

ALBERTA

THE MAGAZINE OF CONSULTING ENGINEERS OF ALBERTA

INNOVATORS

2023
SHOWCASE
AWARD
WINNERS

2023

THE DRIVE FOR

NET ZERO


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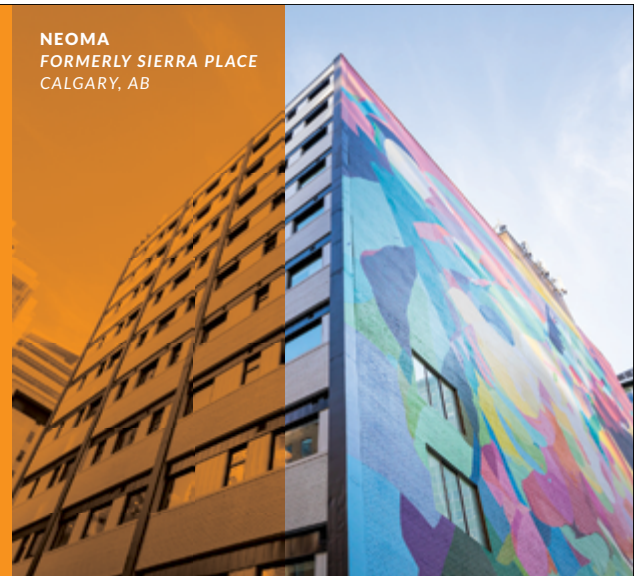
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MESSAGE FROM THE CEA PRESIDENT

JUST OVER TWENTY years ago, I attended my first CEA Showcase Awards Gala. I had been invited as part of an owners' group for an award submission (which we didn't win at the time). I remember sitting there in awe at this industry community, that I had so little exposure to at that time, and was truly amazed at the projects, the people and the wide scope of the engineering success achieved by consultants. It was an unforgettable moment in my career, it was inspiring and remains a highlight so many years later. Today, I am in even more awe of our industry and all we have achieved. The last few years have been challenging, with the adaptation and resiliency of consulting engineers, we have built a stronger and more connected industry, that we should all be proud of. Congratulations to the award winners, from firms to owners to individuals. Every winning project has a story behind it; and we celebrate these stories. The work we do and the teams behind the work.

Change is inevitable, and over the past couple years the pace of change seems to be faster. We have all adapted to the change of how we work, how we deliver projects and how we connect. That change continues today; legislative changes to

how we administer projects, changes to government, climate change, artificial intelligence, the list of change impacting our industry is indefinite. What comes out of change is our innovation and, as an industry, we have been very successful in navigating change, largely because of our ability to embrace change, finding ways to be more efficient and add value for our clients. If I had been told two years ago that I would now have more video meetings than in-person meetings, I would have clearly voiced a different response, not to mention the large percentage of our industry that has successfully adapted to working from home, working from the office and in a hybrid model.

The continual challenge to innovate and prosper through uncertainty, accepting change and moving forward is on full display through all of the CEA award submissions. Through innovation and responding to the needs of our industry partners, throughout changing and uncertain times, we should all be proud of what has been accomplished. Once again congratulations to our award winners, project submissions and for all the successes this past year.



RYAN BETKER, P. ENG.
CEA PRESIDENT

“CHANGE IS INEVITABLE, AND OVER THE PAST COUPLE YEARS THE PACE OF CHANGE SEEMS TO BE FASTER. WE HAVE ALL ADAPTED TO THE CHANGE OF HOW WE WORK, HOW WE DELIVER PROJECTS AND HOW WE CONNECT.”

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SUCCESS IS BUILT ON RELATIONSHIPS

CONGRATULATIONS TO the winning firms and individuals in this year's Awards program. Through our Awards program, we celebrate not only individual project and career successes but also the success of our industry through another dynamic year. Consulting engineers are no strangers to unforeseen issues at the project, business or industry levels and continue to be adaptive to what currently seems to be an unending onslaught of unprecedented and significant challenges.

The most successful projects are built upon solid relationships within the project team, with project owners and with the project construction team. Often these relationships are tested by the pressures faced by each of the three parties involved. In the past year, these pressures have continued to increase in many areas. Contractors have been dealing with price volatility in materials, equipment and labour markets. Owners have been challenged to manage spending on capital and operating budgets during an inflationary period. Government leadership has had a considerable amount of flux. New and proposed legislation and regulations can adversely impact any or all parties involved in projects. Consulting engineers are often caught in this disruptive environment, attempting to meet changing expectations from clients, contractors, regulators and society in general.

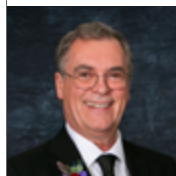
Relationships at the project level can become strained since all parties are currently facing uncertainties with potential negative financial impacts. Risk aversion is a growing concern with our members, clients and contractors that reaches beyond the project level. It is an industry issue. Procurement practices, contractual terms, alternative project delivery methods and early contractor/consultant involvement on projects have become common topics in our CEA meetings with provincial government departments, municipal governments and

allied industry groups such as the Alberta Construction Association, Alberta Roadbuilders & Heavy Construction Association and the Consulting Architects of Alberta. Achieving success at an industry level also requires solid relationships, collaborative approaches and development of a common understanding of everyone's concerns in order to achieve creative and innovative options moving forward.

Through our industry meetings, CEA members, owners and contractors continue to share a common problem that directly impacts the success of all parties – a shortage of skilled labour. Baby boomer retirements, pandemic aftershocks and changes in workplace cultures have created challenges in finding staff, and in their development and retention. Project outcomes and industry outcomes hinge on everyone working together on this common problem. Recognizing that all parties will be impacted with the repercussions of this for the next few years, has been the first step. A lack of experienced staff from all perspectives has been identified as posing significant mutually inclusive risks which will need a combined approach to resolve as the next step.

Re-establishing more in-person connections with our industry partners and client groups over the past year has been valuable in identifying issues, building trust, strengthening relationships and quite frankly, just getting to know people better! Despite the ongoing unpredictability in the current market, CEA believes that there are a number of options owners can use in procurement and project delivery that will enable better management of limited resources from all affected parties, provide better allocation of risks and create better outcomes in terms of schedule and cost control. We will continue to be working closely with our members, clients and stakeholders on these issues in the upcoming year.

On a final note, thank you to everyone who submitted projects to demonstrate your innovation and the power of teamwork on a wide variety of projects. Thank you to our judges on making the difficult decisions to select the Award winners. Thank you to our member firms who continue to support CEA and this Awards program.



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

THE CASE FOR CANADA'S INFRASTRUCTURE NETWORK

OUR COUNTRY'S APPROACH to approving major infrastructure projects is in desperate need of an overhaul. If we want to get big things built – telecommunications, railways, highways, electrical networks, energy and resource infrastructure – project proponents are daunted by a plethora of approval hurdles that are prohibitively expensive, glacially slow to clear and, far too often, redundant.

This scattershot approach has led to some significant problems. For one, it's environmentally unsustainable – the lack of coordination between project approvals has led to sprawling and inefficient use of land. It's also one of the reasons that northern and Indigenous communities are left without proper infrastructure, exacerbating food insecurity. Further, our infrastructure deficit means that harvesting critical minerals – including those needed for electric vehicles – is onerous and often impossible. Meanwhile, economic growth in this country is stunted because the disjointed process deters major job creators – both international and domestic – from investing in Canada.

To solve these unique and complex problems, we need to think big – a country as geographically large as ours demands this of us. We need a bold, innovative, legacy-defining plan to launch Canada into a new era of modern infrastructure.

CANADA'S INFRASTRUCTURE NETWORK WILL DO JUST THAT ACEC is championing a solution: a coordinated network of rights-of-way for infrastructure projects. Sometimes referred to as an infrastructure corridor, it is essentially a master plan for pre-established and pre-approved routes that allow for necessary infrastructure to be built. Routes that make logical sense and accommodate multiple infrastructure assets (such as energy lines, highways, etc.). Pathways that ensure the most efficient use of land and connect our communities, particularly those in the north. A network across provinces and territories that reduces costs and expedites planning time, therefore encouraging more investment into Canada and boosting economic growth. We could be the globe's supplier of the strategic resources necessary for a greener economy. But we need Canada's Infrastructure Network to make sectors like critical minerals and hydrogen more viable and more competitive.

THE PATH FORWARD: HOW WE CAN ACHIEVE THIS TOGETHER The first step is to bring all parties to the table. We should also build on the work already undertaken by provincial and territorial governments (such a concept has already been on the radar of the Alberta government for years) as well as the government's recent consultations for the National Infrastructure Assessment, which aims to determine a long-term vision for developing and financing infrastructure in Canada.

With this new network, we can get everyone on the same page, planning with the same map – all while prioritizing Indigenous engagement, community interests and environmental sustainability. This would allow us to not only connect Canada's regions and communities, but connect our people as well. Working together towards the same goal, we would encourage more interjurisdictional collaboration and bolster unity across the country. The provinces, territories and First Nations will benefit; the economy and environment will benefit.

THE RESULT: A STRONGER CANADA

Canada's Infrastructure Network has the transformative potential to deliver the nation-building projects that Canadians and their families need and deserve.

We would create good jobs for Canadians across the country and encourage more investment into Canada. We would have more certainty and clarity in the development process, allowing us to build essential infrastructure faster. We would have the tools to provide the north with reliable transportation and energy, while also tackling food insecurity and creating more economic opportunities for Indigenous peoples. We would facilitate the movement of goods, services and resources across Canada which would make interprovincial trade easier, give Canadians access to a greater diversity of products and reduce economic disparity between provinces and territories. We would advance our environmental goals by using land more efficiently, and we would improve market access for resources, including critical minerals – all while growing our economy.

Our communities would be stronger, more sustainable and more prosperous for this generation of Canadians and the next.

Canada can and *should* be a country where we achieve big things. An ambitious, forward-thinking plan of this scale requires vision and political will, and we have the power to make it happen.



TIM STANLEY, P. ENG.
BOARD CHAIR



JOHN GAMBLE, CET, P. ENG.
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BY: BREANNA MROCZEK

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**RECRUITING AND RETAINING
QUALIFIED TALENT ARE THE
TOP CHALLENGES FACING
CONSULTING ENGINEER FIRMS**

Alberta Innovators asked business leaders about the greatest challenges their firms are facing, and how they are trying to solve them. The answer was unanimous — everyone indicated that recruiting enough talented staff to meet demands, and retaining employees, are the biggest challenges. In their own words, here is a look at the staffing challenges leaders are facing, and what they are doing to try and overcome them. →



staffing challenges are typical of the engineering industry.



JACKIE MYKYTIUK, BSC
PROJECT MANAGER, DIRECTOR AT M2 ENGINEERING

JACKIE MYKYTIUK recognizes that inflationary pressures affecting resources and projects have been challenging, but finding experienced people remains the biggest hurdle. “We are working with recruiters and using our networks to put the word out there,” Mykytiuk says. “Networks are always the most successful way for us to recruit people, but right now everyone is working from the same pool of candidates.”

To entice candidates and encourage current employees to stay, M2 Engineering re-evaluated wages to account for inflation, offers a flexible work environment and ensures support systems are in place to help employees continue to navigate an industry and world in flux. “We just want to support people with what they need at work to help them achieve balance in life.”



CHRIS WORKMAN, M.ENG., P.ENG.
PRESIDENT AT THURBER ENGINEERING

THURBER ENGINEERING'S main staffing challenge is finding intermediate-level engineers. “We have a lot of big, new projects, but there is a shortage of people to work on them,” says Chris Workman. He’s seen a return to pre-2015 project levels in Alberta. To address the skill gap, Thurber is providing additional training opportunities for more junior engineers. For all employees, the company tries to offer engaging work environments and competitive benefits. “We have been working hard to provide a good work environment at all our offices – including increased communications to keep people feeling connected – and to provide flexibility for people who are interested in work-from-home options,” Workman says. “We are growing by recognizing the value our people have.”

FOR GORD JOHNSTON, “it’s all about people.” In 2022, Stantec focused on engaging and retaining its current employees first, followed by recruiting talent to meet new demands. As part of both initiatives, Stantec has focused on perfecting its hybrid work offerings. “We are fully supportive of hybrid work. We think it is here to stay,” Johnston says. “We are also trying to add value to the office through collaborative events and training that get people together.” Stantec is also focusing on mentoring junior employees in their first



**GORD JOHNSTON,
M.ENG., P.ENG**
PRESIDENT AND CEO AT STANTEC

three years with the company through personalized outreach, developing professional groups and other communities. “We want to give people the support they need to advance their careers, to feel embedded in the culture of Stantec – like they are part of something greater than the company.”

ISL ENGINEERING is working to retain current staff and recruit new talent by placing more focus on individual needs and preferences, while staying on top of innovative ways to meet business needs. “We are creating the next wave of excellent professionals and engineers while we find ways to give them what they need to be their best,” says Rodney Peacock. “Mental health has certainly been a bigger focus for us, and we are providing space for needed rest



RODNEY PEACOCK, P.ENG.
PRESIDENT AND CEO AT
ISL ENGINEERING & LAND SERVICES

while they grow their careers and develop our profession.” In 2023, ISL Engineering will be focusing on key strategic hires with the problem-solving skills needed for innovation in the industry, all while maintaining flexibility for its continued growth.

DAVID NAGY THINKS maintaining and attracting talent remains the biggest challenge in the industry, and a key area of focus for Associated Engineering. Part of this challenge arises from the downward pressures being placed on how clients pay firms. It directly affects what firms can offer to attract and retain staff and how they can support the health of the engineering industry. “A lot of the solutions will start with how our professional services are procured,” Nagy says, noting that advocating for qualification-based selection can help protect the engineering industry and encourage talent to build, grow and develop their talents within it. “Ensuring



DAVID NAGY, P.ENG., MBA
NATIONAL PRACTICE LEAD,
ALTERNATIVE AND MAJOR PROJECTS
AT ASSOCIATED ENGINEERING

clients have proper insight on the enormous value that good engineering has on the lifecycle of a project would support a healthier industry. Underdeveloped, quick engineering has many long-term effects, but when you can really have a qualified individual who knows the problems, anticipate and build it into their design, you’ll see a huge improvement.”

STAFFING CHALLENGES are typical of the engineering industry due to changes that occurred during the pandemic. “Firms and clients followed a more conservative approach during the worst of the pandemic, either in hiring or starting new projects, and now there is a higher demand for services as clients try to complete all the projects that they wanted to do two or three years ago,” says Sara Anderson. She says hiring solutions lie in working with emerging talent, especially students who graduated during the pandemic but may



SARA ANDERSON, P.ENG., PE
PRINCIPAL AND SENIOR ENGINEER
AT URBAN SYSTEMS

not have fully participated in a co-op program or other work opportunities due to restrictions on in-person experiences. “We have been reaching out to connect with post-secondary institutions in Alberta to be involved with career fairs and reintroduce students to available jobs and the benefits of traditional engineering jobs.” **AI**

GETTING TO NET ZERO

THERE IS NO SINGLE PATH TO REACH NET-ZERO GREENHOUSE GAS EMISSIONS, BUT ALL OF THEM WILL REQUIRE INNOVATIVE, ENGINEERED SOLUTIONS

BY MICHAEL GANLEY

THE CITY OF EDMONTON, which owns more than 5,000 vehicles, 900 buildings and 700 other bits of infrastructure like spray parks and bus shelters, has a goal of being net zero with respect to greenhouse gas emissions by 2050.

The person tasked with overseeing the massive effort to get it there is City Manager Andre Corbould. “We have a lot of work to do, and we’re not quite on track to do it yet,” says Corbould, a civil engineer who was hired to his current position in January, 2021. “We’re going to get on track, but we’re going to need innovators, especially innovators like consulting engineers, to help us get there.”

Corbould says the City is taking a two-pronged approach. The first is to transition its fleet of vehicles to a mix of electric and hydrogen power. “The hydrogen option allows us to do that quicker than if it was just electric,” he says, “because there are some opportunities for retrofits of vehicles that are easier to do, especially when you convert from diesel.”

The second prong is to reduce emissions from the heating and cooling of buildings. The City is targeting a 19 per cent reduction in building emissions through deep energy retrofits of existing buildings and a further 36 per cent reduction in City-wide emissions through transformations to energy production such as low-carbon electricity supplies and low-carbon district energy systems.

The City has identified \$800 million worth of potential retrofits for City-owned buildings, but says the first \$53 million, which has been approved by the City, will make a huge positive difference. “We have commitment now from our government and Edmontonians to start investing in these things,” he says. “We need innovation from the →







industry, engineers and builders, so we can do the best we can with the resources we have.”

In addition to the Blatchford district energy system – around which an entire eco-community will be built in the lands formerly occupied by an airport – Corbould also points to some major, one-off projects that the City has undertaken that will make an impact. These include the 169-kilowatt solar installation on the Edmonton Convention Centre and a new \$18 million net-zero fire station in the southwest of the city featuring 382 solar panels, geothermal heating and cooling and stormwater management through landscape innovations.

The City of Calgary is also focussed

**“WE NEED INNOVATION
FROM THE INDUSTRY,
ENGINEERS AND BUILDERS,
SO WE CAN DO THE
BEST WE CAN WITH THE
RESOURCES WE HAVE.”**

ANDRÉ CORBOULD, CITY MANAGER, EDMONTON

on exploring opportunities for deep retrofits and the continued expansion of district energy systems, and has taken the additional step of embedding its climate and environment department within its planning department. “That is so fundamental when we look at greenhouse gas reductions,” says Carolyn Bowen, Director of Climate and Environment with the City, which has the same net-zero goal as Edmonton. “A large part of what we’re doing is looking at how we plan and build our city, so there will be lots of opportunities to integrate climate and climate mitigation into that.”

Alberta has extensive experience with district energy systems, which produce thermal energy at a central plant and then use underground pipes to distribute the energy to a number of buildings. The University of Alberta has a district energy system that already prevents about 60,000 tons of carbon dioxide emissions from entering our atmosphere each year. The university is looking to improve on both the supply and the demand sides.

On the supply side, Associate Vice-President,



Utilities, Michael Kohlenberg says the university is developing a Master Energy Plan (MEP), which will include an evaluation of energy supply, energy demand reduction, and carbon emissions reduction strategies through the year 2050, including the use of heat pumps, geothermal sources, electricity or a combination of all of them. “There is no magic silver bullet out there,” says Kohlenberg, a mechanical engineer. “We’re looking to develop a road map on how to get to net zero and as technologies mature and become available, and as the power grid greens, we’ll have that modelling done from an engineering standpoint.”

On the demand side, University of Alberta Vice-President Facilities & Operations, Energy and Climate Action (and mechanical engineer) Michael Versteeg says the university is looking at its own deep energy retrofits to buildings, as well as at using technology to optimize the use of equipment. “We’re starting to explore enterprise energy analytics, so using data to help better inform how buildings should be operating and looking for inefficiencies in overall control strategies,” he says.

The university has a number of enterprise-level data platforms. “They watch how buildings drift over time, how they are correlating to weather patterns and occupancy-based usage,” says Versteeg, “so one layer above what the building controls systems are doing.”

There are opportunities for contractors and consultants throughout the burgeoning net-zero economy, but Bill Black, president of the Calgary Construction Association, says there will need to be structural changes for them to take advantage of those opportunities. “One thing I’ve been trying to do is move our industry farther up the decision-making chain,” he says.

“The way the commercial industry is wired, we respond to what somebody else wants. We don’t tell them what to need or want.” He says if a building owner decides it wants a net-zero building, and

then hires a design team to design it, it can get a net-zero building. “These buildings are very complex,” he says. “You need a much higher level of technical expertise, and you need it earlier in the process.”

He says the drive for net zero gives the construction industry a chance to reinvent itself, with key trades in a design-assist role early in the process.

Michael Jackson, the Senior Director, Electrical and Mechanical for the Prairie provinces with WSP, agrees, saying consultants should have a conversation with every client on every project early in the process. “To use engineering services to the maximum benefit, it has to be an open and collaborative process, transparent and with all the data you can generate,” he says. “The challenge of a lot of this is the maintenance and operation over time. These systems can become complex very quickly. It’s not just build it and walk away. You’re asking, ‘How are they going to operate it for the next 25, 35 years?’”

But if you get involved early and have those conversations, the opportunities are boundless. “There are \$800 million in opportunities for retrofits in Edmonton alone,” says Corbould. “My advice is get heavily engaged in this field because we are going to start, and there is going to be a lot more to come.” **AI**

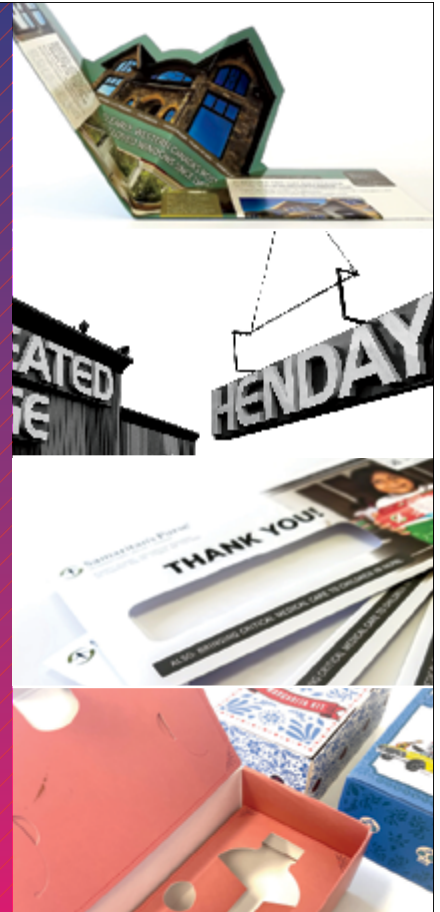
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HONESTY, INTEGRITY AND EXPERTISE

SHELDON HUDSON STANDS BY HIS WORD AS A CONSULTING ENGINEER

SHELDON HUDSON HAS a simple photo frame on his desk. In it is a photo of a small, unassuming commercial building in the town of Sundre in southern Alberta. It's an accountant's office that was built by his grandfather, uncle and cousin, and it stands as a reminder of the importance of his work as an engineer, no matter the size of the job.

"My cousin was an accountant looking for a place to put her business practice. And my grandfather and my uncle had a desire to build a building," he says. "They needed a civil engineer to do the site design around the building, which was a relatively small exercise. They ended up asking me to do it."

Hudson agreed and packed up his survey equipment and went down to do a site visit. He found that the site was quite low, and close to Bearberry Creek. After measuring the ground around the site, he concluded that, in the event of a flood in the area, the building could be at risk. But raising the elevation was a costly endeavor – one that his family hoped to avoid if possible.

"It was going to cost several thousand →

BY LISA CATTERALL
PHOTOGRAPHY RAY WATKINS



CONSULTING ENGINEER
SHELDON HUDSON

dollars to raise their lot, so my uncle and grandfather thought this was a waste of money,” he says. “I remember my grandfather saying that they diverted Bearberry Creek around years ago so that the area would never experience flooding.”

Although the main creek had been diverted, and there was only a trickle running through it at the time, Hudson wanted to err on the side of caution. This wasn’t the time or place to take shortcuts.

“Although they were putting a lot of pressure on me to lower the building elevation, I just felt like it was too big of a risk. So they agreed, but I think they thought that I was being too conservative at the time,” he says.

That suspicion wouldn’t last. It was only a year or two later that southern Alberta experienced unusual flooding. As the water rose, Bearberry Creek exceeded the capacity of the diversion channel, forcing water to the original creek adjacent to the building. Water began to build up and Hudson’s judgment calls were put to the test.

“The water came up into the parking lot, to the curb but didn’t go into the door,” he says. “If I remember correctly, it was one of the only buildings, if not the only building, in that area that didn’t flood.”

The building became a point of pride for Hudson. Although his career is full of memorable projects, this one stood out. As a civil engineer, he had spent decades designing infrastructure to withstand the forces of Mother Nature. But hadn’t often had the opportunity to see his work in action.

“An engineer rarely gets to see their designs tested to the limits like that. And to see it get tested and perform as expected, was a moment of pride,” he says.

Now, the photo frame on his desk stands as a reminder of the importance of having confidence in the work that engineers do. Since joining Al-Terra in 1993 as a co-op student, Hudson has learned from the examples set by mentors Corry Broks and Leo Broks, who formerly led the company. Their leadership guided his growth as a consulting engineer, and set the tone for the rest of his career. He credits them with reinforcing the importance of honesty and integrity, and standing up for what you believe in, which was instilled in him by his parents while he was growing up on the family farm near Brownfield, Alberta. “I was raised on the farm, but I grew up with Al-Terra,” says Hudson.

“Everything that we do is about tradeoffs,” he says. “There is a constant push and pull between costs versus benefits. In the end, we have a responsibility to protect the public interest. To do that effectively, reputation is important. When you *do* feel strongly about something, we as engineers want people to respect that and say, ‘OK, if Sheldon is bringing this as a concern, we should stop and consider his opinion.’”

Hudson knows that choosing to stay with the same company throughout his career meant choosing the road less travelled. But, he says the opportunities he’s had to keep growing and learning along the way have kept him engaged.

“When I enrolled in my MBA, I told myself it was an important stepping stone for my career,” he says. “Although I value my MBA, my career is much more than my current position as CEO of Al-Terra. It is the sum of many parts, which includes my technical work as well as the relationships and life experiences that I have collected throughout my journey.

“You realize when you get older that what’s truly important is who’s a part of your life, and who’s helped shape your life? And finally, who can you help?” **AI**



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CEA CODE OF ETHICS

CEA member firms impose upon themselves a very strict Code of Ethics requiring disciplined fulfilment of their duties with honesty, justice and courtesy toward society, clients, other members of CEA and employees.

Ongoing regulation by peers ensures quality management practices and the integrity of all CEA members.

CEA membership accreditation criteria are stringent. In addition to conforming with the standards of practice set by the Association of Professional Engineers and Geoscientists of Alberta (APEGA) and the requirement to hold an APEGA Permit to Practice, member firms must maintain permanent facilities with employees in Alberta; be managed by one or more professional engineers; have at least two years operating experience as a consulting engineering business; and employ an individual in Alberta who has at least five years experience in consulting engineering as a professional engineer.

Clients benefit directly by dealing with CEA member firms, professionals who are keenly interested in maintaining and promoting their own business association which, in turn, advocates the veracity and trust which can be expected from each of its members.

SOCIETY

1. Members shall practise their profession with concern for the social and economic well-being of society.
2. Members shall conform with all laws, bylaws and regulations and with the APEGA Code of Ethics.
3. Members shall satisfy themselves that their designs and recommendations are safe and sound and, if their engineering judgment is overruled, shall report the possible consequences to clients, owners and, if necessary, the appropriate public authorities.
4. Members expressing engineering opinions to the public shall do so in a complete, objective, truthful and accurate manner.
5. Members are encouraged to participate in civic affairs and work for the benefit of their community and should encourage their employees to do likewise.

CLIENTS

6. Members shall discharge their professional and business responsibilities with integrity.
7. Members shall accept only those assignments for which they are competent or for which they associate with other competent experts.
8. Members shall immediately disclose any conflicts of interest to their clients.
9. Members shall respect the confidentiality of all information obtained for and from their clients but shall deal appropriately with any matters which may place the public in jeopardy.
10. Members shall obtain remuneration for their professional services solely through fees commensurate with the services rendered.
11. Members shall promote consulting engineering services in accordance with a qualifications-based selection system endorsed by CEA.

OTHER MEMBERS

12. Members shall relate to other members of CEA with integrity and in a manner that will enhance the professional stature of consulting engineering.
13. Members engaged by a client to review the work of another member of CEA shall avoid statements which may maliciously impugn the reputation or business of that member.
14. Members shall respect the clientele of other members of CEA and shall not attempt to supplant them when definite steps, including negotiations for an engagement, have been taken towards their engagement.
15. Members, when requesting professional engineering services from other consulting engineering businesses, including members of CEA, shall promote the use of a qualifications based selection system endorsed by CEA.

EMPLOYEES

16. Members shall treat their employees with integrity, provide for their proper compensation, require that they conform to high ethical standards in their work and fully understand this Code of Consulting Engineering Ethics.
17. Members shall not require or permit their employees to take responsibility for work for which they are not qualified.
18. Members shall encourage their employees to enhance their professional qualifications and development through appropriate continuing education.



2023

CONSULTING ENGINEERS *of* ALBERTA

SHOWCASE AWARDS



consulting
engineers
of alberta



2023
SHOWCASE
- AWARDS -

CEA LIEUTENANT
GOVERNOR'S AWARD
FOR DISTINGUISHED ACHIEVEMENT

THE PROJECT WHISPERER

BRIAN PEARSE SAYS ENGINEERING IS A LOT LIKE RIDING HORSES: WITH PATIENCE AND GOOD COMMUNICATION, YOU CAN DO GREAT THINGS

GROWING UP IN STURGEON County, north of Edmonton, Brian Pearse's life revolved around riding and showing the horses on his family's farmland. It wasn't until high school that he started thinking about a career plan. "I thought I would probably be an electrician, like my dad," he says. "This notion of engineering – I really didn't know any people with that type of background to talk to, but it was intriguing," he says. So he did a little research and talked to the school counselor. He was starting from scratch – he had not even taken physics at that point – but engineering "became a goal without really knowing a whole lot of what it entailed."

He took engineering at the University of Alberta, but upon graduating still did not have much non-horse-based, real-world experience. So he started with Stewart Weir and Company, a surveying and engineering company established in Alberta in 1912, and he received all the experience he could want. The company was small at the time, and Pearse was immediately put on a highway project survey crew, where he started learning about... pretty much everything. "I literally went out and surveyed the project, came in, processed the data, did the design, put the contract together, tendered it, and was basically the project manager," he says. "Having the ability to be involved in every single step was unique."

He turned that experience into a 30-year career, almost all of which was spent at Stewart Weir, where he eventually became CEO. He says his life has had many "aha" moments, but that his career has been "more of a build than a boom." He credits mentors like former assistant deputy minister of

Alberta Transportation Nester Chorney and the late Reg Kotch, who worked with Alberta Transportation and was the mayor of the Town of Stony Plain. They taught him to have an appreciation of the entire job, from the work in the field to the importance of invoicing. By the time he became Stewart Weir's manager of transportation, Pearse "felt ready for anything."

If it sounds like Pearse enjoys the business side of things as much as the

when it comes to new projects. "If we have a meeting, it's not unusual that they start the meeting with a prayer. They're looking for different projects and they discuss them very deeply. Success to them is probably a little bit different than how traditional companies see it. And that has to be recognized."

Pearse stepped away from the world of horses while he and his wife – whom he met while taking riding lessons – raised their kids, but he says the equestrian and

"I LOVE BEING AN ENGINEER, BUT I WAS REALLY DRIVEN BY THE BUSINESS ASPECT. I ENJOYED THE PARTNERSHIP WITH THE CLIENT AND THE CONTRACTOR TO DELIVER. AND I ALWAYS FELT LIKE WE COULD BE MORE EFFICIENT, TAKE ON BIGGER PROJECTS AND BRING MORE SERVICES TO CLIENTS."

BRIAN PEARSE

actual engineering, that's because he does. "I love being an engineer, but I was really driven by the business aspect. I enjoyed the partnership with the client and the contractor to deliver. And I always felt like we could be more efficient, take on bigger projects and bring more services to clients."

After a long career and term as president of the Association of Professional Engineers and Geoscientists of Alberta, Pearse now frequently works with First Nations. He says he appreciates their patience and intention

engineering worlds aren't so far apart. "The thing with horses is it's not as simple as just going: This is the goal, this is what we're gonna do. They don't typically respond well to that," he says. Similarly, clients – or staff, or the projects themselves – don't always respond well to that thinking. There are always things that get in the way of advancing a project, things that are beyond your control. But if you have patience, and communicate well, you can reach that goal."

– CORY SCHACHTEL

2023
**SHOWCASE
 - AWARDS -**
 HAROLD L.
 MORRISON AWARD
 RISING YOUNG
 PROFESSIONAL
 NOMINEES

CEA 2023 SHOWCASE
 YOUNG PROFESSIONAL NOMINEE JUDGES

- AL MAURER**, P. Eng. Retired Edmonton City Manager
- HERB KUEHNE**, P. Eng. CEA Past President
- KEN PILIP**, P. Eng. CEA Past President, CEA's Past CEO & Registrar



Vincent Huang, P.Eng.
 Geotechnical Engineer
 WSP E&I

VINCENT HUANG

Since 2013, Vincent has been working in the consulting industry as a geotechnical engineer, serving clients in the pipeline, government and oil sands industry. Colleagues say he is an excellent source of technical knowledge and an inspiring leader who is always willing to provide guidance.

Vincent specializes in geotechnical instrumentation design for remote sites, LiDAR evaluation, GIS data management, and geohazard identification and assessment for pipeline and linear infrastructure corridors.

During his time studying at the University of Alberta, Vincent engaged others to become active members of the engineering community and has continued this in his professional career. Vincent has served as the program chair for the Geotechnical Society of Edmonton since 2020 and is a current volunteer with the Young Professional Committee of the Consulting Engineers of Alberta and the Canadian Society of Civil Engineers.



Kirk Haugrud, M.Eng., P.Eng.
 Senior Engineer
 Entuitive Corporation

KIRK HAUGRUD

Kirk is a Structural Engineer at Entuitive's Calgary office and has been with the firm for over eight years. He has been an integral team member on several high-profile structural engineering projects in Calgary, such as the 9th Avenue parkade and Platform Innovation Centre, the new central library and the St. Louis Hotel restoration.

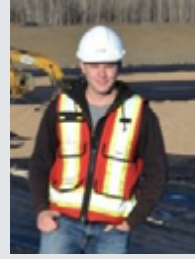
Working on designs using concrete, steel and wood, and gaining experience across a wide range of sectors led to Kirk taking an active role and sharing his expertise through Entuitive's knowledge centres. He has also developed numerous tools that are widely used within the company for design.

Kirk's dedicated work to help develop his colleagues and contribute to the firm's technical excellence ensures safe engineering designs in our community, as well as an increased ability to meet project intents and functions.

WINNER →

HAROLD L. MORRISON AWARD

JOHN MACKENZIE



Sarah Faithful, EIT
Designer, Bridges
WSP

SARAH FAITHFUL

Graduating with a combined engineering and economics degree from the University of Calgary in 2017, Sarah began working as an engineer-in-training at WSP. She has worked on various project types, including contract supervision for several high-profile bridge replacement and rehabilitation projects, such as the 9th Avenue bridge replacement for the City of Calgary and several Alberta Transportation projects.

The continual pursuit of knowledge and competency is at the heart of Sarah's love of working as an engineering professional. She is experienced in different aspects of bridge engineering, such as structural analysis, design of concrete and steel bridges, and construction materials and technologies.

Sarah is an active member of the civil engineering community, having volunteered for several years as a member of the Calgary Chapter Executive with the Canadian Society for Civil Engineering.



John MacKenzie, P.Eng.
Project Manager and Lead
Engineer AECOM

JOHN MACKENZIE

John's career in the environmental engineering and consulting industry began with a full-time offer from AECOM prior to his graduation in 2012 from the University of Alberta. Since then, he has developed into a leading project manager with the Environment business line and has become an important mentor and resource for project management, quality and health and safety.

John is a professional engineer and member in Alberta (APEGA) and Northwest Territories/Nunavut (NAPEG). John has completed designs and project management for several of Canada's largest northern remediation projects including the Tundra Mine remediation project and Giant Mine remediation program.

John served as the Edmonton office chairperson for the United Way and is recognized for his achievements in co-leading the national Blooming Program, which focuses on hiring Indigenous new graduates and interns.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE

BUILDING ENGINEERING
COMMERCIAL



STATE-OF-THE-ART SHREDDER AND RECYCLING FACILITY

AWARD OF EXCELLENCE

Building Engineering – Commercial

FIRM: ARROW ENGINEERING INC.

CLIENT/OWNER: GENERAL RECYCLING INDUSTRIES LTD.

LOCATION: EDMONTON, ALBERTA

OTHER KEY PLAYERS:
GLEN TICHKOWSKY, KEVIN MATTAI

General Recycling's redeveloped recycling facility is a true engineering marvel. The multi-staged scrap metal processing facility is one of a handful in Canada, one of two in Alberta and is the largest in Western Canada.

Arrow Engineering provided the complex mechanical, electrical and structural engineering for the cutting-edge facility. By challenging industry standards and encouraging innovation, they helped the client realize their vision of 'shredding for a better tomorrow'.

Capable of processing over 120 tons per hour, the facility diverts tons of waste from the landfill and cuts more than 700,000 tons of greenhouse gases annually, making a big environmental impact.

JUDGES' COMMENTS

The team solved sophisticated engineering and design challenges relating to cutting-edge shredding technology. This successful state-of-the-art project is clearly a showcase engineering achievement.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE
—
BUILDING ENGINEERING
INSTITUTIONAL

TELUS WORLD OF SCIENCE EDMONTON - AURORA EXPANSION

AWARD OF EXCELLENCE

Building Engineering – Institutional

FIRM: DIALOG

CLIENT/OWNER: TELUS WORLD OF SCIENCE
EDMONTON

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: WSP

CONTRACTORS: DELNOR CONSTRUCTION LTD.

TELUS World of Science Edmonton is the destination to engage Albertan's hearts and minds in science. DIALOG provided architectural and engineering services for the Aurora expansion, including a new science gallery, expanded lobby, box office, gift shop and a reimagined pedestrian-first entrance. The project removed a significant portion of the existing building envelope to create the breathtakingly open lobby. The building promotes sustainable design with stormwater diversion, solar PV modules, EV charging stalls and a high albedo roof. The result is a truly outstanding facility that strengthens the client's mission to ignite curiosity, inspire discovery, celebrate science and change lives.



JUDGES' COMMENTS

An excellent multi-discipline project in a category of superb projects. This project took something that was already pretty good and successfully made it better.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE
—
STUDIES, SOFTWARE
AND SPECIAL
SERVICES



CITY-WIDE STORMWATER MAPPING AND MODELLING

AWARD OF EXCELLENCE

Studies, Software and Special Services

FIRM: ASSOCIATED ENGINEERING

CLIENT/OWNER: CITY OF CALGARY

LOCATION: CALGARY, ALBERTA

The City of Calgary selected Associated Engineering for the development of GIS mapping and detailed stormwater models of city neighbourhoods that experience localized flooding during heavy rainfall events. Associated Engineering's unique, automated programming and spatial routines produce detailed overland drainage maps on demand, assisting City engineers in making timely and informed decisions to reduce flood risks. Automation has allowed the City to gauge the impacts of future growth, while dramatically reducing the time required to respond to Calgarians' concerns, protecting public safety, property and the environment in the most cost-effective manner.

JUDGES' COMMENTS

An amazing tool developed in order to help mitigate stormwater flooding and enhance the proactive protection of public property.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE

COMMUNITY
DEVELOPMENT

SMALL FIRM
BIG IMPACT

ROXY THEATRE REBUILD

AWARD OF EXCELLENCE

Community Development

AWARD OF EXCELLENCE

Small Firm – Big Impact

FIRM: ARROW ENGINEERING INC.

CLIENT/OWNER: THE THEATRE NETWORK

LOCATION: EDMONTON, ALBERTA

OTHER KEY PLAYERS: GLEN TICHKOWSKY,
KEVIN MATTAI, SCOTT KOEHN

When Edmonton's iconic Roxy Theatre burned down on January 13, 2015, the city lost the heart of its entertainment scene. Though the Roxy was gone, it wasn't forgotten, and the community rallied to resurrect the theatre.

Arrow Engineering was honoured to provide advanced mechanical, civil, electrical and structural engineering for the Roxy Theatre rebuild. By meeting extremely challenging accessibility constraints and maximizing acoustics, the new Roxy is a state-of-the-art facility.

Today, 84 years after opening to the public, the Roxy has reclaimed its prominent place in Edmonton's cultural sphere as a vibrant heritage piece and point of pride for residents.



JUDGES' COMMENTS

The reinstatement of a historic piece of arts and culture in Edmonton was done in a technically proficient way that respected the context of the area and maximized the functionality.

JUDGES' COMMENTS

A leading edge project that incorporated several unique aspects.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE
—
ENVIRONMENTAL
—
SUSTAINABLE DESIGN



MODERN INTEGRATED WASTE MANAGEMENT FACILITY

AWARD OF EXCELLENCE

Environmental

AWARD OF EXCELLENCE

Sustainable Design

FIRM: TETRA TECH CANADA INC.

CLIENT/OWNER: CITY OF LETHBRIDGE

LOCATION: LETHBRIDGE COUNTY, ALBERTA

SUB CONSULTANTS: RELUMEN ENGINEERING INC., KUMLIN SULLIVAN ARCHITECTURAL STUDIO LTD., SUNWISE ENGINEERING LTD., FEEG ENGINEERING LTD., BCB ENGINEERING LTD

CONTRACTORS: WHISSEL CONTRACTING LTD., MCNALLY CONTRACTORS (2011) LTD., GOLDRIDGE SAND AND GRAVEL, SECURE ENERGY SERVICES INC., SOUTHWEST DESIGN & CONSTRUCTION LTD., ENGINEERED COMPOST SYSTEMS, JOHN ZINK HAMWORTHY, DMT MECHANICAL LTD.

Lethbridge had an ambitious vision of rapidly modernizing its Waste and Recycling Center to receive and process multi-stream waste and improve environmental performance.

In just five years, Lethbridge and Tetra Tech completed over 30 projects worth over \$20 million, highlighted by a compost facility diverting up to 40 TPY from the landfill, a hydrovac facility collecting up to 43,000m³ of waste from the surrounding region, a landfill gas system that will reduce GHG emissions by around 15,000T CO₂e per year and a 43m long stainless steel leachate riser installed within a failing concrete manhole that will improve landfill performance.

JUDGES' COMMENTS

The technical solutions demonstrate the innovative technical ability of the project team as well as the collaboration between client and consulting engineers. These solutions are a showcase for other municipalities.

JUDGES' COMMENTS

This project had many impediments including difficult terrain, legacy failing infrastructure, unique engineering and a need for multiple disciplines to be coordinated. It was a very difficult job that was undertaken with exceptional engineering.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE

TRANSPORTATION
INFRASTRUCTURE – ROADS,
INTERCHANGES, AIRPORTS,
MASS TRANSIT

SPRAY LAKES ROAD COAL-MINE VOID RISK MITIGATION

AWARD OF EXCELLENCE

Transportation Infrastructure – Roads,
interchanges, airports, mass transit

FIRM: KLOHN CRIPPEN BERGER LTD.

CLIENT/OWNER: ALBERTA TRANSPORTATION

LOCATION: CANMORE, ALBERTA

SUB CONSULTANTS: TETRA TECH CANADA INC.,
CHALLENGER GEOMATICS, 3VGEOMATICS, ATS TRAFFIC

CONTRACTORS: DCL CONSTRUCTION SERVICES LTD.,
R.S. FOUNDATION SYSTEMS LTD., TRITON
ENVIRONMENTAL CONSULTANTS LTD.



Following the decline of coal mining in the town of Canmore, Highway 742 (Spray Lakes Road) was constructed over the abandoned No.1 mine. As part of Alberta Transportation (AT)'s Geohazard Risk Management program (GRMP), which manages approximately 500 geohazard sites along the province's highways, a large coal mine void was identified that appeared to be expanding upwards towards the highway. Klohn Crippen Berger developed a design that mitigated the risk and ensured early detection of future deformations below the highway. Construction completed in 2021 and it was the first coal mine void backfilling project completed by the AT GRMP program.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE
—
COMMUNITY OUTREACH
AND IN-HOUSE
INITIATIVES



McELHANNEY CARES ALBERTA

AWARD OF EXCELLENCE

Community Outreach
and In-House Initiatives

FIRM: McELHANNEY LTD.

CLIENT/OWNER: McELHANNEY LTD.

LOCATION: VARIOUS LOCATIONS, ALBERTA

Caring for our communities is at the forefront of everything we do at McElhanney. As one of our core values, this statement ensures we care about each other, our clients and our communities each day.

The McElhanney Cares program helps us celebrate community involvement and sponsor meaningful local activities through company-wide and branch-specific initiatives. By creating a sense of goodwill, trust and pride in our staff, the employee-run program results in a mutual benefit for our company and communities. This past year we supported over 200 local charities, with over \$630,000 raised and countless hours of in-kind donations and volunteer work.

JUDGES' COMMENTS

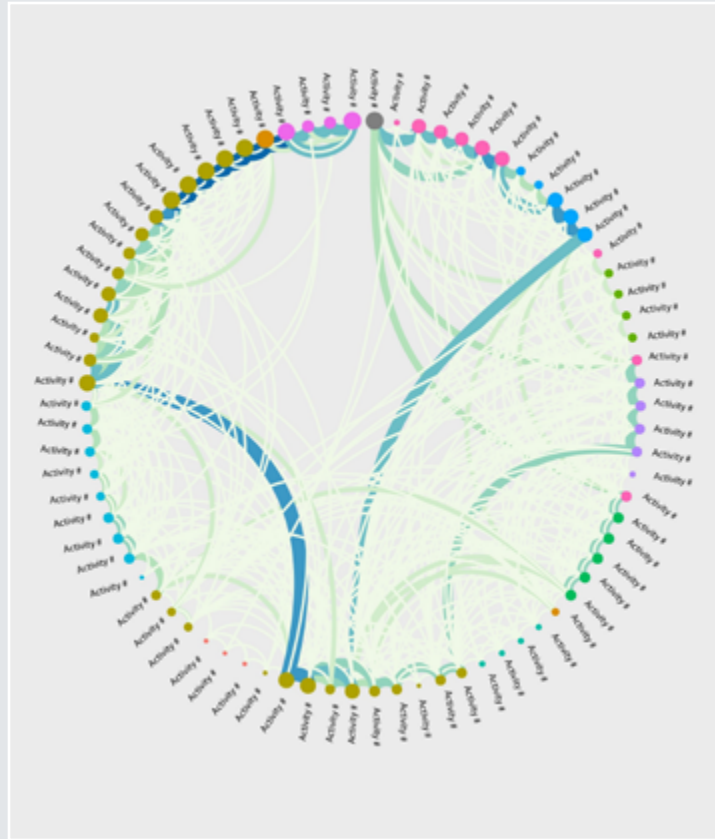
A wonderful example of making a broad impact across Alberta. I applaud McElhanney's ACE purpose and their overall Cares Program. I see it as hugely beneficial to the community, the company and the employees.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE

SMALL FIRM
BIG IMPACT

ASAP: AN ADVANCED SCHEDULE ANALYSIS PLATFORM FOR SUCCESSFUL PROJECT MANAGEMENT



AWARD OF EXCELLENCE

Small Firm – Big Impact

FIRM: SMA CONSULTING LTD.

CLIENT/OWNER: SMA CONSULTING LTD.

LOCATION: EDMONTON, ALBERTA

OTHER KEY PLAYERS: CITY OF EDMONTON,
EDMONTON CATHOLIC SCHOOL DIVISION

In construction, we all know time is money. The schedule tells the story of the project, tracks progress and is a crucial reference during disputes. But is a given schedule reliable? SMA has integrated scheduling experience, industry best practices and real-world challenges to develop our comprehensive Advanced Schedule Analysis Platform (ASAP). The platform incorporates advanced visualization with multiple schedule analysis techniques, including forensic schedule analysis, innovative network analysis and Monte Carlo simulation, and has been used on projects and programs from \$10 million to \$1 billion in size to assess impacts, recover from schedule delay and help ensure success.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE

TRANSPORTATION
INFRASTRUCTURE
TRANSPORTATION
STRUCTURES



9TH AVENUE BRIDGE REPLACEMENT

AWARD OF EXCELLENCE

Transportation Infrastructure
– Transportation Structures

FIRM: WSP

CLIENT/OWNER: CITY OF CALGARY

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: COWI NORTH AMERICA LTD.,
TETRA TECH CANADA INC., MASKELL PLENZIK &
PARTNERS ENG INC., STURGESS ARCHITECTURE,
W ARCHITECTURE & LANDSCAPE ARCHITECTURE LLC.,
DONALD LUXTON & ASSOCIATES INC.

CONTRACTORS: PCL CONSTRUCTION
MANAGEMENT INC., SUPREME STEEL, LAFARGE
CANADA INC., BAUER FOUNDATIONS CANADA INC.,
IRONCLAD EARTHWORKS LTD.

The 9th Avenue bridge crossing the Elbow River is a historically significant connection between adjacent communities that dates back to Calgary's original founding. Since 1909, the crossing was served by a riveted through-truss that had reached its practical service life by 2017.

WSP Canada lead an integrated consultant team to deliver the design and construction oversight of the demolition of the original truss and installation of a tied arch replacement bridge. The completed arch is the first of its kind in Calgary for a roadway bridge and stands out as a resilient and architecturally significant structure for future generations.

JUDGES' COMMENTS

Innovative approach to completing rehabilitation with a modern structure that accommodates multi-modal needs. The 9th Avenue bridge replacement serves as an unmistakable part of the future Calgary landscape, providing greater accessibility for all users, improved flood resilience and serves as a key connection between communities.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE
-
WATER RESOURCES

TWEDDLE DRAINAGE UPGRADES

AWARD OF EXCELLENCE

Water Resources

FIRM: STANTEC CONSULTING LTD.

CLIENT/OWNER: EPCOR WATER SERVICES INC.

LOCATION: EDMONTON, ALBERTA

CONTRACTORS: M.A.P. WATER AND SEWER SERVICES LTD., KRAN CONSTRUCTION LTD., WEINRICH CONTRACTING LTD., CKB CONSTRUCTION LTD.

Common for neighbourhoods built before the 1980s, excessive ponding and flooding can occur due to the lack of overland drainage. Stantec was fortunate to participate with its client, EPCOR Water Services Inc. in implementing a wide array of flood mitigation measures in southeast Edmonton from 2012-2022. This included project management, initial assessment and analysis, concept generation, preliminary and detailed design, cost estimation and procurement assistance, inspection and construction management. Through our utilization of 2D modeling technologies, Stantec was able to determine the root causes of the flooding and safely mitigated to protect the neighbourhoods from future extreme weather events.



JUDGES' COMMENTS

The Tweedle drainage upgrades project illustrates many of the challenges and rewards of a successful urban flood mitigation project.

2023
SHOWCASE
- AWARDS -

AWARD OF
EXCELLENCE
—
PROJECT
MANAGEMENT



TERWILLEGAR DRIVE STAGE 2 PRIORITY LADDER PROCESS

AWARD OF EXCELLENCE

Project Management

FIRM: CIMA CANADA INC. (CIMA+)

CLIENT/OWNER: CITY OF EDMONTON

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: ASSOCIATED ENGINEERING

OTHER KEY PLAYERS: EHAN ENGINEERING LTD.

In today's fiscal reality, public sector clients look to stretch their budget dollars to only build what is necessary. It can be a difficult process to determine which components of a project are more important than others to maximize the value of an investment in key infrastructure. The City of Edmonton retained CIMA Canada Inc. (CIMA+), along with Associated Engineering, for the design development and construction of the Terwillegar Drive Stage 2 project. A priority ladder process was created to help make decisions on priority components within the budget. EHAN Engineering assisted in facilitating the Priority Ladder value engineering process.

JUDGES' COMMENTS

Excellent front-end planning and scope definition. Good process for evaluating alternatives. The criteria ladder approach was well managed and helped project manage the scope of the project effectively.

2023
SHOWCASE
- AWARDS -
AWARD OF
MERIT
—
SMALL FIRM
BIG IMPACT



TERWILLEGAR DRIVE, WHITEMUD DRIVE TO ANTHONY HENDAY DRIVE - CONCEPT PLANNING FOR CAPACITY AND OPERATIONAL IMPROVEMENTS

AWARD OF MERIT

Small Firm – Big Impact

FIRM: AL-TERRA ENGINEERING LTD.

CLIENT/OWNER: CITY OF EDMONTON

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: ISL ENGINEERING AND LAND SERVICES LTD., TWENTY/20 COMMUNICATIONS, THURBER ENGINEERING LTD., SMA CONSULTING LTD., ACI ACOUSTICAL CONSULTANTS, SPENCER ENVIRONMENTAL MANAGEMENT SERVICES

For 40 years, Terwillegar Drive in southwest Edmonton was planned as a freeway corridor with interchange connections to the crossing residential roadways, Anthony Henday Drive and Whitemud Drive. The project team determined the objectives and goals of the Concept Planning Study could be achieved in a more cost-effective and timely manner through an eight-lane expressway (3 general purpose lanes & bus lane in each direction). A lit SUP path on the east side provided a fully multi-modal corridor. The final concept meets or exceeds the required operational capacity of the corridor at estimated cost savings of ~\$900 million compared to the freeway.

JUDGES' COMMENTS

Significant impact for commute — brings multi mode into model.

2023
SHOWCASE
- AWARDS -
AWARD OF
MERIT
—
PROJECT
MANAGEMENT



WESTWOOD GARAGE DEMOLITION

AWARD OF MERIT

Project Management

FIRM: ENGLOBE CORP.

CLIENT/OWNER: NAIT

LOCATION: EDMONTON, ALBERTA

OTHER KEY PLAYERS: BYRON MAZUR, PHILIPPE GINGRAS

NAIT retained Englobe to manage the geotechnical engineering and environmental services for the Westwood Garage demolition. The scope included the large-scale remediation of diesel contaminated soil and hazardous materials assessment and abatement monitoring for all structures.

The outcome was a clear piece of property poised for redevelopment and a project that perfectly captured the sustainable and safe vision NAIT had for the demolition and remediation program.

NAIT transformed the contaminated site containing derelict buildings into a beautiful parcel of land on which it can build learning facilities or residential units.

JUDGES' COMMENTS

An excellent multidisciplinary project which required a proactive project management style. On time and on budget with no change orders. Excellent estimate and on-site representation.

2023
SHOWCASE
- AWARDS -
AWARD
OF MERIT
—
ENVIRONMENTAL



DETERMINING THE VALUE OF NATURAL ASSETS

AWARD OF MERIT

Environmental

FIRM: ASSOCIATED ENGINEERING

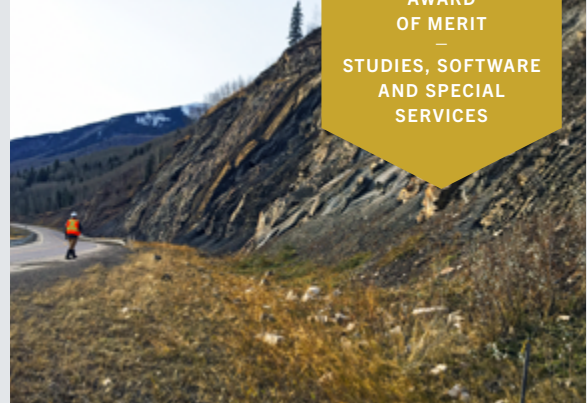
CLIENT/OWNER: CITY OF CALGARY

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: GREEN ANALYTICS CORP.

The City of Calgary selected Associated Engineering to inventory its natural assets, consider their benefits and measure their financial value. Associated's unique approach engaged different City business units and applied environmental economics to build a shared understanding of the services provided by natural assets, ranging from increased property valuation to habitat protection, carbon storage and urban heat reduction. Accessible through an interactive dashboard, this knowledge brings additional insight into urban planning decisions and forms an industry-leading foundation to manage natural assets as an integral part of the greater urban assets portfolio.

2023
SHOWCASE
- AWARDS -
AWARD
OF MERIT
—
STUDIES, SOFTWARE
AND SPECIAL
SERVICES



DEVELOPMENT OF A NOVEL RISK-BASED HIGHWAY GEOTECHNICAL ASSET MANAGEMENT SYSTEM

AWARD OF MERIT

Studies, Software and Special Services

FIRM: TETRA TECH CANADA INC.

CLIENT/OWNER: ALBERTA TRANSPORTATION

LOCATION: EDMONTON, ALBERTA

Tetra Tech Canada Inc. and Alberta Transportation (AT) developed an innovative risk-based Geotechnical Asset Management (GAM) framework, transforming Alberta Transportation's current Geohazard Risk Management Program into a GAM program. The intent of the GAM framework development was to enhance AT's ability to effectively prioritize, measure and manage life-cycle investments in assets such as slopes, embankments, retaining walls and subgrades, based on performance expectations and risk tolerance.

Alberta is Canada's first province to develop a risk-based Geotechnical Asset Management Framework. Implementation of the GAM framework aligned with the state-of-the-art NCHRP Geotechnical Asset Management Implementation Manual (NCHRP, 2019) and ISO 55000 principles.

2023
SHOWCASE
- AWARDS -
AWARD OF
MERIT
-
BUILDING
ENGINEERING
COMMERCIAL



UNIVERSITY DISTRICT BLOCK 23

AWARD OF MERIT

Building Engineering – Commercial

FIRM: RJC ENGINEERS

CLIENT/OWNER: UNIVERSITY OF CALGARY PROPERTIES GROUP

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: SMITH + ANDERSEN, DESIGNCORE ENGINEERING LTD., CIVITAS, INC.

CONTRACTORS: GRAHAM MANAGEMENT SERVICES LP

OTHER KEY PLAYERS: GGA - ARCHITECTURE

Block 23 is the retail and lifestyle amenity for the University District development. Fronting onto the Central Commons Park, the development consists of a mixed-use building joined by a community plaza space. The building is composed of a CRU ground floor and two to three levels of office above. Collaboration with the owner, architects and sub-consultants ensured the successful completion of this project in 2022.

2023
SHOWCASE
- AWARDS -
AWARD OF
MERIT
-
SUSTAINABLE
DESIGN
-
BUILDING
ENGINEERING
INSTITUTIONAL



INNOVATION CROSSING

AWARD OF MERIT

Sustainable Design

AWARD OF MERIT

Building Engineering – Institutional

FIRM: RJC ENGINEERS

CLIENT/OWNER: HERITAGE PARK HISTORICAL VILLAGE

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: REMEDY ENGINEERING., SMP ENGINEERING, URBAN SYSTEMS LTD.

CONTRACTORS: AKELA CONSTRUCTION LTD.

OTHER KEY PLAYERS: ACE ARCHITECTURE

Innovation Crossing is a new educational building located in Calgary's Heritage Park that provides programming showcasing how renewable resources are being used today and into the future. The facility is ultra-efficient, incorporating numerous sustainable technologies that also function as exhibits to show renewable energy in action. This single-storey building is composed of a main exhibition hall with back-of-house service areas and a south facing exterior patio.

JUDGES' COMMENTS

Sustainable design in a historical context. This building tells a story and integrates a wealth of sustainable design features and technology that will not only perform well but will educate people in sustainability well into the future.

2023
SHOWCASE
- AWARDS -

AWARD OF
MERIT

TRANSPORTATION
INFRASTRUCTURE
ROADS, INTERCHANGES,
AIRPORTS,
MASS TRANSIT



JASPER AVENUE NEW VISION

AWARD OF MERIT

Transportation Infrastructure – Roads, Interchanges, Airports, Mass Transit

FIRM: JOINT: DIALOG & AL-TERRA ENGINEERING LTD.

CLIENT/OWNER: CITY OF EDMONTON

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: AL-TERRA ENGINEERING LTD., DIALOG, EDA PLANNING + URBAN DESIGN, THURBER ENGINEERING LTD., TWENTY/20 COMMUNICATIONS, THE ARCHAEOLOGY GROUP, SMA CONSULTING LTD.

CONTRACTORS: PCL CONSTRUCTION, ABALONE, CKB CONSTRUCTION, THOMPSON INFRASTRUCTURE, SEVEN M CONSTRUCTION, BLACK & McDONALD, LAFARGE, VECTOR CONSTRUCTION, PLACE-CRETE SYSTEMS, OLD WORLD PAVING STONES, OLIVER JAMES SITE FURNISHINGS, CAN-TRAFFIC SERVICES, KICHTON, VISCO DEMOLITION AND RECYCLING

Jasper Avenue is an important cultural, social and economic centre for the city of Edmonton, and is designated as one of the city's "main streets." The vision for this project was to transform the Avenue into an attractive people place, while maintaining its importance as a transportation link. The revitalization of Jasper Avenue's streetscape is seen as a catalyst to private sector redevelopment, a symbol of the vitality of downtown and is a place Edmontonians can be proud of. The project is along Jasper Avenue, from 97 Street to 100 Street, and 97 Street, from Jasper Avenue to 102 Avenue.

JUDGES' COMMENTS

The challenges of executing an excellent plan on a very challenging site, with heavy pedestrian and vehicular traffic, were all conquered by the Jasper Avenue project team. The risk management and public engagement components of the project were very well managed.

2023
SHOWCASE
- AWARDS -

AWARD OF
MERIT

TRANSPORTATION
INFRASTRUCTURE
ROADS, INTERCHANGES,
AIRPORTS,
MASS TRANSIT



MONTGOMERY MAIN STREETS: WHERE A STREET BECOMES A COMMUNITY

AWARD OF MERIT

Transportation Infrastructure – Roads, Interchanges, Airports, Mass Transit

FIRM: URBAN SYSTEMS LTD.

CLIENT/OWNER: CITY OF CALGARY

LOCATION: CALGARY, ALBERTA

SUB CONSULTANTS: RJC ENGINEERS, THURBER ENGINEERING LTD., ADP ENGINEERING LTD., RUSSELL PR INC.

CONTRACTORS: ALSA ROAD CONSTRUCTION LTD.

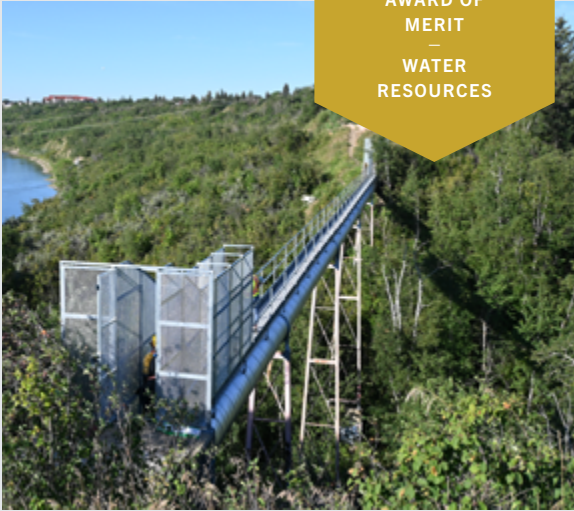
OTHER KEY PLAYERS: CITY OF CALGARY

Bowness Road runs through the heart of Montgomery in northwest Calgary. The first of the city of Calgary's Main Streets to be reconstructed, this project delivered public realm and streetscape improvements to encourage focused redevelopment and vibrancy along the corridor. Sustainable design measures like street trees and bioswales will increase the climate resiliency of Bowness Road. Urban Systems, City of Calgary and ALSA Road Construction worked together to deliver enhanced space for walking, cycling and transit while increasing safety for all road users. The project was completed seven months ahead of schedule and within the City's capital budget.

JUDGES' COMMENTS

This project shows how a transportation project can transform a community, increasing mobility options, improving comfort and safety, and increasing the attractiveness for citizens living and utilizing the corridor.

2023
SHOWCASE
- AWARDS -
AWARD OF
MERIT
-
WATER
RESOURCES



TRESTLE NO. 3 – REHABILITATION AND STEEL PIPE REPLACEMENT

AWARD OF MERIT

Water Resources

FIRM: ASSOCIATED ENGINEERING

CLIENT/OWNER: EPCOR UTILITIES INC.

LOCATION: EDMONTON, ALBERTA

SUB CONSULTANTS: THURBER ENGINEERING LTD.

CONTRACTORS: WHITSON CONTRACTING

After discovering several major issues at Trestle No. 3, EPCOR retained Associated Engineering to rehabilitate and replace the corroded steel pipe and fix erosion issues impacting the ground around the trestle. The project team worked together to implement a series of innovative designs and construction methodologies to overcome the challenges posed by lack of access and the steep ravine slopes. Risks during construction were managed by using alternative construction methodologies allowing workers to safely traverse the steep slopes and provide protection from falling debris. Now completed, the rehabilitated trestle is safe, functional and no longer an environmental liability for EPCOR.

JUDGES' COMMENTS

This project was very challenging with all sorts of terrain problems and construction access obstacles. The engineers rose to the occasion by working around these challenges.

2023
SHOWCASE
- AWARDS -
AWARD OF
MERIT
-
TRANSPORTATION
INFRASTRUCTURE
TRANSPORTATION
STRUCTURES



PEACE RIVER SHOP SLIDE/ HWY 2 OFF RAMP TIED-BACK CONCRETE WALL PILE

AWARD OF MERIT

Transportation Infrastructure – Transportation Structures

FIRM: THURBER ENGINEERING LTD.

CLIENT/OWNER: TRANSPORTATION AND ECONOMIC CORRIDORS

LOCATION: PEACE RIVER, ALBERTA

SUB CONTRACTORS: DIALOG DESIGN

CONTRACTORS: KICHTON CONTRACTING LTD.

OTHER KEY PLAYERS: TRANSPORTATION AND ECONOMIC CORRIDORS

In the town of Peace River, the Highway 2 off-ramp at 99th Avenue continued to slump despite various stabilization attempts. Thurber Engineering and subconsultant Dialog Design designed a solution to permanently fix the landslide. A 246-metre-long pile retaining wall consisting of 141 cast-in-place concrete piles capped with a reinforced concrete waler was installed. Included were 79 tie-back anchors and a three-meter high steel soldier post and timber lagging retaining wall. The solution was developed using finite element modelling software that incorporated soil-structure interactions under various loading conditions. This methodology allowed greater certainty during design and a better performing product overall.

JUDGES' COMMENTS

Some very sophisticated engineering analysis took place on this project. Overcoming the geomorphology challenges is a big job – well done!

2023
SHOWCASE
- AWARDS -
JUDGES

Adam Laughlin, P.Eng.
*Deputy City Manager, Integrated
Infrastructure Services, City of Edmonton*

Andrew Sharman, M.Sc., CMILT
*Vice President, Facilities & Operations,
University of Alberta*

Bill Rosehart, P.Eng, PhD.
*Dean, Schulich School of Engineering,
University of Calgary*

Bruce Cullen, B.Sc.
*Director, Corporate Analytics & Innovation,
City of Calgary*

Douglas Wright, CD, LCol (Retd), FMA
*President & CEO,
Delstan Innovations Group*

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

George Jergeas, P.Eng., PhD., M.Sc., B.Sc.
*Professor Emeritus of Project
Management, University of Calgary*

Lisa White, PhD., P.Eng., FEC
*Industrial Professor, Faculty of
Engineering, University of Alberta*

Lisa Doig, P.Eng.
*President and Council Chair (APEGA) /
Managing Director (ODOig Consulting
Services Inc.)*

Malcolm Bruce, MSM, ICD.D
Chief Executive Officer, Edmonton Global

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

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

Mike Damberger, P.Eng.
Regional Director, Alberta Transportation

Paul Breeze, FACI, FCPCI
Retired

Tom Loo, P.Eng.
*Assistant Deputy Minister,
Construction and Maintenance Division,
Alberta Transportation*



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