

# Saskatchewan Heavy Construction Association Construction Association



# INFRASTRUCTURE ISSUE



## BIG BYPASS

## Broda Group sets the stage for massive P3 project around Regina

By Heather Hudson

hen it comes to heavy construction, it doesn't get any bigger than the Regina Bypass Project.

When complete in 2019, the \$1.88-billion infrastructure upgrade will boast 12 new overpasses, 40 km of new four-lane highway (plus an additional 20 km of resurfaced highway) and 55 km of new service roads.

The project is a public-private partnership (P3) between the Government of Saskatchewan and the Regina Bypass Partners – a consortium of design, construction and maintenance operators, as well as creditors and equity sponsors. The Ministry of Highways and Infrastructure (MHI) is overseeing the project.

The largest infrastructure project in Saskatchewan's history involves dozens of contracting and construction companies – big and small – from across the province, creating 8,200 jobs.

David Stearns, executive director of major projects, Regina Bypass Project, MHI, says the execution of the massive undertaking is being carefully coordinated to ensure a safe process for workers and the public.

"The safety of the travelling public and the mobility that directly links to the economy will be the final measures of success for this project," he says.

## Why does the city need the Regina Bypass Project?

For years, traffic safety and congestion have been serious problems along Regina's Victoria Avenue and Highway 1 East. An increasing number of public and commercial vehicles share the busy artery and a number of at-grade intersections have resulted in numerous traffic injuries and fatalities. Phase 1 of the project – to be completed in 2017 – will address this stretch of highway, eliminating the problematic intersections and upgrading the roadway.



## "We hit the ground running last fall and it's been our focus to stay on schedule as all the other components of the project depend on us to be finished on time."

- Russell Clunie, Jr., Vice-President, Broda Group

Another focal point of the project is to divert up to 70 per cent of trucks off busy Victoria Avenue southbound on the new bypass.

"In 2008, we were the first province to complete the twinning of the TransCanada Highway from border to border – with the exception of an important linkage bypassing Regina," says Stearns.

When the project is complete in late 2019, the last piece will be in place to allow a full, border-to-border highway with uninterrupted flow at posted speeds of 110 km/h.

### SHCA member gets on board

Broda Group got involved in the Regina Bypass Project in 2014 when the Province of Saskatchewan issued Requests for Qualifications for the design, construction and maintenance of the project. They joined construction giants Graham Construction, Parsons, Carmacks and VINCI and its subsidiaries to form the Regina Bypass Design Builders (RBDB) to create a bid on the design, construction, finance, operation and maintenance of the project.

Today, Broda Group is one of approximately 50 Saskatchewan companies involved with the project.

"[Broda Group's] role was to provide the expertise, pricing and thought leadership on the design for earth work components of the job. Through the process we carved out a fairly significant component of work on the job," says Broda Group's Vice-President Russell Clunie, Jr.

The company's confidence to bid on a job of this scope comes from more than 50 years of steady growth.

Cas Broda established Broda Group of Companies in Saskatchewan in 1957. In time, Broda's simple gravel hauling business expanded into aggregate processing and began meeting the needs of large quarry operations, supplying ballast to clients like CN Rail, CP Rail and BC Rail. Over the years, growth continued in all



## **FEATURE** The team starting a new cut in the Cowan Borrow Pit on the west side of Regina. Material from this pit is being used for subgrade construction for the new bypass from Highway 1 West to Highway 6.

areas of heavy construction, road construction, mine development, site works and concrete plants.

Today, Cas's son, Gord Broda, is at the helm of the thriving business headquartered in Prince Albert, Sask. and specializes in aggregate processing, earthwork, civil construction and concrete production. With an equipment asset base of approximately 400 units valued at more than \$40 million, they have the capacity to move more than five million m3 of material per year.

During the busy season, the Broda Group employs more than 400 employees.

"On any given day, we have a core base of employees in the 175 range, which can fluctuate depending on our work in the quarry division and infrastructure division," Clunie notes.

When RBDB was awarded the Regina Bypass Project contract in May 2015, they called on their expertise, equipment and experience to get started. As earthmovers, Broda Group was first up. They got started that September - and the pressure has been on ever since.

"We hit the ground running last fall and it's been our focus to stay on schedule as all the other components of the project depend on us to be finished on time," Clunie expains. "As the dirt guy, you've got to set the stage and make sure you deliver or the whole project is in jeopardy. We don't wait on anybody but design and utilities to get out of the way.

"If we fail, the whole domino effect occurs and everybody fails. You really want to be sure you know what you're doing and the team is crisp and capable of doing it."

Currently, utility work is also going on throughout the area.

"There are over 400 utility conflicts in this project, a number of which are major utilities like Enbridge, TransGas, SaskTel and Alliance Pipelines," says Stearns. "We expect the utility work to be ongoing through 2018."

## **Challenges for Broda Group**

A project of this magnitude comes with its share of challenges. As first contractors on the job, they're battling a few challenges, but Clunie says they have systems to address each one.





#### Weather

Mother Nature is a factor on any construction job - but on a P3 project with strict timelines and significant fines for delays, there's little room for bad weather days. A relatively mild winter in 2016 helped keep the earth moving, but Clunie says they've always got their eyes on the sky.

"We take advantage of every good day because you never know when it's going to start raining. I won't say we're out of the woods until we're completed," he says.

#### Risky Regina clay

The earth materials on some locations are less than desirable to work with, says Clunie. The high plasticity index of the Regina clay, which comprises the first layer of the earth, is wet, clumpy and heavy.

"You have to spend a lot of time drying it out for optimum moisture. The density is significantly high. It's difficult material to work with," he explains.

One of the ways they've mitigated this challenge has been creating deeper borrow pits to expose more till.

"It means we're hauling longer, but we're able to reduce settlement times on large embankments and stay on schedule," says Clunie.

### Scheduling and coordination

Before its work is finished on the Regina Bypass Project, Broda Group will have run 24/7 shifts with roughly 200 workers for close to two years.

"It's always a coordination process to keep the cycle of people and logistics running smoothly. And because it's a design-build, you're always challenged with designs keeping up with production," Clunie says. "Generally, it's going fine, but it requires constant diligence."

An on-site weekly meeting to discuss mechanics, assets, equipment servicing, safety and engineering helps ensure constant communication and quality control.

Stearns says RBDB's commitment to excellence, safety and bringing all players together as one team has been stellar.

"RBDB has done exceptionally well on the safety front, which is critically important to this project," he notes.

The Regina Bypass Project is expected to be completed by the end of 2019. For more information, visit saskatchewan.ca/residents/ transportation/regina-bypass-project. 0

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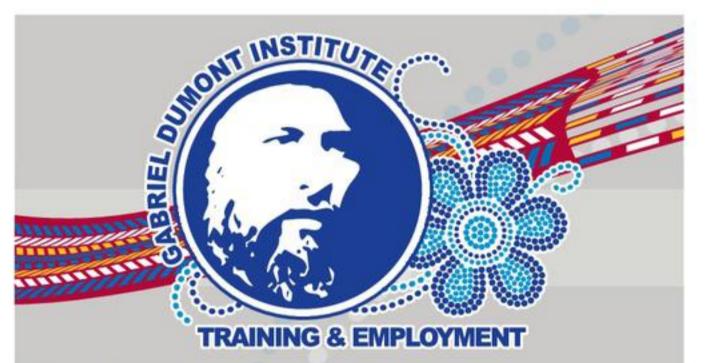
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