment (NIA) is a critical step toward developing a long-term vision for the country's infrastructure needs. By prioritizing projects based on their impact, the NIA provides a framework to guide investment in essential infrastructure.

ACEC has long championed a centralized, evidencebased approach to infrastructure planning. The establishment of the Canadian Infrastructure Council (CIC) is a significant milestone in this effort. The CIC brings together stakeholders to advance data-driven infrastructure strategies that promote economic growth, climate adaptation and Indigenous reconciliation.

Alberta plays a key role in shaping infrastructure policy and implementation. As a hub for resource development, innovation and economic activity, Alberta's economic contributions and infrastructure requirements need to be part of the national discussion.

PRIORITIZING VALUE OVER COST

For infrastructure investments to be truly effective, procurement processes must prioritize long-term value over short-term cost savings. Canada's traditional price-based procurement model often discourages innovation and leads to infrastructure with higher maintenance costs, premature failures and expensive retrofits.

A shift toward outcome-focused procurement is essential. Qualification-Based Selection prioritizes expertise, experience and innovation over simply choosing the lowest-cost bidder. Progressive delivery models like Integrated Project Delivery and Progressive Design-Build encourage collaboration, align incentives and foster shared accountability among project stakeholders. CEA has long been a leader in the national discussion on procurement reform.

TIME FOR ACTION

As industry leaders, we can urge policymakers and the public to recognize infrastructure as a strategic investment in national and provincial prosperity. By prioritizing resilience, long-term planning and procurement reform, we can ensure that infrastructure continues to support our economy, communities and environment for generations to come.



JOHN D. GAMBLE, CET, P.ENG. PRESIDENT AND CEO



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INVESTING IN THE FUTURE

RETROFITTING, REPAIR AND RENEWAL MAKE ALBERTA'S URBAN AND RURAL COMMUNITIES STRONGER

BY CORY SCHACHTEL

s Alberta's population booms, municipal leaders are looking for ways to address increased pressure on existing infrastructure. By focusing on older, established infrastructure, municipalities can manage assets effectively and provide upgrades which lead to cost savings in the long term while meeting the increasing demands of population growth and climate change. Building up and repairing current infrastructure, rather than building out, means longevity for our roads, bridges and pipes.

RETROFITTING BUILDINGS

In 1964, John Martin and Vern Nord founded MCW Consultants in Winnipeg. Their first assignment was an HVAC retrofit and modernization of Hotel Saskatchewan, in Regina. A similar modernization of Toronto's York Hotel became the firm's first official project in Ontario, and it's been sharing its retrofitting expertise across Canada ever since.

"We started off in 1964 with one retrofit, and we have an entire division that's just done energy retrofits since 1991," explains Michael Driedger, principal at MCW. Clients haven't always prioritized renovations over rebuilds, Driedger says, "but now it is appealing to people to talk about net-zero decarbonation, energy efficiency — property managers and investors are looking at that, because it can significantly affect their portfolios."

By Driedger's estimate, that financial focus is most intense in Alberta. But with other provinces following suit, and the Canada Green Buildings Strategy spending billions on private and public building renovations and retrofits, he says the nation-wide market "is sitting in between a six- and nine-billion-a-year industry. So \$27 million a day is spent on retrofitting buildings in Canada."

In early 2023, MCW began the process of modeling and upgrading the Calgary Drop-In and Rehab Centre's HVAC system, which helped the charity sign its second 25-year lease, allowing it to operate in the same space in Calgary's core until 2050. In 2024, the company retrofitted a seniors' building for the Alberta Social Housing Corporation. In each case, Driedger says, it was more environmentally and economically efficient to renovate rather than rebuild.

"In Red Deer, for example, we ran a study that showed the cost to rebuild was about \$40 million, but to renovate and bring its energy use down by 70 per cent was only \$18 million," he says, highlighting the economic value of investing in and revitalizing infrastructure in established, mature neighbourhoods.

Retrofits are often cheaper than rebuilds, but Driedger says "developers want to put their debt capital into growth," and growing their portfolios means adding more buildings. Driedger says this creates a "double-headed problem" for utility providers in growing cities, because if a city's existing buildings aren't retrofitted, its energy profile continues to grow. "That basically makes it so that you can't really add more buildings, because you don't have the power capacity. If you can save money with the existing buildings, then you can continue to grow out. \rightarrow





NEIGHBOURHOOD RENEWAL IN EDMONTON

Helping cities grow responsibly is what engineering, landscape architecture and geomatics firm Al-Terra has done since 1976.

"We do all the infrastructure," says Al-Terra's Manager, Urban Design and Renewal, Cy Balitbit, "including drainage, flood mitigation, low impact development, and what we call sustainable mobility."

When the firm is assigned a project as part of Edmonton's Neighbourhood Renewal Program, for example, the City identifies issues in mature neighborhoods like Garneau and Strathcona, and asks Al-Terra to explore design directions for infrastructure, including sidewalks, trees and drainage.

The firm also takes its lead from utility companies which flag any areas that, based on their models, are in high-risk flood zones. But before any costly "infrastructure replacement" conversations happen, Balitbit's team looks at low-impact development (LID) solutions.

"Instead of all the stormwater going straight to the major system, we detain it for a little bit on the surface level." Water detainment comes in the form of neighbourhood stormwater ponds, gardens, basins, planters absorbent landscaping and soil cells (crate-like structures around sidewalk trees) that all connect to the drainage system, along with self-contained LID solutions that absorb, hold and distribute the water sent its way.

"So it's kind of performing in two ways: One is with the water being detained, and then there's an opportunity for trees to attain better growth along city streets and to improve the quality of life of people with green infrastructure."

RURAL INFRASTRUCTURE

In 2024, Rural Municipalities of Alberta (RMA) released its Rural Municipal Infrastructure Deficit Project. It's a series of four reports which outline the gap between the ideal and actual current state of rural municipal infrastructure, and show the massive importance of provincial investment.

"We've been holding the line on taking care of our bridges and roads for a very long time, and now we're starting to slip backwards," says Ponoka County Reeve Paul McLauchlin. He was RMA president when the reports were released, and says the reports show that "if we had better asset management and actually invest at the front end, we can get a seven-



dollar return on every dollar we spend, which is incredible."

But over the past seven years, McLauchlin has seen what he calls an "erosion" of investment dollars from the provincial government, which not only delays infrastructure upkeep but also downloads public services onto municipalities.

"We never used to pay for policing, up until five years ago, and now we're up to a million dollars a year," McLauchlin says. "So now, basically four per cent of my budget is a policing line item that was never there prior. These are choices being made for us, not with us, so that downloading is basically us picking up responsibilities, financial and otherwise, for someone else."

Alberta's rural bridges and roads are safe, McLauchlin clarifies, but to his eye, squeezing small town budgets while giving breaks to already-ballooning industry budgets is simply bad governance.

"They've issued three separate — I'll use the words 'incentive programs,' because that's how they're couched — but those were unilateral, provincially dictated decreases in oil and gas taxes. My job is maintaining infrastructure, but with all these other things [downloading], it's hard for me to do that job."

McLauchlin says the reports' "call to action is that we need to have these core investments" to make the most of Alberta's engineers, and everyone quoted echoes that call.

"We have always done more with less," McLauchlin says. "We need to rely on innovation and outside-the-box thinking. And there needs to be a recognition by government of the importance of the responsibility municipalities have. We need to actually recognize that there are different ways of doing things and make sure we share that information as much as possible. I think that's how we'll get through this. I think that's how we'll take on the future."

WATER EMERGENCY IN CALGARY

When Calgary's Bearspaw South Feeder main ruptured in June of 2024, the city entered a state of emergency, which included water restrictions. Underground, Associated Engineering was investigating the cause of the break, and helping to install technology to monitor the pipeline into the future — preventing another catastrophe.

"This pipe is so critical. It's the most important buried water pipe in Calgary," says Duane Strayer, Vice President, Urban Development with Associated Engineering. There is a need, he says, for renewal of Western Canada's urban infrastructure — not only in Calgary, but across the region as infrastructure ages.

Repair and renewal are critical when it comes to water infrastructure — replacing an entire pipe is disruptive to individuals and businesses and costs governments money. While most Canadians take their water infrastructure for granted, once it's gone, or limited like it was when the Bearspaw main broke, more people realize just how critical this infrastructure is.

"This feeder main [break] is a reminder for all of us of our dependence on infrastructure that is buried, that is out of sight, out of mind," Strayer adds.

As trenchless technology becomes more common in Canada, work can happen underground without opening roads and disrupting daily life. After repairs to the Bearspaw line were made and a new section of pipe installed, the City put tethered and freeswimming monitoring devices in the pipe, so the pipe can detect any issues before they reach a crisis point.

"A robust asset management program includes inspection and monitoring of buried assets, such that potential problems can be identified before another significant break occurs like what happened in Calgary," Strayer adds.

Buildings, water pipes, bridges, sidewalks this infrastructure is critical to our communities. From Alberta's largest cities to its many rural communities, investing in retrofitting, repair and renewal ensure communities continue to thrive.



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Putting it **Together**

Prefab and modular construction methods could have a big impact on Alberta's future

BY BREANNA MROCZEK

n Alberta, modular and prefabricated construction are significant considerations for any engineering firm. Modular construction involves manufacturing entire sections or modules of buildings in a controlled factory setting and then assembling them on-site. In contrast, prefab construction refers to creating components of buildings — like walls, facades or mechanical systems — off-site for later assembly.

Peter Osborne, a partner at GEC Architecture, says that modular construction is often used for projects

with repetitive elements, such as housing units or classrooms, while prefab components are employed across a wider range of building types.

"Modular construction reduces time spent on the job site, which is particularly beneficial for remote or challenging locations where labour availability and conditions are issues," Osborne says, while "prefabrication demands higher quality control and precision, which forces teams to plan better and deliver more consistent results compared to traditional construction." \rightarrow



As industries across the province face increasing demands for efficiency and cost savings while maintaining quality in construction, both of these methods have emerged as innovative solutions.

APPLICATIONS

Alberta has seen a surge in modular and prefab projects across various sectors, especially housing, education, health care and transit infrastructure.

"We've used modular construction most recently on five supportive housing projects for Edmonton under the federal Rapid Housing Initiative — where each unit was a volumetric module built off-site and assembled on-site to address constrained schedules," Osborne says.

Derek Ciezki, a partner with SMP Engineering, emphasizes modular construction's effectiveness in projects with repeatable designs, such as dormitories and units of hospital wings.

"The biggest feature of modular construction is flexibility — it's like working with Lego," says Ciezki.

Prefab classrooms, or "portables," are a common sight in Alberta's schools, enabling flexible expansion to accommodate growing student populations. William Johnston, WSP's regional Market Leader, thinks there are even more opportunities for schools beyond portables, especially with the Government of Alberta's School Construction Accelerator Program and commitment to building up to 90 schools in the next seven years.

"There are many misconceptions in this field — about what is 'modular construction' and that it's only applicable to low-cost housing, but the opportunity goes far beyond this. Those leading global industry modernisation are expanding the idea from modular and simple prefabrication to a carefully designed kit-of-parts, developed in concert with the supply chain, and it's perfect when applied to the education or healthcare needs we have," Johnston says. "To really thrive, prefabrication and kit-of-parts construction needs scale where we can take the solution up to a wide program level beyond a single project. The process of building 90 schools becomes much more efficient when you think about standardizing the design and components."

BENEFITS AND EFFICIENCIES

Shifting work to controlled factory environments minimizes weather delays and labour inefficiencies. This advantage is particularly relevant in Alberta's harsh winters, where on-site construction can be challenging.

"Anything you can do in the comfort

and climate of your own facility before it hits the site generally helps save time, money and addresses potential safety concerns," says Rob Kisney, CEO of CDN Power Pac. "It puts fewer people on job sites, making them less cluttered and more productive overall."

Osborne says that while the overall project timeline might remain similar, the time spent on-site is drastically reduced.

Talent shortages in the construction industry also drive the adoption of these methods. According to Osborne,



prefab allows contractors to leverage skilled labour in urban centres for work in remote locations. This approach not only addresses workforce constraints but also reduces safety risks.

Kinsey says that, for electrical contractors, pre-wiring and pre-testing electrical components in a controlled environment improves both efficiency and safety.

QUALITY AND COST IMPLICATIONS

The controlled environment of a factory setting enhances the quality of prefabricated components. Ciezki says that more strict dimensional controls and higher precision in factories lead to superior products compared to traditional on-site methods. However, achieving this quality requires thorough coordination among design and construction teams. "Prefab saves time and improves quality because it's done in a controlled environment, avoiding on-site risks and coordination issues," Ciezki says.

On the cost side, there is nuance. Prefab and modular construction can have higher initial capital costs due to factory setup and bulk material procurement. Johnston points out that, unlike traditional construction, where payments are staggered, prefabrication projects require upfront investment for materials and fabrication, which can strain cash flow for contractors.

"Prefab thrives when there's a large, predictable pipeline of work, but inconsistent demand makes it hard for manufacturers to invest and reduce costs," Johnston says. "For the impact to be successful, owners need guidance to align procurement methods that allow these construction methods to deliver their value."

Yet, Johnston says factors like reduced site labour, shorter project timelines and improved quality will result in longterm savings.

"I think the quality goes up just because you are doing work in a controlled

"ANYTHING YOU CAN DO IN THE COMFORT AND CLIMATE OF YOUR OWN FACILITY BEFORE IT HITS SITE GENERALLY HELPS SAVE TIME, MONEY AND ADDRESSES POTENTIAL SAFETY CONCERNS."

- Rob Kisney, CEO, CDN Power Pac

environment. The time typically goes down and then so does the cost."

For example, Alberta's programlevel approach for schools aims to standardize components, enabling bulk procurement and lowering costs for future projects. "At times modular and prefab can result in a higher capital cost, but if you take a broader look at what your building costs, then prefab and modular construction does start to have a cost benefit," Osborne says.

CHALLENGES

While there are many benefits to prefab and modular builds, one of the biggest challenges identified is in scaling operations. Prefabrication thrives on economies of scale, but achieving this requires a consistent pipeline of projects. As Johnston explains, this creates a chicken-and-egg problem that hinders widespread adoption. "No one has been able to really invest to drop the price point, because the pipeline hasn't been there, and because the pipeline hasn't been there, the price point hasn't dropped into this kind of flat pressure cycle."

Finally, coordination is critical. Prefabricated components must meet strict building codes and integrate seamlessly. Ciezki says that even slight misalignments can necessitate time-consuming adjustments.

"Early engagement with contractors and subcontractors helps streamline budgets and processes, and that's where you can save time and reduce costs, especially on large or intricate projects," Ciezki says.

"Prefabrication involves some level of certainty, because you're engaging people earlier and you're getting more control over the outcome," says Osborne. "That's really important from a design perspective."

THE ROAD AHEAD

Far from a flash in the pan, these construction methods could help build Alberta's future. By standardizing modular and prefab components, the industry can save money and increase efficiency.

In a province grappling with talent shortages, tight schedules and the need for sustainable construction, modular and prefab methods offer compelling solutions. These approaches can transform construction practices, delivering high-quality projects that meet the demands of a growing and evolving population. •

Planning and Building Alberta's Future

About the Consulting Engineers of Alberta

Since 1978, the Consulting Engineers of Alberta (CEA) has been the advocacy voice of consulting engineers across the province. We represent nearly 10,000 staff employed by approximately 75 engineering companies.

CEA provides valuable business and industry insights to the Government of Alberta, municipal government associations including Rural Municipalities of Alberta and Alberta Municipalities.

We work closely with the Alberta Roadbuilders and Heavy Construction Association, Alberta Construction Association and other allied industry partners. Our input focuses on collaboration, safety, procurement, asset management, and sustainable and predictable funding for the engineered environment.

Our expertise guides public policy to ensure Alberta's engineering sector supports ongoing education and training, labour attraction and retention, and economic development.

Our #1 Policy Priority

Sustainable and Predictable Funding and Procurement

Sustainable and predictable public funding attracts investment, drives competition, and provides long-term benefits for both urban and rural Albertans.

Growing cities have complex infrastructure priorities, including schools, universities, hospitals, utilities, mass transit, and recreation centres. These projects attract investment and labour supply and make Alberta competitive globally Predictable, consistent and transparent funding and procurement make city-building better, faster and more affordable.

Rural municipalities are highly sensitive to disruptions in public infrastructure funding and more susceptible to long-term impacts from emergency events. Dependable and sustained commitments to public investment in rural Alberta support regional development initiatives and connect communities.

For Alberta's Future

Consulting engineers are dedicated to planning and building Alberta's future. Through communication and collaboration with owners, consulting engineers can effectively develop long-term strategies for infrastructure operations, maintenance and development. Ensuring the best outcomes requires a multi-year approach in planning and budgeting which is rooted in a commitment to predictable and sustainable funding for infrastructure investments.



Prioritizing Public Infrastructure

- Consulting engineers are a significant stakeholder in the public infrastructure discussion; being at that decision-making table is critical for Alberta's continued economic development.
- We support alternative procurement and project delivery models to provide cost effective solutions to budgetary and scheduling challenges.
- We are aligned with other professional and construction industry associations to support greater transparency in the planning and procurement of public infrastructure.
- Prudent investment in critical infrastructure includes asset management.
- Consulting engineers can help government prioritize the needs and value of infrastructure investments to achieve the greatest return for our economy, jobs, and economic competitiveness.

Economic and Community Development

Public leaders in all levels of government work hard to support our communities and improve people's quality of life. Over the next several years, these pursuits will be challenged by a growing population, increasing costs of living, unstable supply chains, declining housing affordability, increased labour competition, and shifting environmental regulation and investment trends.

Adequate investment in pre-project planning and design through consulting engineers aids public leaders in making informed decisions on high-dividend investments in essential assets, such as schools, hospitals, transit, roads and utilities.

These investments create jobs, improve quality of life, and increase Alberta's attractiveness to potential workers and spur further economic development.

Value of Consulting Engineers

Significant concerns in public infrastructure often involve how to best achieve reduction in schedule delays and cost escalation on projects. Achieving successful outcomes in project delivery provides value to owners, designers, builders and the public. The root cause of these delays and cost overruns are most often the result of limited pre-planning investment, and underdeveloped design investment. Engaging consulting engineers early in the planning and budgeting process assists owners in defining the most reasonable scope, budgets and timing for their projects and programs.

Consulting engineers are experts who provide professional services to all levels of government in the planning, design, construction, and maintenance of critical public infrastructure. We understand how public sector budgets work, how to prioritize projects and how to work with all affected stakeholders.

We share government's commitment to cost-effective capital planning, smart asset and risk management, environmental stewardship, and transparent investment and procurement.















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CAREER PROFILE 2025



THE VALUE OF PEOPLE ENGINEERS ARE A HUMAN RESOURCE

BY ELIZA BARLOW PHOTOGRAPHY ERIC BELIVEAU

CHRISTINE CHATER doesn't point to a single "lightbulb" moment that propelled her into the world of consulting engineering. She attributes her career to several moments and a series of professional leaps and reflections anchored by her belief in the power of people.

From her early days as a recruiter to her current role as Senior Manager, Human Resources (Canada) for CIMA Canada Inc., Chater's path is a testament to adaptability and a commitment to recognizing and fostering talent in others.

Born and raised in Edmonton, Chater's career started at Staff Bureau, a placement agency, where she first learned about the recruiting industry — matching people and skills with employers needing help.

"It was a challenge. Sourcing that perfect candidate felt like uncovering a needle in a haystack," she recalls. Finding the right person for her clients and employers offered a "great sense of accomplishment and personal growth." Helping businesses find people, and people find careers, prompted Chater to consider opportunities in human resources (HR). She took the plunge when a colleague recommended her for an HR role with the Alberta Research Council (ARC).

As an HR manager, Chater got a front-row introduction to the world of engineering. She recognized the industry's appreciation for people's intellect and creativity.

"I realized our client groups value (the HR) profession. They value what we have to say, our opinions and how we support the business needs — they value what HR could do to help support their business," she says.

This led to a transformative realization: consulting engineering wasn't just about technical expertise and project execution, but about the people who made it all possible. "In engineering, we're selling our intelligence, our smarts," Chater explains. "That makes attracting and retaining the right talent not just important, but critical."

Chater spent six years at ARC and some time in recruitment with a large firm before another big opportunity came her way. While volunteering as a director and president of the board of Chartered Professionals in Human Resources of Alberta (CPHR Alberta), she was approached for an opportunity in HR with engineering firm CIMA Canada Inc. She got the job in October 2011, another seminal moment in Chater's journey.

Her mandate was clear: establish CIMA Canada Inc.'s presence across the region by recruiting top talent, opening new offices and fostering a culture that reflected the company's core values. Chater leveraged her recruiting experience to help CIMA Canada Inc. grow organically and through mergers, establishing offices in such cities as Vancouver, Saskatoon and Kelowna.

"THE BEST PART OF THE JOB IS SEEING SOMEONE WHO YOU HIRED GROW AND DEVELOP AND BECOME A LEADER, MANAGER, [OR] EXPERT AND KNOWING YOU PLAYED A ROLE IN HELPING AND GUIDING AND COACHING THEM TO GET THERE."

CHRISTINE CHATER

"In engineering, it's all about the people. You need to be a good listener and an excellent communicator. That's what makes it work," she says, adding that CIMA Canada Inc. is known for valuing those skills. "That's what sets us apart," she says. "Our employees are our biggest resource."

Still, consulting engineering comes with its own set of challenges. Owners can often prioritize cost over value, making it difficult for firms to compete beyond price. Chater has remained steadfast in her belief that investing in people is non-negotiable. "Choosing price over value isn't always the best decision," she notes, describing people as "our biggest asset, and that's where our value lies."

This philosophy has paid dividends. CIMA Canada Inc. recently achieved silver-level status in Women in Governance's Parity Certification, recognizing the company's commitment to fostering diversity and inclusion. For Chater, such accolades are a testament to the firm's dedication to its people and future.

Now, more than a decade into her tenure with CIMA Canada Inc., Chater shows no signs of slowing down. Her work has helped shape the company's culture and reputation, making it a destination for top engineering talent.

"The best part of the job is seeing someone who you hired grow and develop and become a leader, manager, [or] expert and knowing you played a role in helping and guiding and coaching them to get there," she says.

Chater credits her professional success to those who have guided her.

"HR can be a lonely profession. You sort of sit in the middle, always balancing people's needs," she says. "I've been fortunate to have a personal network to draw from — mentors and a core group of HR professionals that support one another. At important moments, that has been my greatest resource." •

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SULTING ENGINEERS & ALBER*



2025 Showcase - Awards -

CEA LIEUTENANT GOVERNOR'S AWARD FOR DISTINGUISHED ACHIEVEMENT

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INNOVATOR, COLLABORATOR AND COMMUNITY BUILDER

LEAVING HIS MARK ON THE CITY

JEFF DIBATTISTA'S resumé boasts an impressive collection of building and infrastructure projects, accumulated over a 20+ year professional engineering career. But he is perhaps most proud of the people he's been able to work with and learn from, as well as those whose lives have been positively impacted by the projects he's led.

As the 2025 recipient of the Consulting Engineers of Alberta's Lieutenant Governor's Award for Distinguished Achievement, he recognizes a few key themes that emerged throughout his career, including collaboration, giving back to your community and making the most of opportunities as they arise.

"One of my core beliefs is that you should make big plans and then go do them," he says.

That's exactly what DiBattista did in 1993 after graduating from the University of Waterloo's civil engineering program. He and his wife Traci packed up their lives and moved across the country to Edmonton for a planned two-year stay while he completed a master's degree in structural engineering.

"Neither of us had been to Edmonton before, and this was before the internet so we just thought we'd go on an adventure," he says.

But before long, that plan for adventure evolved into something even bigger. After completing his master's, DiBattista went on to complete his PhD at the University of Alberta, where he met many future colleagues and collaborators.

One of those was Jim Montgomery of DIALOG. The two would go on to work together, with DiBattista joining DIALOG and working on some of Edmonton's biggest infrastructure projects.

The University of Alberta campus served as a backdrop for many important moments in DiBattista's life. And although he didn't know it when he was a graduate student, he would one day leave his own mark on the buildings and classrooms where he spent long hours studying.

Many of the most memorable projects

from DiBattista's career were connected to the University of Alberta. He beams with pride when discussing the design and building process for the Edmonton Clinic Health Academy and the Kaye Edmonton Clinic. Although both projects came with their own challenges, the final results more than made up for it.

"They were big projects — very stressful and intense with a lot of demands," he says. "But it feels really good to know that both of those buildings are serving the health care faculties at the U of A as well as patients."

Those aren't the only buildings at the University of Alberta DiBattista had a hand in shaping. He also served as the structural engineering project manager for the Markin/CNRL Natural Resources Engineering Facility — a building where he would have spent his academic career.

"ONE OF MY CORE BELIEFS IS THAT YOU SHOULD MAKE BIG PLANS AND THEN GO DO THEM."

JEFF DIBATTISTA

"Not only was I designing a building for my faculty at my alma mater, but it was actually my department. All of my professors from my master's degree and from my PhD were moving their offices into that building. So let's just say I was feeling a little bit of pressure to do a really great job," he laughs.

But perhaps no other project holds a place in DiBattista's heart like Edmonton's 100th Street Funicular. The project bridged a number of different professional practices, including structural engineering, landscape architecture and transportation design. The idea of collaboration with the different specialties piqued DiBattista's interest from the start.

"That project embraces a lot of what I believe in terms of collaboration," he says. "Is it a structural engineering project? Or is it an architecture project or a transportation project? Well, it's got a funicular and a bridge and walking paths. It's a very integrated project and it's really just meant to make lives better for people," he says.

The project was the first of its kind in the city, connecting the downtown core with the city's verdant river valley. Its completion changed river valley access for Edmontonians, opening up new opportunities to enjoy natural spaces.

"When it opened at the end of 2018, we had people saying they had never been able to get into the river valley before on their own because of mobility challenges, and now they could do it," he says. "To provide that kind of access felt really special."

In addition to working on these major infrastructure projects, DiBattista has also spent much of his career giving back to the engineering profession, serving terms on both the board of the Consulting Engineers of Alberta (including as president in 2010-2011) and on The Association of Professional Engineers and Geoscientists of Alberta's Council. He has also remained closely connected to the University of Alberta, most recently by leading the school's Civil Industry Advisory Board. The group bridges industry and academia, providing feedback and guidance to the school, so that the university can enhance its programming and better prepare students for life after graduation.

In a way, the group symbolizes the kinds of collaboration that DiBattista sees as integral to any project's success.

"Many great opportunities are brought about by bringing together people with different experiences, perspectives and expertise," he says.

"It's about collaborating to get things done that we couldn't do on our own, and really trying to make sure that we're providing the best possible service to society."

- LISA CATTERALL

SHOT AT CONFEDERATION LOUNGE AT FAIRMONT HOTEL MACDONALD

~

PHOTO COOPER & D'HARA

2025 Showcase - Awards -

HAROLD L. MORRISON AWARD

RISING YOUNG PROFESSIONAL NOMINEES

CEA 2025 SHOWCASE AWARDS YOUNG PROFESSIONAL NOMINEE JUDGES

ADAM LAUGHLIN, P. Eng. HELDER AFONSO, P. Eng. KEN PILIP, P. Eng.

McElhanney



JARRETT ZILINSKI, P.Eng. Project Manager McElhanney Ltd.

Jarrett is a Project Manager with a background in transportation planning, functional design and traffic engineering. Since earning his B.Sc. in Civil Engineering from the University of Alberta, Jarrett has become a key contributor to major transportation projects across

Alberta. His expertise spans traffic data collection, transportation planning, cost estimation, and client and contractor relations.

Known for his ability to present complex transportation solutions in a clear and meaningful way, he earns the trust of municipal councils and stakeholders alike. He advocates for mentorship and equity, diversity and inclusion. He is Chair of the CEA Young Professionals Edmonton Committee and champions initiatives like the Be More Than a Bystander program at McElhanney.

THURBER



LUCAS GREEN, P.Eng. Geotechnical Engineer Thurber Engineering Ltd.

Lucas is a geotechnical engineer whose expertise spans the management and supervision of geotechnical drilling operations, void remediation efforts, roadway design initiatives, and industrial, municipal, commercial and highway projects. He is active in the field, serving as

the inspector on projects for Alberta Transportation and Economic Corridors, overseeing instrumentation installation and testing, conducting geotechnical investigations, and coordinating field operations. Lucas has played key roles in the Peace River Shop Slide/Highway 2 Tied-Back Concrete Pile Wall and Trestle No. 3 Rehabilitation.

Lucas is Vice Chair of the Edmonton Chapter of the Canadian Society for Civil Engineering and is an active member of the CEA Young Professional group.

TE TETRA TECH



KARLI HOMINICK, P.Eng. Geotechnical Engineer Tetra Tech Canada Inc.

Karli brings a wealth of experience with a geotechnical background. Her expertise spans geotechnical drilling investigations, deep and shallow foundation design, geotechnical instrumentation monitoring, advanced laboratory programs, project management and construction

monitoring. Since joining Tetra Tech in 2021, she has taken on complex projects, including geotechnical services for EPCOR projects and school developments across Alberta.

Clients seek Karli for her exceptional communication skills and her ability to manage complex projects with efficiency and precision.

Karli is an active member of the CEA's Young Professionals group and mentors junior engineers. She volunteers with the Geotechnical Society of Edmonton and Tetra Tech's Women's Networking Support Group.





ALEXANDER MALSBURY, P.Eng. Project Engineer Al-Terra

Since joining Al-Terra in 2017, Alex has become a leader in municipal engineering and transportation infrastructure. His role has evolved to managing multiple sites, training students and taking responsibility for field design solutions. In 2023, Alex became Team Lead and Design Lead

of the Capital Roads Program for the City of Leduc. His expertise in planning, roadway design, contract administration and construction management has contributed to enhancing infrastructure and community development.

Alex participates in Al-Terra's Independent Development and Accelerated Development programs, and he mentors junior engineers and co-op students. Alex consistently delivers exceptional results, making him a key contributor to the industry's future.

WINNER →

HAROLD L. MORRISON AWARD **IARRETT 711 INSKI**







BRENT MCLEAN, P.Eng. Structural Engineer LEX3 Engineering

Brent is a structural engineer at LEX3 Engineering with over eight years of experience in bridge design, construction inspection and project management. A graduate of the University of British Columbia with a B.A.Sc. in Civil Engineering and a Civil Engineering Technology diploma

from Lethbridge College, Brent has extensive expertise in delivering practical, cost-effective solutions for complex infrastructure projects.

Brent has played a key role in managing Red Deer County's bridge program, overseeing several standard bridge designs and major replacement projects. Known for his technical proficiency and collaborative approach, Brent works closely with clients, subconsultants and regulatory agencies.

Brent is an active member of Edmonton's running community. Big Brothers Big Sisters and CEA's Young Professional Group.

Stantec



C M SHAH MIRAJ, P.Eng. **Program Manager** Stantec Consulting Ltd.

C M Shah Miraj is a Program Manager at Stantec with seven years of experience in the power sector. He holds a B.Sc in Industrial Systems Engineering and is known for his proactive approach to problem solving. Miraj has led multiple programs, including

building and managing a high-profile initiative for a major utility client, earning exceptional client feedback.

As Leadership Lead for Stantec's Developing Professionals Group in Calgary, Miraj has focused on bridging the gap between senior leadership and developing professionals. He serves on the Young Professionals Group steering committee at CEATI, fostering young professionals' engagement within the power sector. He volunteers with Habitat for Humanity and Stantec Community Week events.



MIKAYLA MORREY, P.Eng. Structural Engineer WSP Canada Inc.

Since graduating from Queen's University with a Bachelor of Applied Science with Honours, Mikayla has contributed to major infrastructure projects. She has rapidly advanced from a junior engineerin-training to Project Manager at WSP.

Mikavla has worked on high-profile projects such as the Centre Block

Rehabilitation in Ottawa, where she helped design an innovative gridshell roof for the Parliament building. She leads the development of ECObuild, a schematic design tool that revolutionizes the approach to decarbonization in building projects.

Mikayla mentors junior staff, and is committed to advancing diversity and inclusion in engineering. She co-founded the Calgary chapter of Women in Consulting Engineering and volunteers with APEGA's Science Night.

TETRA TECH



IPRYL BUIZA, P.Eng. Geotechnical Engineer Tetra Tech Canada Inc.

Over the past eight years at Tetra Tech. IprvI has played a key role in geotechnical projects. His expertise includes drilling methods. geotechnical instrumentation, field inspections, construction, monitoring, foundation design and slope stability. Ipryl was instrumental in Tetra

Tech's role in the Green Line LRT Stage 1 Project and helped complete geotechnical boreholes along the proposed southeast LRT alignment by coordinating third-party contractors, utility locates and permitting.

A mentor and leader, Ipryl supports junior engineers. He is committed to staying at the forefront of industry advancements, currently training as a Certified Radon Professional. Ipryl volunteers with the Alberta Science Network and the Veterans' Food Bank drive.

CONSULTING ENGINEERS OF ALBERTA 33



BMO CONVENTION CENTRE EXPANSION

AWARD OF EXCELLENCE

Building Engineering - Commercial

FIRM: JOINT - STANTEC CONSULTING LTD. & RJC ENGINEERING

CLIENT/OWNER: CALGARY MUNICIPAL LAND CORPORATION AND CALGARY STAMPEDE

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: POPULOUS, S2 ARCHITECTURE, ENTUITIVE, SMITH + ANDERSON, URBAN SYSTEMS LTD., JENSEN HUGHES, 02 PLANNING & DESIGN, MKA

CONTRACTORS: PCL CONSTRUCTION, WESTERN ELECTRICAL MANAGEMENT LTD., ARPI'S INDUSTRIES LTD.

OTHER KEY PLAYERS: M3 DEVELOPMENT MANAGEMENT, CALGARY MUNICIPAL LAND CORPORATION, ME ENGINEERS MECHANICAL & ELECTRICAL SUPPORT Convention centres can breathe energy into urban districts, revitalize historic neighbourhoods and bring their city into a new international spotlight. The BMO Centre Expansion is more than just an addition to an existing facility; designed as an iconic gathering place, the architectural form celebrates the unique geography of the region, captures the Calgary Stampede Spirit and positions Calgary as a top-tier destination for international conventions and a hub to share cutting-edge ideas as the largest convention centre in Western Canada.

JUDGES' COMMENTS

An outstanding example of project teamwork at its best. Calgary and Southern Alberta are the beneficiaries of this incredible BMO Centre.



ARTHUR J.E. CHILD COMPREHENSIVE CANCER CENTRE

AWARD OF EXCELLENCE

Building Engineering – Institutional

AWARD OF MERIT

Sustainable Design

FIRM: JOINT - STANTEC CONSULTING LTD., DIALOG, SMITH + ANDERSEN

CLIENT/OWNER: ALBERTA INFRASTRUCTURE

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: BUILDING SCIENCE ENGINEERING, CYGNUS GROUP, SENEZ CONSULTING, RWDI, SPALDING HARDWARE, LERCH BATES, KJA, KAIZEN FOODSERVICE PLANNING & DESIGN

CONTRACTORS: PCL CONSTRUCTION, MODERN NIAGARA, PLAN GROUP CANEM SYSTEMS JV

The Arthur J.E. Child Comprehensive Cancer Centre, opened Fall 2024, is Canada's largest comprehensive cancer treatment and research facility and the second largest in North America. Following the engagement of hundreds of patients, family advisors, physicians, and design and contracting partners, the innovative design focuses on a "Heart" courtyard, fostering trust, comfort, resilience and hope. The Centre, designed and built by the PCL, Stantec, DIALOG and Smith + Andersen (Footprint) team, integrates communities for treatment, education and research. This innovative facility features cutting-edge engineering design, showcasing advancements in health care design and public infrastructure.

JUDGES' COMMENTS

Very striking in terms of innovative features, engineer design and benefit for research. Truly a transformative project.



BONAPARTE FIRST NATION IR2 WATER SYSTEM IMPROVEMENTS

AWARD OF EXCELLENCE

Community Development

FIRM: GHD LIMITED CLIENT/OWNER: BONAPARTE FIRST NATION LOCATION: BONAPARTE FIRST NATION, BRITISH COLUMBIA

CONTRACTORS: CLEARFLO SOLUTIONS INC.

The Bonaparte First Nation IR2 Water System Improvements Project addresses decades of water insecurity in Bonaparte First Nation, providing the community with a safe, clean drinking water system after previously being on a boil water advisory. The project features two solar-powered, containerized water treatment plants strategically located within the community. The challenge for GHD was to coordinate and design a sustainable, cost-effective system that ensured reliable water access to residents. The resulting project eliminates water trucking, reduces carbon emissions and incorporates a remote-control system, offering a scalable solution for other remote and Indigenous communities facing similar challenges.

JUDGES' COMMENTS

Navigating the complexities of the site and working to innovate socially and environmentally efficient and effective outcomes led to top ranking.



AL-TERRA: COMPASSIONATE CITIZENS OF OUR COMMUNITY

AWARD OF EXCELLENCE

Community Outreach and In-House Initiatives

FIRM: AL-TERRA CLIENT/OWNER: AL-TERRA LOCATION: EDMONTON AND CALGARY, ALBERTA One of Al-Terra's core values is to be compassionate citizens of our community. Each year, employees select a focused Charity of Choice to support. This philosophy is an integral part of the firm's culture. Employees champion the chosen charity through volunteering, fundraising events and personal donations. Al-Terra matches funds raised through Charity of Choice in addition to other contributions. Since 2012, Al-Terra has donated over \$1.5 million dollars through our generous program of giving, which has touched over 65 charitable organizations across Alberta.

JUDGES' COMMENTS

The whole Al-Terra organization should be congratulated for the astounding outreach that influences so many people in Western Canada. A truly amazing program that raises the bar to a whole new level.



GHG MONITORING

AWARD OF EXCELLENCE

Environmental

AWARD OF MERIT Studies, Software and Special Services

FIRM: GHD LIMITED CLIENT/OWNER: BC HYDRO LOCATION: BRITISH COLUMBIA GHD developed an integrated greenhouse gas (GHG) assessment approach for extensive natural domains as a baseline emissions evaluation for a hydropower reservoir. This innovative project, the first compliance-based GHG assessment of its kind in Canada, combined the emissions flux method, eddy covariance and a carbon stock heatmap to address emission complexities. The approach effectively captured spatial and temporal GHG variations, with data integration and analysis demonstrating robust accuracy and aligning with existing studies. Moreover, the cost-effective execution stayed under budget. This milestone bridges research and industry, advancing sustainable electricity development and setting a benchmark for similar initiatives.

JUDGES' COMMENTS

This was a unique project with a unique approach to determine net GHG emissions from a future reservoir site. They combined two methodologies. This approach will benefit others in both academic research and industrial investigations into greenhouse gas impacts across diverse areas.



GIANT MINE REMEDIATION PROJECT: STABILIZATION, SUBSTANTIVE DESIGN AND REGULATORY APPROVAL

AWARD OF EXCELLENCE

Natural Resource Production

AWARD OF MERIT

Environmental

FIRM: JOINT - WSP & AECOM

CLIENT/OWNER: CROWN-INDIGENOUS RELATIONS AND NORTHERN AFFAIRS CANADA & PUBLIC SERVICES AND PROCUREMENT CANADA

LOCATION: YELLOWKNIFE, NORTHWEST TERRITORIES

SUB CONSULTANTS: MAGNA IV ENGINEERING INC., NEWMANS GEOTECHNIQUE INC.

CONTRACTORS: PARSONS INC.

OTHER KEY PLAYERS: GOVERNMENT OF THE NORTHWEST TERRITORIES

The Giant Mine Remediation Project is a multi-billion dollar mine closure and environmental cleanup, located in Yellowknife, Northwest Territories. Since 2010, the WSP and AECOM team has provided design and regulatory permitting services to the Government of Canada, as well as participating in community and First Nations engagement. The abandoned mine has now been stabilized and the project has reached a key milestone of completing substantive design and receiving a land use permit, water licence and Fisheries Act Authorization allowing construction to begin. The remediation is scheduled to be completed in 2038.

JUDGES' COMMENTS

The project provides immense value to a large region including First Nations and provides the best way forward for similar projects worldwide.

JUDGES' COMMENTS

The remediation of Giant Mine has been a longstanding, highly complex and necessary project. The innovations and technical advancements — especially as used to manage and communicate risks across all stakeholder groups — is unparalleled!



VALLEY LINE SOUTHEAST LRT

AWARD OF EXCELLENCE

Project Management

AWARD OF MERIT

Transportation Infrastructure – Roads, Interchanges, Airports, Mass Transit

FIRM: JOINT - AECOM, DIALOG, HATCH, ISL ENGINEERING AND LAND SERVICES LTD., MOTT MACDONALD CANADA LIMITED, SMA CONSULTING LTD., THURBER ENGINEERING LTD.

CLIENT/OWNER: CITY OF EDMONTON

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: SPENCER ENVIRONMENTAL, GEC ARCHITECTURE, PHICON LTD., QA ENGINEERING, REVERB COMMUNICATIONS, THE STEWART GROUP, JACK STUEMPEL & ASSOCIATES Valley Line Southeast is a 13.1 km low floor light rail transit system. It is the City of Edmonton's largest infrastructure project and the first implementation of its new vision of mass transit. The transit line is integrated into existing communities, offering connectivity from Downtown to Mill Woods and with existing LRT lines. It includes 11 street-level stops, an elevated station, one bridge, two elevated guideways, one tunnel and an operations and maintenance facility. As the Owner's Engineer, connectEd Transit Partnership managed the program from concept design in 2011, through preliminary design, procurement and design and construction, to service commencement in 2023.

JUDGES' COMMENTS

The complexity of the Valley Line Southeast LRT project is coupled with the transportation and environmental benefits to the larger community. A very large and complex project with numerous risks and challenges.

2025 Showcase - Awards -

AWARD OF EXCELLENCE

> SMALL FIRM BIG IMPACT

99 AVENUE SANITARY TRUNK BYPASS PROJECT

AWARD OF EXCELLENCE Small Firm – Big Impact

FIRM: SMA CONSULTING LTD.

CLIENT/OWNER: EPCOR

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: STANTEC CONSULTING LTD., THURBER ENGINEERING LTD., SOLIDEARTH GEOTECHNICAL

CONTRACTORS: SHANGHAI CONSTRUCTION GROUP (CANADA) CORP., ASSOCIATED ENGINEERING, SMA CONSULTING LTD., CKB CONSTRUCTION, DOUBLESTAR DRILLING



Edmonton's 99 Avenue sanitary trunk, built in 1975, is 30 m below ground, tall enough to walk in and serves 117,000+ customers – more than the population of Red Deer. To allow rehabilitation and increase capacity, EPCOR and the project team constructed a new 1.6 km bypass sewer. An innovative microtunnelling approach minimized surface impact. The first use of specialized pre-lined concrete pipe in Edmonton withstood large boulders and jacking forces of up to 1000 tonnes. The final connection to the trunk was made under live flow conditions during the dead of night. Rehabilitation is now under way.

JUDGES' COMMENTS

Such projects often go unnoticed or are ignored because they are out of sight and therefore out of mind. Yet they are highly complex to manage given the high number of parties involved, risks, soil/weather conditions and scheduling involved in making this project a success. SMA Consulting did a superb job at connecting it all together. Impressive.



COAST TO COAST: UNDERSTANDING INFRASTRUCTURE MAINTENANCE NEEDS FOR PARKS CANADA

AWARD OF EXCELLENCE

Studies, Software and Special Services

FIRM: ASSOCIATED ENGINEERING CLIENT/OWNER: PARKS CANADA AGENCY LOCATION: CANADA-WIDE SUB CONSULTANTS: DILLON CONSULTING LIMITED Associated Engineering played a transformative role in modernizing asset management for Parks Canada Agency, who oversees 18,000 assets valued at \$28 billion. Leveraging innovative data-driven methodologies and working closely with the agency's Service Management branch, Associated evaluated hundreds of assets across Park's diverse portfolio in remote and challenging areas across Canada. Associated developed a custom asset information system which integrates condition, maintenance, energy, climate risk and code information. The results from this project provide Parks Canada with the integrated information required to better enable decision making and investment planning.

JUDGES' COMMENTS

Well presented example of cross discipline expertise and innovation that recognizes the client needs at all levels of the organization. This work is a real benefit to Canada! 2025 SHOWCASE - AWARDS -AWARD OF EXCELLENCE SUSTAINABLE DESIGN

FEASIBILITY STUDY FOR GREEN HYDROGEN PRODUCTION AT LULU ISLAND WWTP



AWARD OF EXCELLENCE

Sustainable Design

FIRM: GHD LIMITED CLIENT/OWNER: METRO VANCOUVER LOCATION: RICHMOND, BRITISH COLUMBIA Metro Vancouver is exploring options for hydrogen production from their wastewater treatment plants (WWTPs) to achieve carbon neutrality goals. Two pathways were identified: electrolysis of purified final effluent and electrolysis of ammonia recovered from digester supernatant centrate. The latter provides the additional benefit of reducing nitrogen discharge to receiving waters.

GHD completed a study to assess the technical and economic feasibility of the two hydrogen production pathways at the Lulu Island WWTP and developed conceptual designs for both pathways. Evaluation included equipment, electricity consumption, carbon intensity, GHG emissions, carbon credits and hydrogen end uses.

JUDGES' COMMENTS

The feasibility assessment of two different pathways for green hydrogen production at waste water treatment plants is critical foundational work for accelerating the adoption of greener energy solutions.

This is a highly creative and innovative project, producing hydrogen from municipal wastewater. It can generate a new circular economy of waste to energy. Super interesting!

2025 Showcase - Awards -

AWARD OF EXCELLENCE

TRANSPORTATION INFRASTRUCTURE – ROADS, INTERCHANGES, AIRPORTS, MASS TRANSIT

> TRANSPORTATION INFRASTRUCTURE – TRANSPORTATION STRUCTURES

WEST CALGARY RING ROAD -HIGHWAY 8 TO OLD BANFF COACH ROAD SEGMENT

AWARD OF EXCELLENCE

Transportation Infrastructure – Roads, Interchanges, Airports, Mass Transit

AWARD OF EXCELLENCE

Transportation Infrastructure – Transportation Structures

FIRM: JOINT - HATCH & CIMA CANADA INC. (CIMA+)

CLIENT/OWNER: ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: WSP, D.E.S. ENGINEERING LIMITED, MORRISON HERSHFIELD LIMITED (NOW STANTEC CONSULTING LTD.)

CONTRACTORS: CALGARY SAFELINK PARTNERS



The West Calgary Ring Road - South Project completes the 101 km ring road around Calgary and its decades of planning, engineering and construction. It provides safe access to adjacent land uses and communities while significantly reducing congestion. This final segment (Old Banff Coach Road to Highway 8) includes five km of highway, four interchanges, seven structures and a pedestrian underpass. Calgary Safelink Partners selected the CIMA+ and Hatch joint venture, with support from WSP, D.E.S. and Morrison Hershfield, for delivery of the design. The West Calgary Ring Road opened on December 19, 2023, ten months ahead of schedule.

JUDGES' COMMENTS

This was a very complex project requiring a large amount of coordination and collaboration. In the midst of COVID-19 the team managed a huge risk and a good degree of difficulty.

JUDGES' COMMENTS

Coordinating a massive project like the West Ring Road is a feat of modern engineering. It is reassuring to know that this kind of engineering talent is available in Alberta.



HORSEFLY REGIONAL EMERGENCY SPILLWAY PHASE 1

AWARD OF EXCELLENCE

Water Resources

FIRM: MPE A DIVISION OF ENGLOBE CLIENT/OWNER: SOUTHERN REGIONAL STORM-WATER DRAINAGE COMMITTEE

LOCATION: TABER, ALBERTA SUB CONSULTANTS: STANTEC CONSULTING LTD. CONTRACTORS: DEGRAAF EXCAVATING LTD. Southern Alberta's agricultural sector, which generates over \$1.8 billion annually for the GDP, is increasingly at risk from flooding due to the frequency of large storms and intensive irrigation. The Horsefly Regional Emergency Spillway Phase 1 project, near Taber, addresses this by utilizing existing irrigation infrastructure for managing stormwater. MPE, a division of Englobe, led the civil, structural and hydrotechnical design for Phase 1 — a 5.6 km section connecting Taber Lake Reservoir to the Oldman River — ensuring long-term sustainability and infrastructure protection. Once the entire spillway is complete, it will allow greater management of stormwater throughout the Lethbridge to Medicine Hat corridor.

JUDGES' COMMENTS

The Horsefly Regional Emergency Spillway Phase 1 project sets a new standard in sustainable water management, providing key benefits to Southern Alberta in flood prevention, crop protection and economic development. Flooding has historically threatened farmland, infrastructure and communities due to vulnerabilities in the canal, which could breach during major storms, disrupting irrigation, drinking water and causing agricultural losses in the hundreds of millions.



LENDRUM AFFORDABLE HOUSING REDEVELOPMENT

AWARD OF MERIT Building Engineering – Commercial

FIRM: ENGLOBE CORP. CLIENT/OWNER: CIVIDA LOCATION: EDMONTON, ALBERTA SUB CONSULTANTS: ROCKLIFF PIERZCHAJLO KROMAN ARCHITECTS LTD.

CONTRACTORS: GRAHAM CONSTRUCTION

Responding to the increased demand for affordable housing in Edmonton, the beautiful Lendrum residential complex was built to modern standards with ease-of-use systems and intuitive technology.

Englobe was honoured to provide advanced mechanical, electrical and geotechnical engineering for the Lendrum redevelopment project. Overseeing the demolition of the retired Lendrum buildings and subsequent conversion of the property, the team delivered an upgraded residence complex that doubled the original site's density while meeting all stakeholder needs.

JUDGES' COMMENTS

The complexity of redeveloping an existing site was managed in a positive way to bring new life to a community and much needed affordable housing.



GENE ZWOZDESKY CENTRE AT NORWOOD

AWARD OF MERIT

Building Engineering – Institutional

FIRM: JOINT - DIALOG & SMP ENGINEERING

CLIENT/OWNER: ALBERTA INFRASTRUCTURE, ALBERTA HEALTH AND ALBERTA HEALTH SERVICES

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: ACUMEN COST CONSULTING, AL-TERRA, BUNT & ASSOCIATES ENGINEERING LTD., CIMA CANADA INC. (CIMA+), RESOURCE MANAGEMENT CONSULTANT, THURBER ENGINEERING LTD.

CONTRACTORS: CLARK BUILDERS

Gene Zwozdesky Centre at Norwood is a new home for those in need of complex continuing care — a continuum of services for those with chronic disease or disability — for young or old, minimal to full care. Located near the Royal Alexandra and Glenrose Rehabilitation Hospitals, it fosters a cohesive community for residents, staff and visitors. The facility features advanced structural systems with two-way slabs, innovative mechanical systems with water-cooled chillers, steam heating and comprehensive electrical systems with emergency power. Sustainable features include networked electrical metering and future-ready photovoltaic infrastructure, all in service of providing state-of-the-art care in Edmonton.



LETHBRIDGE RECOVERY COMMUNITY

AWARD OF MERIT

Community Development

FIRM: MPE A DIVISION OF ENGLOBE CLIENT/OWNER: ALBERTA INFRASTRUCTURE LOCATION: LETHBRIDGE, ALBERTA SUB CONSULTANTS: FWBA ARCHITECTS CONTRACTORS: SYNERGY PROJECTS LTD. OTHER KEY PLAYERS: TECH-COST CONSULTANTS LTD.

Alberta is facing a growing addiction and mental health crisis impacting individuals, families and communities. In response, the government has prioritized expanding treatment and improving infrastructure. MPE, a division of Englobe, partnered with Alberta Infrastructure and the Ministry of Mental Health and Addiction to design and build the Lethbridge Recovery Community — a therapeutic, community-focused treatment centre. Featuring a modular design, with components built off-site and assembled on-site, the facility provides adaptable, scalable support tailored to diverse needs. This innovative model sets the stage for similar centres across Alberta, addressing addiction, homelessness and health care strain while fostering recovery, resilience and stronger communities.



BUILDING COMMUNITY CAPACITY

AWARD OF MERIT

Community Outreach and In-House Initiatives

FIRM: ASSOCIATED ENGINEERING CLIENT/OWNER: DUNCAN'S FIRST NATION LOCATION: DUNCAN'S FIRST NATION, ALBERTA

SUB CONSULTANTS: HELIX SURVEY

CONTRACTORS: DUNCAN'S FIRST NATION, WEAVER GROUP, AGS MECHANCIAL CONTRACTORS, PURE ENERGY

OTHER KEY PLAYERS: INDIGENOUS SERVICES CANADA, CANADIAN MORTGAGE AND HOUSING CORPORATION, INDIGENOUS SKILLS AND EMPLOYMENT TRAINING

Duncan's First Nation's care and creative vision, through the Heavy Equipment Operator Training Program, enabled their community members to attain new skills and secure employment all the while upgrading infrastructure and boosting morale in the community. Associated Engineering collaboratively worked alongside Duncan's First Nation to assist with funding applications, reports, designs and construction support services. Together, Duncan's First Nation and Associated Engineering set in motion a model that other communities can adopt and adapt to their own needs.

JUDGES' COMMENTS

It is one thing to create a vision, it is quite another to make it reality. Duncan's First Nation is to be commended on how they moved forward with their vision — it is inspiring and motivating to see the implementation of an astute approach and framework. Associated's involvement in supporting this must have been equally rewarding and energizing — this is an approach and framework other communities should learn from and emulate.



OILSANDS OVERBURDEN WASTE DUMP

AWARD OF MERIT

Natural Resource Production

FIRM: THURBER ENGINEERING LTD. CLIENT/OWNER: OILSANDS CLIENT LOCATION: OILSANDS, ALBERTA

When our client faced a space challenge regarding overburden storage, they turned to Thurber to assess the possibility of repurposing an existing tailings pond for waste storage. Thurber worked with the client to design a 50-metre-tall storage facility on 80 metres of soft tailings to address risks including liquefaction, stability, materials placement and long-term performance. Construction is complete and Thurber is working with the client to assess the feasibility of building an extension to the overburden dump. The project is the first significant structure to be built on top of an in-pit tailings pond in Alberta's oilsands and the world.

JUDGES' COMMENTS

Great project and very innovative unique approach that challenged the status quo — it was not without challenges and risks.



DESIGN-BUILD INNOVATION: COLLABORATIVE PROJECT MANAGEMENT OF WEST CALGARY RING ROAD

AWARD OF MERIT

Project Management

FIRM: ASSOCIATED ENGINEERING

CLIENT/OWNER: ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: TETRA TECH CANADA INC.

CONTRACTORS: ELLISDON CONSTRUCTION SERVICES INC., CALGARY SAFELINK PARTNERS

The delivery of the West Calgary Ring Road project, a vital transportation initiative in Alberta, exemplifies design-build innovation and collaborative project management. Built in two segments, the project includes eight kilometres of the new Stoney Trail, 27 bridges including four service interchanges, as well as the full reconstruction of five kilometres of the TransCanada Highway. As the Owner's Engineer, Associated Engineering's commitment to fiscal responsibility and delivering value for money resulted in quantifiable cost savings of over \$30 million. Innovative project management strategies helped achieve minimal claims, exceptional safety and on-time delivery, setting new benchmarks for excellence.



EMPATHETIC PROJECT MANAGEMENT STRATEGIES TO FACILITATE SUSTAINABLE NEIGHBOURHOOD RENEWALS

AWARD OF MERIT

Small Firm – Big Impact

FIRM: AL-TERRA CLIENT/OWNER: CITY OF EDMONTON LOCATION: EDMONTON, ALBERTA SUB CONSULTANTS: TWENTY/20 COMMUNICATIONS (960722 ALBERTA LTD.)

Edmonton's Neighbourhood Renewal program revitalizes infrastructure in mature areas, improving roads, sidewalks and streetlights while enhancing public spaces and active transportation links. Boyle Street and McCauley are diverse inner-city communities with unique challenges requiring special consideration due to their complex social fabric. These neighbourhoods house various social agencies, cultural centres and vulnerable populations. To address these challenges, Al-Terra partnered with Twenty/20 Communications and the City of Edmonton, employing GBA+ practices to engage diverse stakeholder groups. This collaborative approach helped gather valuable feedback, informing project design decisions and aligning the renewal efforts with the specific needs of these multifaceted communities.

JUDGES' COMMENTS

Bravo to Al-Terra and the approach they use to solicit input and engage the numerous and vastly different communities and people! Well done in landing with design options amidst probably much feedback, and the many wishes and demands of the stakeholders while keeping in mind the necessities of people traffic and transportation.



BOW VALLEY GAP WILDLIFE OVERPASS

AWARD OF MERIT

Transportation Infrastructure – Transportation Structures

FIRM: DIALOG

CLIENT/OWNER: ALBERTA TRANSPORTATION AND ECONOMIC CORRIDORS

LOCATION: EAST OF CANMORE, ALBERTA **SUB CONSULTANTS:** ECOFOR CONSULTING, EGIS, MIISTAKIS INSTITUTE, THURBER ENGINEERING LTD.

CONTRACTORS: ATLANTIC INDUSTRIES LTD., PME INC.

Simple and straightforward in its design and engineering, the Bow Valley Gap Wildlife Overpass serves to reduce wildlife-vehicle collisions and connect wildlife migration routes and patterns that cross the Trans-Canada Highway. Design considerations sought to balance technical complexity, driver safety and experience and the ecological needs of the wildlife populations it will connect. The location was selected based on traditional migration patterns and the design responds to the topography and local ecology of the surroundings to integrate it into the landscape in a manner that is sensitive and thoughtful.

JUDGES' COMMENTS

Excellent project with stunning results of a unique bridge design that merges with landscape and environment, enhancing the wildlife corridor with aesthetically pleasing infrastructure that enhances safety from wildlife collisions. The Wildlife overpasses have emerged as a major success in advancing both highway safety and environmental conservation.



LLOYDMINSTER WASTEWATER TREATMENT FACILITY

AWARD OF MERIT

Water Resources

FIRM: ISL ENGINEERING AND LAND SERVICES LTD. CLIENT/OWNER: CITY OF LLOYDMINSTER LOCATION: LLOYDMINSTER, ALBERTA OTHER KEY PLAYERS: CHANDOS-BIRD JOINT VENTURE, MAGNA IV ENGINEERING, VEOLIA WATER TECHNOLOGIES

The City of Lloydminster faced a mandate from the federal government to upgrade its Wastewater Treatment Facility or face legal consequences. ISL was brought on as the Owner's Engineer to provide water, wastewater engineering and project management services.

Utilizing Integrated Project Delivery and extensive Building Information Modelling, ISL and the project team were able to optimize design and streamline construction. The upgraded facility significantly improved the quality of treated effluent entering the North Saskatchewan River, ensuring compliance with the Federal Wastewater Systems Effluent Regulations and protecting downstream communities. The project was completed two weeks ahead of schedule and \$1.5 million under budget.

JUDGES' COMMENTS

The project was delivered ahead of schedule, under budget and during a period of immense uncertainty and turmoil. The project team demonstrated tremendous agility, innovation and focus on client value.

2025 SHOWCASE AWARDS JUDGES

Andre Corbould, P.Eng. Senior Advisor, Integrated Strategic Partners

Cathy Maniego, P.Eng. Assistant Deputy Minister, Strategic Integration and Operations Division, Alberta Infrastructure

Craig Walbaum, M.Sc., P.Eng. Acting Deputy City Manager, Integrated Infrastructure Services, City of Edmonton

Donald Hawkes, P.Eng., PMP Director, Project Management, EPCOR Water Services

Erin Bird, P.Eng. Leader, Grant, Partner & Industry Relations, City of Calgary

Garry Johnston, P.Eng. Manager, Project Construction and Engineering, Strathcona County

Dr. Lianne Lefsrud, P.Eng., PhD. *Risk, Innovation, and Sustainability Chair (RISC); Professor and Director Outreach, Chemical and Materials Engineering, University of Alberta*

Lisa Doig, P.Eng, FEC, MBA Managing Director, O'Doig Consulting Services Inc.

Malcolm Bruce, MSM, ICD.D CEO, Edmonton Global

Manon Plante, P.Eng., FEC, MDS, CD1 Senior Corporate Advisor, Women Building Futures

Michael Thompson, P.Eng., MBA General Manager, Infrastructure Services, City of Calgary

Mike Koziol, P.Eng., M.Eng. President, Koziol Consulting Ltd.

Paul Breeze, FACI, FCPCI CEA Past President, Retired

Ranjit Tharmalingam, P.Eng. Senior Policy Advisor, Minister of Transportation and Economic Corridors

Rob Lonson, P.Eng. *Executive Director, Technical Standards Branch, Alberta Transportation and Economic Corridors*

Tom Loo, P.Eng.

Assistant Deputy Minister, Construction and Maintenance Division, Alberta Transportation and Economic Corridors

Celebrating Excellence. Embracing the Future.



Thank you, Jay Nagendran, P.Eng., FCAE, ICD.D, FEC, FGC (Hon.)

For the past eight years, Registrar and CEO Jay Nagendran has guided APEGA through many challenges and opportunities, showing a commitment to regulatory excellence, public safety, and the principles of self-regulation. His innovative contributions have helped drive the engineering and geoscience professions forward and have built a strong foundation for the future.

We wish you a fulfilling retirement!

Welcome, Paul Wynnyk, CMM, MSM, CD, P.Eng.

Incoming Registrar and CEO Paul Wynnyk brings a wealth of experience safeguarding public welfare, including almost four decades in the Canadian Armed Forces and, most recently, five years with the Government of Alberta. Starting April 1, he will oversee the continued advancement of professional standards, help navigate changes to legislation, and support the continued role of engineering and geoscience in driving Alberta's economic growth and innovation.

We look forward to what the future will bring!

Thank you, Jay. Welcome, Paul.



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