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# 2022 FORECAST

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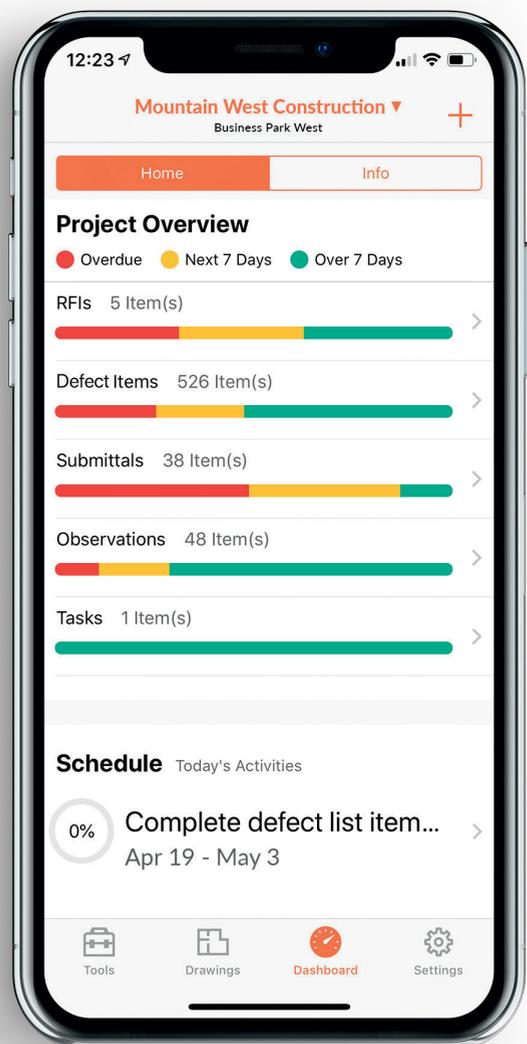


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## WELCOME LETTER

**P**rocore is proud to sponsor *On-Site's* 2022 Canadian Construction Forecast, which looks at the uncertainty the industry is faced with, and what construction leaders are watching for in the upcoming year. As the leading provider of construction management software, we are aware and mindful of the challenges owners, general contractors, subcontractors and engineers continue to face since the onset of the pandemic. With issues like increasing supply chain costs, disconnected teams, project productivity, growing safety concerns, and a labour shortage, now is the time for the construction industry to embrace platform technology in order to do more with less.

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Sincerely,



**Jas Saraw**  
Vice President, Canada  
Procore Technologies



# ENDLESS OPPORTUNITY

The forecast is bright for Canada's construction sector, but supply chain and labour challenges remain

BY ANDREW SNOOK

**W**hile economic recovery from the COVID-19 coronavirus pandemic is underway in Canada, supply chain disruptions and labour shortages have added to challenges felt across most industries, and the construction sector is no exception.

The good news for those in the construction industry is that investment

bounced back in the sector for residential and non-residential construction after a slowdown early into the pandemic.

According to the *Canadian Construction Outlook: Q4 2021* report from global property consultancy company Jones Land LaSalle (JLL), the value of new building permits hit a peak of over \$11 billion in the second quarter of 2021. The report

states that the surge was a result of increased investment in the residential sector (all types of housing, due to low interest rates and increased demand for space); the industrial sector (which had 36 million square feet of space under construction, a new record for Canada); and investment in new office buildings (largely projects started up in Toronto,



to building material shortages during a spike in global demand for materials such as lumber, steel, aluminum, copper and various plastics for construction building materials.

According to the JLL report, shipping containers coming across the Pacific Ocean have been taking an average of 73 days to get to their final destinations, as opposed to 20 to 30 days pre-pandemic. In addition to delays, shipping costs have been, in many cases, 300- to 400-per-cent higher than what they were before the pandemic took its grip on the world.

Export Development Canada's chief economist Peter Hall says that the supply chain disruptions being experienced in Canada stem from the unexpected speed of the country's economic recovery.

"My opinion is we were conditioned to expect an economy that was going to come back slowly and it's proven us very wrong. This was an economy unlike the pre-global financial crisis period, that was ready to take off as soon as we got the green light," he says. "By the measures that we use, there was significant pent-up demand coming into the pandemic. That's the opposite of the way things were prior to the global financial crisis, but that was the last recession we had, and so, that's the one everybody remembers. They remember falling into the chasm and taking an awful long time to get back out of it. This time around we're jumping back out of it and it's taking everybody by surprise."

The feedback that the EDC is receiving from customers across all industries, including construction, is that growth isn't the problem. The issue is that there is not enough supply to meet global demands.

"It's easy to shut an economy down, you just have to announce that its closing. A pandemic is the kind of situation where you can say, 'Look, for everybody's good health we need to stop,' and so, everything stops," Hall says. "You can announce that the economy is open again, but we're in a situation here where that has happened but then we've had to do either partial or

full closures because of the pandemic. When businesses get into a situation where they don't know if this announced re-opening is the real one, they're going to be more tentative about coming back on, and that's the predicament we find ourselves in now – but this is the real thing."

Hall says we didn't react quickly enough before the shortages started to show up, so everything from chip shortages in the auto sector to shortages in raw materials are taking place.

"It's not easy to get a mine back up and running. Although there's plenty of supply, we're having trouble getting the machine rolling again, and that's going to take a little bit of time," he says.

Although delays and shortages of construction materials arriving on sites have been causing spikes in the costs of materials such as lumber and steel throughout the pandemic, Hall has some positive news.

"The best remedy for high prices is high prices," he says, adding that eventually the higher prices will attract enough companies to any market that the supply will inevitably balance out the demand. "High prices are the architect of their own undoing."

JLL expects building material shortages and shipping costs should stabilize in 2022:

*Much of the volatility we are seeing is a consequence of supply chain operators transitioning from a low demand context to a high demand context in a short period of time as consumers binge on goods and services after a year of lockdown measures. By 2022 this is expected to largely stabilize, resulting in more normal price variations. The COVID-19 pandemic dealt a curveball to supply chain operators that were working on just-in-time orders, tight timelines and tight margins. Supply chain managers have indicated that they are increasingly open to managing larger stockpiles of inventory if it translates to greater control of their materials – this could build in some costs in the form of*

Montreal, Vancouver and Ottawa, prior to the pandemic).

According to an update in GlobalData's Q3 2021 report, *Construction in Canada – Key Trends and Opportunities to 2025*, Canada's construction sector is expected to grow by 6.5 per cent this year. GlobalData had previously forecasted the sector to grow at a rate of 2.5 per cent for 2021. The change in the company's forecast was due to growth largely attributed to the increased investment in the residential sector, vaccination progress and higher public spending in the areas of infrastructure and clean energy projects.

In 2022, there will still be plenty of work available for the construction sector but some of the challenges from 2021 will carryover. One those biggest challenges will be disruptions within building materials supply chains.

Throughout the pandemic, disruptions within the supply chain have led

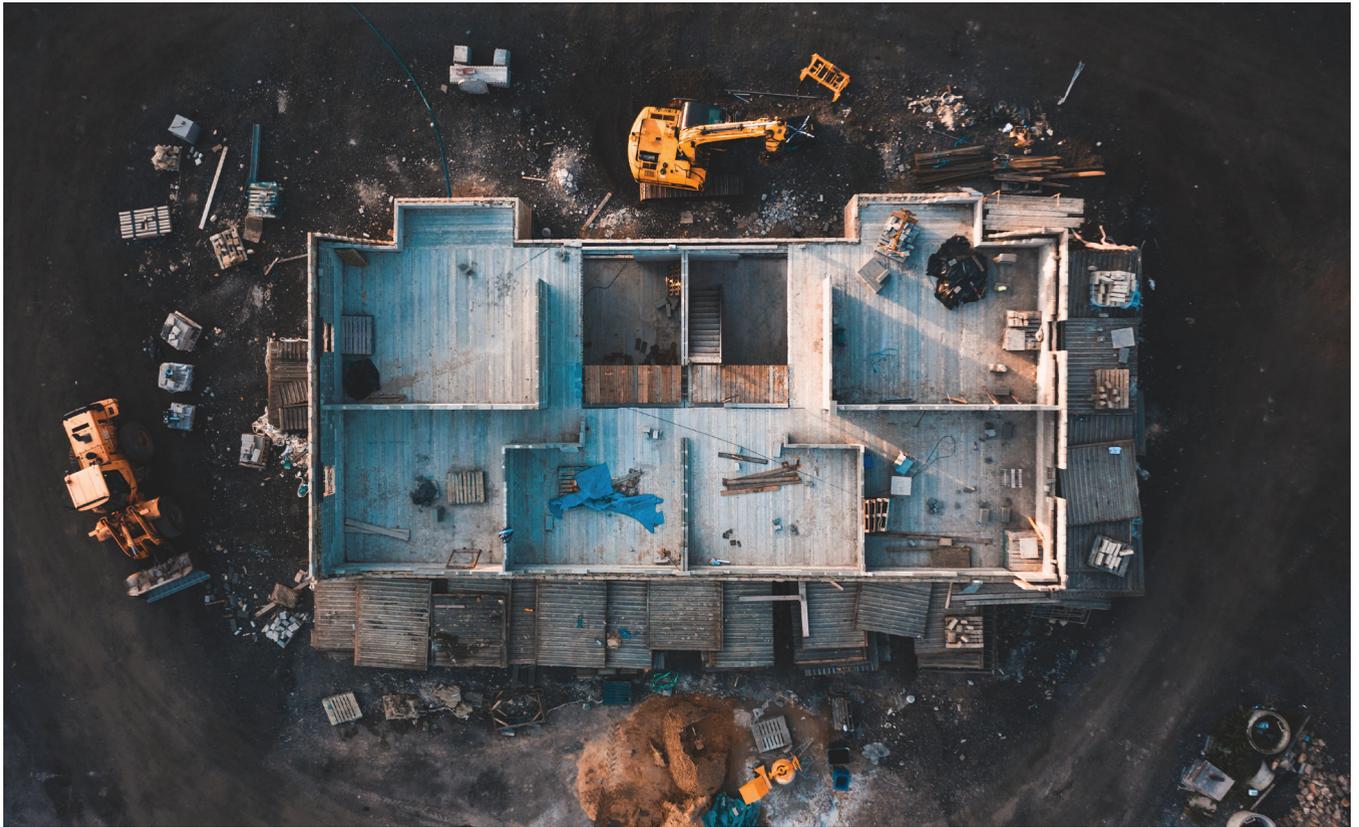


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*larger stockpiles, but it would reduce the pain of bottlenecks. Meanwhile, emboldened regulation in the Chinese economy and construction industry, though a drag on economic growth globally, will temper the pricing spikes we are seeing in commodity markets.*

PCL's Chris Gower, chief operating officer, Buildings, says he expects supply chain disruptions and shipping costs to continue to be a major challenge to navigate in 2022.

"It's been incredibly volatile. We've seen a four-times increase on shipping costs simply in a matter of a week. That sort of volatility is hard to manage, but I think we're all getting better at managing it. The world is adapting pretty well," he says, adding that PCL have focused some of its employees on tackling inflationary issues and supply chain issues. "We're putting several people on tracking and managing price trends on things like steel, copper and lumber. We're trying to become more educated so we can help our people predict the future... the better we get at

managing supply chain and inflation by being smart about our procurement strategies by being as informed as we can be, we're going to add value [for the clients]."

### **OPPORTUNITIES ABOUND**

Despite these challenges, Gower sees plenty of opportunities for the construction sector in 2022.

"I do believe there's an increased amount of work right now. I would call Canada very busy. We've got markets like Quebec, Ontario and B.C. that are very busy, and we've got other markets that are getting busier, so the whole industry has an opportunity to be selective," he says.

Gower says there is plenty of opportunity within the civil side of the construction sector.

"Many of the cities are growing, and with that growth it means a need for civil infrastructure. I don't think that's going to change, and I think there's money being funded in those areas more than in the past few years. I think there's a need for hospitals. Thankfully, in Canada there's

been some hospitals built in the last 10 years – there's certainly a need for more, and we're seeing some very large private-public partnerships being contemplated in various provinces," he says.

One new trend Gower notes is that there are more megaprojects in the range of \$1 billion or more coming available for bid than ever before.

"I think federally and provincially you're going to continue to see strong investments – some provinces more than others," he says.

This will add to an already busy market because the private sector is also spending money on projects that were put on hold due to the pandemic, Gower notes.

"Those are coming back online, and with the provincially- and federally-funded projects coming online, those added together make for a very busy marketplace," he says.

"From an opportunities perspective, infrastructure is going to drive the economy," adds Aon's Doug Correa, executive vice-president and national specialties

leader for commercial risk solutions. "I think there's huge opportunity in all segments of the construction sector."

Correa says there is a huge appetite for projects, and that part of the challenge in 2022 will be clearing various backlogs within the sector.

"Just getting things done is taking more time. It's taking more time to get permits, get inspections done, get financing done," he says, adding that governments are very keen on investing in the sector. "I think there's still billions of dollars in infrastructure funds available. Governments want to get shovel-ready projects into the ground. I expect there will be an increase in spending. I think you're going to see more government funds available to smaller municipal projects."

John Gamble, president and CEO of the Association of Consulting Engineering Companies, is also optimistic about the opportunities within the construction sector in 2022.

"I think, looking forward, businesses and business opportunities are going to be fairly robust – everything from deferred maintenance on infrastructure to some ambitious infrastructure programs and low-carbon initiatives," he says.

### LABOUR SHORTAGES

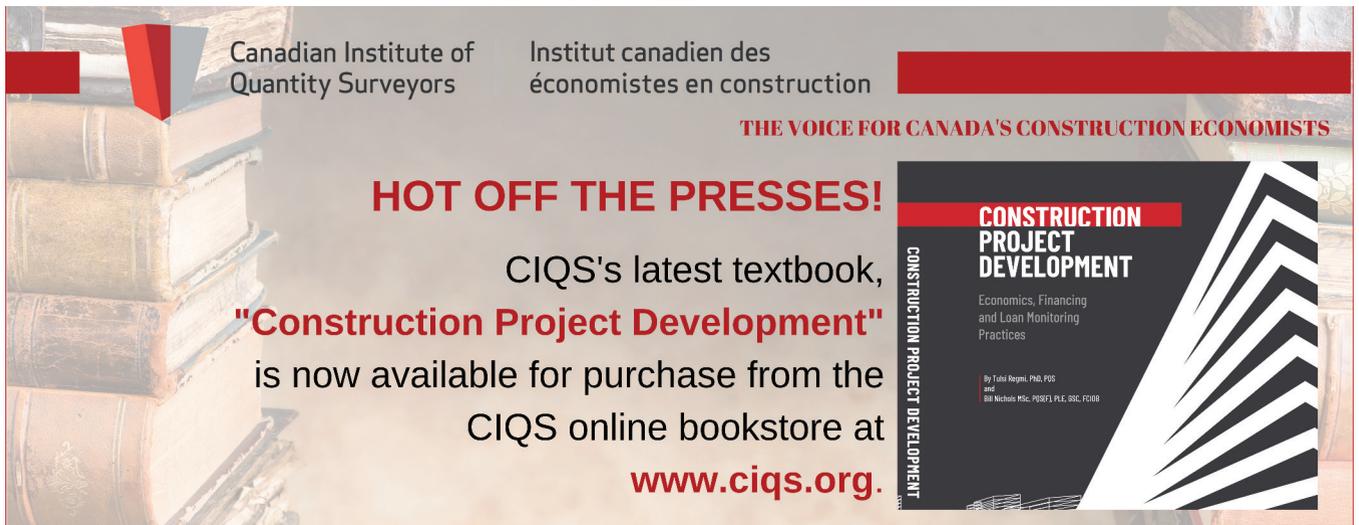
The continued challenge of labour shortages within the construction industry will be another major hurdle in tackling the many residential and non-residential projects that are available and underway throughout 2022.

"Getting qualified people on the design side and on the construction side, I think that's certainly going to be a challenge," Gamble says.

Gower says governments and industry will need to continue to find new ways to attract young people to the industry and complimented a new initiative by the Province of Nova Scotia to attract people to the sector.

**“ I think federally and provincially you're going to continue to see strong investments – some provinces more than others**

"Nova Scotia eliminated the personal portion of personal income tax for the first \$50,000 for any construction trade worker under the age of 30, which I think is a brilliant solution," he says. "I think both the federal and provincial governments in Canada should adopt a similar philosophy. If they truly want to bring people into the workforce – the people under 30 who care deeply about their first paycheck and trying to make ends meet and pay off their student debts – that's a significant draw for people to come into the workforce as skilled labour."

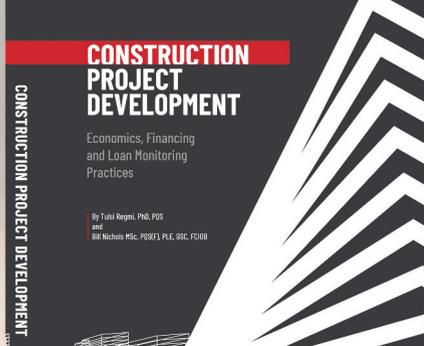


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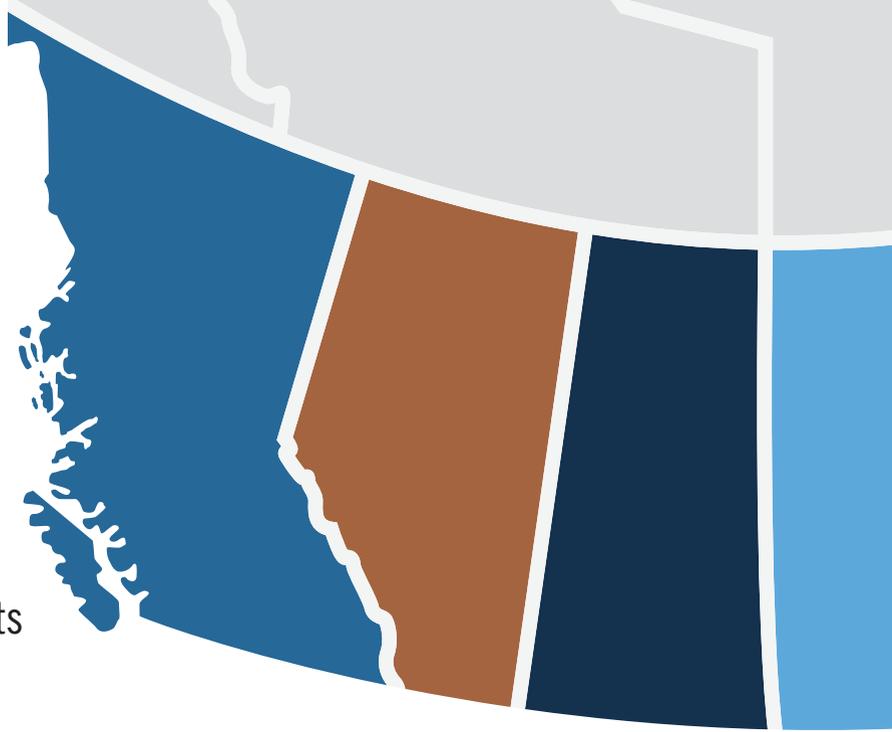
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# Regional Forecast

A look at some of the key investments and projects across the country.



## BRITISH COLUMBIA

Fraser Health Authority has issued the request for qualifications for a new \$1.66-billion hospital and cancer centre in Surrey, B.C. The facility will feature 168 in-patient beds, a surgical/perioperative suite with five operating rooms, four procedure rooms, an emergency department with 55 treatment spaces, and virtual care options in all clinical service areas. An integrated cancer centre will include an oncology/ambulatory care unit with 50 exam rooms, 54 chemotherapy treatment spaces and room for six linear accelerators for radiation therapy.

Construction continues on BC Hydro's massive \$16-billion Site C Clean Energy Project. The project's expected completion date is currently scheduled for 2025.

B.C.'s Ministry of Transportation and Infrastructure announced that the replacement for the George Massey Tunnel on Highway 99 will consist of an eight-lane immersed tube tunnel at a cost of approximately \$4.15 billion. The province is in the process of getting the environment assessments underway. The project is expected to be completed in 2030.

Work on the \$837-million Trans-Canada Highway project between Kamloops, B.C. and the Alberta border continues through 2022 with nine projects across the 430-kilometre section of the highway.

## ALBERTA

A massive project announced this fall is expected to bring thousands of jobs back to the construction sector in Alberta. The Northern Petrochemical Corporation announced that it plans to build a \$2.5-billion carbon-neutral ammonia and methanol production facility in the Municipal District of Greenview, a little over 400 kilometres northwest of Edmonton. The construction of this facility is expected to create more than 4,000 jobs during the construction phase, as well as 400 permanent jobs after its completion.

The province's 2021 Capital Plan will invest approximately \$21 billion in the construction of new roads, schools and hospitals over a three-year period. The plan is expected to support 50,000 direct and 40,000 indirect jobs. Of the \$21 billion, the province has earmarked \$2.4 billion for roads and bridges and \$3 billion for capital maintenance and renewal of public infrastructure.

## SASKATCHEWAN

Saskatchewan's 2021-22 budget has \$3.1 billion earmarked for capital investment including hospitals, schools, highways and other needed projects. The government has allocated \$553.2 million for transportation capital including the twinning of Highway 3 west of Prince Albert, multiple passing lanes on Highways 2, 3, 5, 7, 12, 14, 16 and 39. Budget 2021-22 includes a record level of investment in rural provincial highways with \$180 million allocated to deliver 280 kilometres of upgrades.

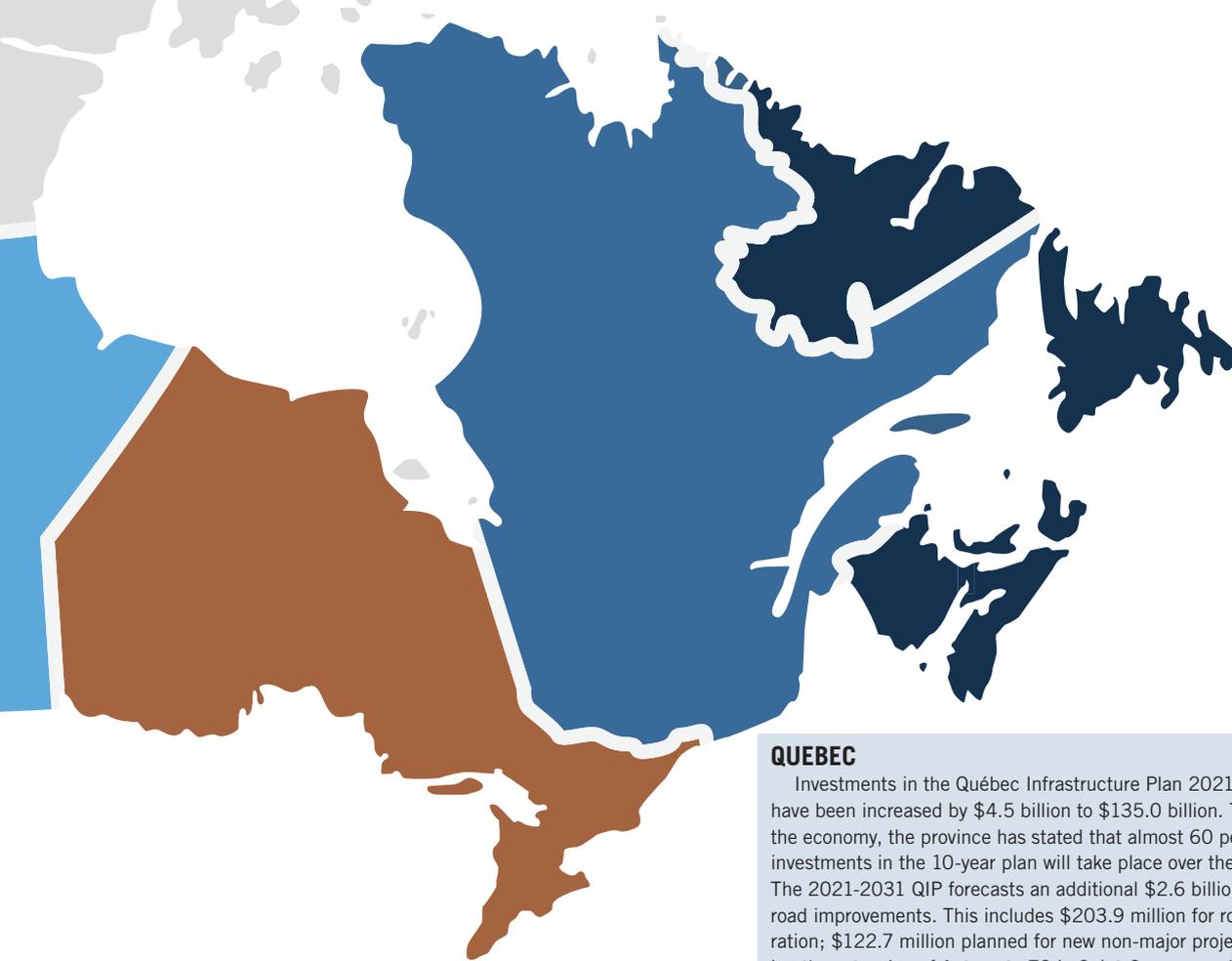
The province has also pledged \$189.9 million for education capital, including \$101 million to support 21 ongoing capital projects, which will build 16 new schools and renovate five additional schools.

The 2021-22 budget has also allocated \$70.1 million to rehabilitate water dams and supply channels. The funding for this section includes the Lake Diefenbaker Irrigation Expansion Project which will promote Saskatchewan's economic growth by expanding its irrigation capacity, diversifying into higher-value crop production, attracting more value-added processing, and adding to long-term food security.

## MANITOBA

The province announced a record \$2.1-billion investment in strategic infrastructure expected to help drive construction jobs and stimulate economic recovery. As part of the three-year Manitoba Restart Capital Program, \$254 million in funding this year is allocated for water/wastewater projects, including a significant contribution to the City of Winnipeg's North End Water Pollution Control Centre, and on two major projects to improve highway safety.

The Government of Manitoba's 2021-22 budget includes approximately \$630 million for road construction and maintenance, including \$107 million through the Manitoba Restart Program. The program will include safety improvements at the intersection of the Trans-Canada Highway and provincial trunk Highway 16 and the south perimeter interchange at St. Mary's Road. The province has earmarked \$415 million for kindergarten to Grade 12 and post-secondary infrastructure, including \$260 million on new schools and related capital and \$155 million on post-secondary infrastructure.



## ONTARIO

Within the province's outlook titled, *2021 Ontario Economic Outlook and Fiscal Review: Build Ontario*, the government has committed to expanding and repairing highways and bridges as a means to spur economic growth. The Government of Ontario has invested approximately \$2.6 billion in 2021-22 to support the Ontario Highway Program. This initiative features more than 580 expansion and rehabilitation projects. One of the key roadbuilding projects announced is the construction of Highway 413, a new 400-series highway and transit corridor that will run across the Halton, Peel and York regions of Southern Ontario. The building of Highway 413 alone is expected to support up to 3,500 jobs each year of construction and generate up to \$350 million in annual real gross domestic product (GDP).

Significant work is also expected to take place on the Scarborough Subway Extension and the Eglinton Crosstown West subway projects with the tunnel boring machines for both projects expected to arrive in Canada in January 2022 with tunnelling getting underway in the spring. In September 2021, Ontario released the request for qualifications (RFQ) for the design and delivery of the stations, rail and systems work for the Scarborough Subway Extension. A shortlist of qualified proponents will be announced in early 2022 following the close of the RFQ. Other large infrastructure projects coming underway (or currently in progress) include Hamilton's 14-kilometre, LRT project and the Kitchener GO Rail Expansion.

Environmental assessments are underway towards the potential construction of the road to Northern Ontario's Ring of Fire. The province has committed nearly \$1 billion to support the all-season road's planning and construction.

In November, the Government of Ontario also committed \$600 million in funding for capital building programs including new-builds and renovation projects for schools and childcare spaces. The announced plan aims to create 19,700 new student spaces and 1,525 new licensed childcare spaces. Approximately \$565 million is allocated to building 26 new schools and fund 20 permanent additions and renovations.

## QUEBEC

Investments in the Québec Infrastructure Plan 2021-2031 (QIP) have been increased by \$4.5 billion to \$135.0 billion. To help restart the economy, the province has stated that almost 60 per cent of the investments in the 10-year plan will take place over the next five years. The 2021-2031 QIP forecasts an additional \$2.6 billion to go towards road improvements. This includes \$203.9 million for road restoration; \$122.7 million planned for new non-major projects, including the extension of Autoroute 73 in Saint-Georges and a bypass in Saint-Lin-Laurentides; \$934.7 million forecasted for major projects "in planning," including the redevelopment of Autoroute 55 between Bécancour and Sainte-Eulalie, the widening of Route 117 between Labelle and Rivière-Rouge, the exchange between autoroutes 440 and 15, and an elevated ramp in Laval; and \$1,196.0 million set aside in the central envelope for provisioning of other major projects.

## ATLANTIC CANADA

In Nova Scotia, \$178.2 million has been budgeted in 2021-22 to support large healthcare redevelopment projects including the QEII New Generation Project, new and renovated operating rooms and a new cancer centre and new community outpatient centre. The provincial government has budgeted \$95.5 million towards the construction, repair and renewal of hospitals and medical facilities across the province. Work will also continue on the multi-year highway twinning projects for Highway 101, Highway 103, Highway 104 and Highway 107.

In New Brunswick, the province has budgeted \$20 million for a multi-year strategy investment to support the development of the small modular nuclear reactors sector. Construction on a new school in Fredericton for 500 students from kindergarten to Grade 5 is expected to get underway in the spring of 2022. The province has allocated \$4.2 million for the selection and purchase of the site, as well as planning and design work.

In P.E.I., the province has budgeted \$3 million for the development of the PEI Centre for Mental Well-Being.

In Newfoundland and Labrador, construction is underway on a new 102-bed adult mental health and addictions hospital in St. John's. The \$330-million project is expected to create 200 jobs during peak construction and 400 jobs in total. In Corner Brook, construction has begun on a new \$722.8-million acute care west coast hospital that will have 164 beds. The province estimates that 1,000 skilled trade jobs will be generated over the course of the hospital's four-year-long construction period.



# TOP 10 CANADIAN CONSTRUCTION TRENDS TO WATCH IN 2022

Canadian Construction Association (CCA) president Mary Van Buren has joined us again this year to offer the CCA's top 10 Canadian construction trends to watch for in 2022.

BY MARY VAN BUREN

## 1. SLINGSHOT OR STOP/START RECOVERY

Private sector and governments flow projects to take advantage of the opportunity to build back better, employ Canadians, and accelerate the economy. This could be constrained by brakes like restrictive workforce quotas, lack of workforce, rising inflation, and continuing challenges in supplies and materials.

## 2. WILL FEDS DELIVER ON PROMISE TO COLLABORATE ON A LONG-TERM INFRASTRUCTURE STRATEGY?

The CCA, on behalf of the industry, has been advocating for a long-term infrastructure plan and was encouraged by the response of the federal government to industry's feedback on what a national infrastructure assessment should look like.

This needs to be a priority for the new Minister of Infrastructure, Dominic LeBlanc.

## 3. SCALING UP TRADE-ENABLING INFRASTRUCTURE

Economic revival is a top priority for all Canadians. Almost two-thirds of Canada's GDP comes from trade, but we have fallen behind in building the trade infrastructure we need to capitalize on and expand into new global markets. With estimates from the World Bank and World Economic Forum saying the reliability and readiness of Canada's trade infrastructure has fallen from 10th best in the world in 2009 to 26th today, we need a massive scale-up in our country's trade infrastructure.

While the United States remains Canada's most important trading partner, China's strength as an economic power is unde-

niable. Asia Pacific trade will play a big part in Canada's future economy. Canada will require a long-term strategy including investments in existing trade gateways and corridors, new marine and inland ports as well as road, rail and air transportation that will support the freight and passenger flows required for growing international trade.

## 4. FOCUS ON APPRENTICESHIPS

While the shortage of skilled workers facing the industry is nothing new, its implications on Canada's swift economic recovery are more dire. Employment growth in Canada is expected to average one per cent annually between the years 2020 and 2024, creating just over 900,000 jobs over the next five years. In the construction sector, the average annual growth outlook suggests employment

growth will likely average approximately 0.6 per cent per year between 2020 to 2024.

There is a need for a national strategy to recruit and retain more than 375,000 apprentices in Red Seal trades over the next five years. Skilled tradespeople cannot be created overnight. Poaching from within the



PHOTO: © SITTINAN / ADOBE STOCK

industry exacerbates the problem. Now is the time to focus on a national, coordinated workforce capacity strategy and boost skilled training programs.

## **5. SUPPLY CHAIN INSTABILITY; CALLS FOR MADE IN CANADA**

Virtually every material from lumber to steel has gone up in price. The fluctuating cost of building materials and the unpredictability of the supply chain are affecting budgets, estimates, and bids. The industry needs to look long and hard at areas that can be optimized to drive a better bottom line, including modernizing the tendering process.

Canada will be looking harder at the opportunities and the challenges of re-patriating Canadian knowledge and manufacturing.

We also need to reduce delays in granting contracts and address cost escalation so that the sub-contractor isn't left footing the entire bill for soaring material costs. The industry faces challenges with both spiking material prices and labour shortages. Finding skilled labour, managing price volatility, and mitigating the risks that come with rising costs are top priorities.

## **6. THE DELIVERY MODELS ARE CHANGING**

Projects are becoming more complex and there is no one-size-fits-all form for financing, designing and managing them. Current procurement practices have contractors shouldering a disproportionate share of the risk. With productivity and sustainability issues on the rise, including net-zero carbon targets, and shortages in material and labour affecting profit margins, it is high time the government refreshed its approach to procurement.

To build the infrastructure needed across the country and recruit the workforce of the future, federal procurement strategies need to adapt to encourage innovation, account for long-term value and sustainability, promote the use of alternative delivery models, and support shared risk.

## **7. GREEN OUTCOMES IDENTIFIED IN PROCUREMENT PROJECTS: BUT WILL**

### **FUNDING BE SUFFICIENT?**

Public interest in sustainable investment has grown significantly over the past 12 months. There is increased activity worldwide to promote greener construction. Reinforced by commitments to the Paris Agreement, a growing number of countries are reaffirming net-zero carbon emission targets, including Canada. At the same time, consumers are demanding socially and environmentally responsible business practices and projects.

During this decade, rising sea levels and rainfall increases can cause flood damage to homes and buildings with costs as high as \$13.6 billion annually. Temperature and rainfall-related damage to roads and railways could increase by up to \$5.4 billion annually, and heat and rainfall damage to electrical transmission and distribution infrastructure can cost utilities and ratepayers up to \$4.1 billion annually. Early investment in adaptation can substantially reduce the impacts and costs to infrastructure of a hotter and increasingly volatile climate by over 90 per cent or \$20.79 billion annually.<sup>1</sup>

## **8. FOCUS ON INCLUSIVE AND COLLABORATIVE CORPORATE CULTURE**

Traditionally, construction has been highly siloed, with the ability to drive low cost as the primary driver. As Canadian society is increasingly embracing diversity and inclusivity, these values are being expected of Canadian firms. In a tight labour market, companies who are unable to adapt will be left behind as workers migrate to those where they feel valued.

There will also be some work to do in re-integrating office workers. This could potentially mean re-shaping these roles particularly where some may seek permanent remote roles or where there is an opportunity to hire from under-served markets or communities. Consideration will

need to be given to minimizing potential conflicts between office and site workers who have different, but equal challenges adapting to COVID and a post-COVID world.

## **9. CYBER SECURITY IS EVERYONE'S BUSINESS**

Millions of people moved from their offices to their homes, sharing data over the internet, in record volumes. Completing daily COVID forms became the norm, as did increased use of IoT for safety, productivity, or auditing purposes. All of these transactions became potential portals for cyber-attacks – and many firms, sophisticated or not, became targets, and sometimes, victims.

While the security industry is creating more shields, a significant threat remains. Cyber security can no longer be limited to the CTO or CIO. More training, more controls and more auditing will be necessary to ensure that companies get the benefits of a connected world, while minimizing or eliminating the very real threat to their business from cyber-criminals.

## **10. DATA SHARING: AN INDUSTRY GAME-CHANGER**

Data is king – but only if you can aggregate it and use it to drive decision-making. Each time a project is managed through its milestones it creates a huge amount of data which rarely gets used again. This data can take the form of schedules, financial budgets, workflows, incident reports and lessons learned. There is a lot we can learn from sharing data that is collected on construction sites. Companies are beginning to look at entering into data alliances because the more data collected the better predictive analytics can be leveraged to assess risk, increase safety and improve productivity. Applying advanced data analytics and machine learning to predict how projects will perform in the future will allow companies to focus on problems before they arise and understand the probability of risk involved.

<sup>1</sup> <https://climatechoices.ca/wp-content/uploads/2021/09/Infrastructure-English-FINAL-Sep29.pdf>