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FALL2019

Ottawa MacDonald – Cartier International Airport Apron II Reconstruction and Expansion – Forterra Canada Provides an XStream Solution

Ian Rowbotham, P.Eng.,
Principal with Avia NG Airport Consultants

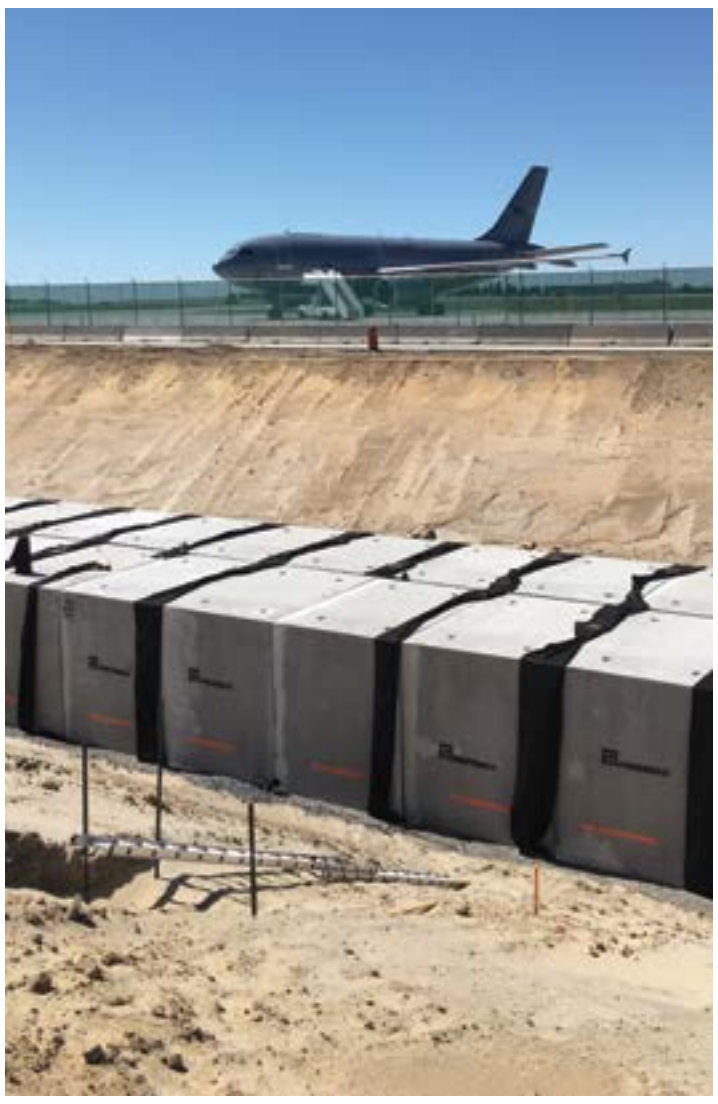
Avia NG Airport Consultants reached out to Forterra in December 2017 for assistance to design and build an infiltration tank. The Ottawa International Airport was expanding its apron area and needed to infiltrate water runoff back into the site as opposed to discharging it. Several design criteria needed to be met:

1) Structurally must resist aircraft loading – Boeing B777-300ER
2) Horizontal seismic loading
3) Infiltration rate drop of 3.2” / hour as a minimum
4) Total storage capacity of 1400 m3 (49,400 cu. ft.)
5) Access points into the chamber

Using their XStream program, Forterra was able to optimize the design and provide a cost-effective solution. We were able to drop the tank below the inlet pipe, thus maximizing the retention volume. This allowed us to minimize the footprint over the site.

The final Forterra design consisted of:

- 78 sections total, of 10’x8’ dry cast boxes aligned as a twin cell. Every 5th box had an interconnecting pipe.
- Manhole access points were located at each end of the tank. Bulkheads were cast into the boxes.



Completed infiltration tank install adjacent to existing Ottawa airport apron.

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Let CCPPA organize a plant tour for your team. Member facilities produce a wide range of concrete pipe and precast products. Our tours address:

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Ottawa MacDonald – Cartier International Airport

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The manhole access points required structural distribution slabs to be dowelled to the XStream to support the aircraft load applied to the box sections.

The site was primarily native sand that was loose to very dense in nature. We proposed an 18” thick stone bed wrapped in filter cloth to allow the water to percolate into the native soil.

Specially engineered backfill was used on the sides of the box to resist the seismic loading. Native overburden completed the installation, eliminating the need for imported material. Once completed, 15” thick concrete pavement finalized the installation.

Each box was produced with a 12” opening in the bottom to allow for infiltration. During the installation process there was concern of adequate infiltration over time as silt would close up the open joints, and the water table could rise seasonally. In order to overcome this, 12” holes were provided in each third box above the springline with additional pipe to redirect the flow into the native soil. There was also concern that the compacted side-fill would not permit adequate drainage.

Greenbelt commenced the installation on June 18, 2019. Bernie Ingimundson, P.Eng. Senior Adviser for Greenbelt, headed up this project and was pleased with both the product and delivery.

Forterra provided the precast concrete design and manufacturing expertise that helped Avia and Greenbelt address some of the challenges involved with the Ottawa International Airport apron expansion project.

Infiltration tank install and bedding preparation.

Fanshawe Park Road, London, ON

Antony Gubbels, P.Eng.
Principal, Urban Land Engineering
LDS Consultants Inc.

In 2017, LDS Consultants Inc. of London, Ontario completed the design of the Fanshawe Park Road project. In the spring of 2019, this project was awarded to CH Excavating (2013). One of the challenging aspects of this project was the requirement to install a large 3.0m diameter maintenance hole in one of the busiest commuter routes into the City. The proposed 3.0m diameter maintenance hole in the roadway required a doghouse-style opening to be placed over top of an existing 2200mm dia. concrete pipe to allow connection for proposed 525mm concrete pipe flowing into the existing storm system.

Coldstream Concrete Ltd., the chosen concrete pipe/precast structures manufacturer, worked with LDS on this project with respect to the required precast concrete structures and reinforced concrete pipe. In reviewing the project requirements, Coldstream Concrete proposed an alternative solution to the specified 3.0m diameter round maintenance hole structure. The alternative solution was primarily driven by the fact that this structure would be placed under one of London’s busiest roadways. Ensuring that the required structural capacity with a round structure would be met would be very challenging given the size of the existing concrete pipe.

Coldstream Concrete’s solution involved producing a square 3.0m x 3.0m precast concrete box chamber, measuring approximately 3.6m deep, with a stacked chimney consisting of several 1.2m diameter maintenance hole pieces sitting on the box chambers’ transitional top slab. This solution provided the most achievable way to successfully rest a doghouse-style structure over the existing concrete pipe and was accepted as the final design for the project. Coldstream Concrete Ltd. provided the structural design, manufacturing, and delivery of this structure.

Custom doghouse structure being lifted into place.

Doghouse structure in final resting position.

The precast concrete box chamber was comprised of three pieces (not including the stacked chimney). A base slab, weighing nearly 8,350kg and measuring 3.508m wide by 3.508m long and 0.305m thick was first placed under the existing concrete pipe. After which, a tall standing square riser section was placed over top of the concrete pipe and onto the base slab. The riser weighed in at nearly 26,000kg and stood approximately 3.640m tall – one of Coldstream Concrete’s tallest single pieces. A transition slab was placed directly on top of the riser, which allowed for the stacked 1.2m diameter maintenance hole chimney to extend to the top of the roadway. The transition slab was slightly lighter in weight compared to the base slab but had similar dimensions.

In May 2019, Fanshawe Park Road West was closed for approximately one month to allow for sewer upgrades, road widening, and the connection of new services to a new proposed gas station just west of Hyde Park Road. CH Excavating (2013) successfully placed the large structure pieces under and over top of the existing 2.2m diameter concrete pipe and made the necessary connections and adjustments to the existing storm system. Together Coldstream Concrete Ltd. and CH Excavating (2013) worked hard, diligently, and quickly to get the job done safely and efficiently.

LDS Consultants Inc., with the help of Coldstream Concrete’s precast concrete engineering and manufacturing expertise, was able to successfully complete the Fanshawe Park project on time and provide the City of London with infrastructure that is high quality and has a long service life.

DECAST Celebrates 30 Years in Essa Township with $12M Plant Expansion

Company adds 35,000 square feet and expands local workforce to more than 550 employees

On September 7th, 2019, DECAST Ltd., part of the TACC Group of Companies, marked three decades in Essa Township with the opening of its plant expansion in Utopia, Ontario. The $12 million, 35,000 square foot expansion brings DECAST's footprint in Essa Township to more than 500,000 square feet and has created 70 new jobs at the state-of-the-art facility.

Municipal and provincial dignitaries join the DeGasperis family as they officially open DECAST's plant expansion in Utopia, Ontario.

"We've had a presence in Essa Township for more than thirty years. We - my brothers, Michael, Carlo and the De Gasperis family - are proud that we are marking our fourth decade in Essa with this $12 million expansion," said Silvio De Gasperis, President, DECAST Ltd.

As one of Canada's leading and most innovative suppliers of infrastructure materials and services, DECAST expanded its operations in Essa Township, southwest of Barrie, to meet growing and unprecedented demand for its products. By sourcing aggregates locally, the plant's expansion will directly support several other businesses in the region.

"The quality of our work at this plant is second to none. We're only as good as our product and we credit the dedicated, local workforce here, along with the strong support we receive from Essa Township for our success. I'm confident we'll see demand continue to grow," Mr. De Gasperis adds.

"The DECAST expansion is positive news for Essa Township," said Sandie Macdonald, Essa Mayor. "These are 70 new, well-paying jobs that support local families, who in return support other local businesses and help to make Essa a thriving community and a great place to live and work."

DECAST has a strong commitment to supporting the communities where it does business. As part of the 30th anniversary celebrations, the company will donate $30,000 to both The Women and Children's Shelter of Barrie and My Sister's Place in Alliston.

For more information, please visit our website at decastltd.com

DECAST Ltd. is leading the Canadian infrastructure market, including water transmission, bridges, storm and sanitary, tunneling and engineered precast products. It is a part of the TACC Group of Companies.

The TACC Group of Companies is owned and operated by the De Gasperis Family and employs over 2,500 people. The group of companies have solid reputations in the industry as bold innovative leaders in their various areas of expertise.

High Street Culvert – 3.6m x 4.2m Precast Concrete Box Culvert

Reid Porter, P.Eng.
Infrastructure Engineer
City of North Bay

Clamshell culvert install

The City of North Bay designed and tendered the project for the High Street Culvert. The design, fabrication, and delivery was awarded to M CON Pipe and Products Ltd. (Ayr, Ontario). The install of the culvert was awarded to Ed Séguin and Sons Trucking and Paving Ltd. The City of North Bay's Engineering team sized the culvert to match the existing culvert capacity which exceeded the hydrological requirements for a culvert crossing, as well as ensuring the size would provide enough room for creating a suitable fish habitat. This resulted in a box culvert sized at 3.6m x 4.2m. The M CON Pipe and Products engineering team provided the structural design for this culvert.

This project was also challenged with a tight schedule of eight weeks from the demolition of the existing infrastructure to the complete installation of this new culvert. The decision to use a precast concrete box was mostly due to its long service life. The rapid replacement capability of using precast concrete elements is an important feature when considering the impact of detour roads and increased congestions due to the road closure.

Given the large size of this precast concrete box structure and the location of the culvert, the weight of each culvert piece posed challenges. The City of North Bay's design team worked with M CON's engineering and technical team to redesign the structure as a clamshell box culvert. Essentially splitting each culvert section into a top and bottom section. This allowed Seguin Trucking, the GC on the project, to more effectively coordinate and place the structure.

The City of North Bay, as the owner of this new infrastructure, is very pleased with the project's outcome and the ability of both M CON and Seguin Trucking to provide solutions to the challenges posed by this project.

Completed clamshell culvert install

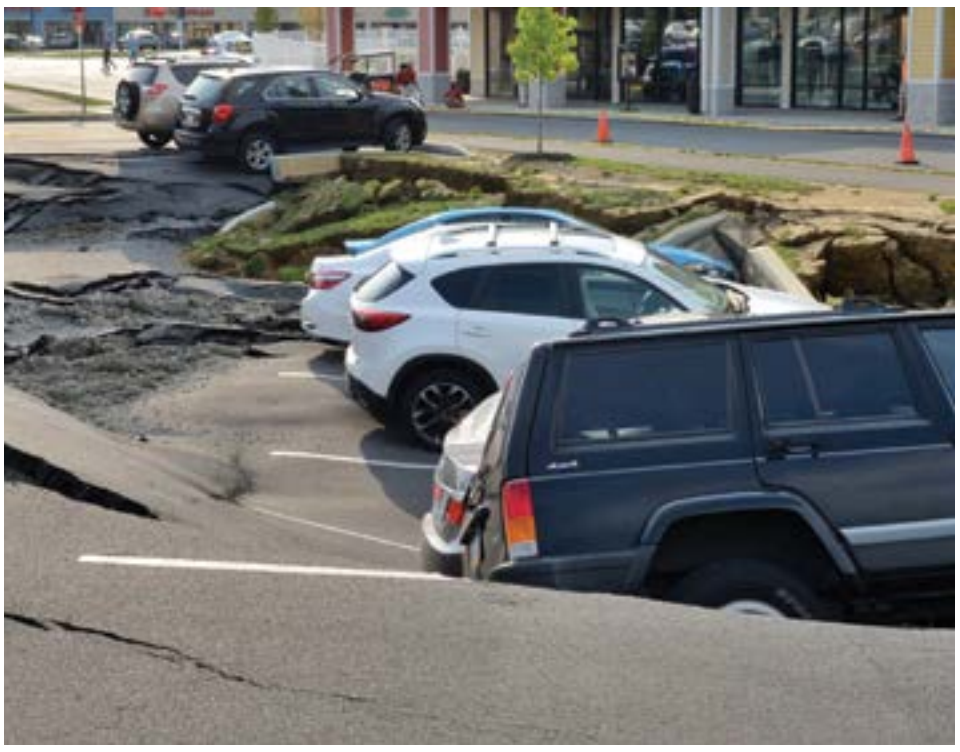
Underground Storage

Camilo Marquez, P.Eng., C.E.T.
CCPPA, MB-SK Regional Engineer

During the design process, it is always challenging to select the proper material, especially when there are multiple constraints attached to the project. Professional engineers are constantly dealing with multiple issues that require in-depth knowledge of the engineering field that relates to the project. Management skills become more important nowadays as the project goes through the following five phases:

- Initiating
- Planning
- Executing
- Monitoring & controlling
- Closing

Every project should be analyzed according to the demands, and more importantly the constraints. In the stormwater management world, as municipalities continue to grow and expand, engineers are responsible to ensure that a mechanism is in place to mitigate the excessive runoff that could potentially make its way into the sanitary sewer system that will ultimately increase the inflow\infiltration ratio. This could result in overloading the pipe network in terms of its capacity that was originally designed. Each site needs to have a system that allows for the stormwater to be retained and slowly delivered to the existing city's pipes. Overland surface areas can be a great solution to maintain this volume of water using parking lots (for small areas) or retention ponds for larger areas such as subdivisions. However, the retention on surface areas are limited to different design elements. On multiple situations, these surfaces areas are more valuable since can be used for more construction that will generate more revenue for the developer rather than the usage of these large areas for retention systems. So, what should we do instead? If we have this problem, is there a way that we can use to control the runoff from hard surfaces, roofs, green areas? Well thankfully, for any difficult problem there is a solution in life except for two things according to wise folks: taxes and death itself, these two cannot be avoided. A little bit too extreme but it is a true statement.



The Tanger Outlet Mall in Lancaster, Pennsylvania, U.S. summer 2018 installed an HDPE underground detention system that quickly failed.
Photo Credit: nbcphiladelphia.com

Stormwater Detention -Nose Creek, Calgary. *Photo Credit: INLAND*

Part of the solution would be the installation of a retention system that will go under the ground, This could simplify the issue of having ponding on the surface and can mitigate the problem of having massive areas just to store water, such as retention ponds. As an engineer, we come up with very sophisticated solutions for problems and as an engineer somehow, we foresee problems that are not in the present. Are we in some way fortune tellers? Probably not, but it is nice to think that way.

The selection of the material that will go under the ground will be the key of the design itself. Engineers are designing these projects based on the requirements of the Municipality/City and in most cases, the stormwater management calculations are based on a 50-100 yr. storm event. The selection of the material should reflect the design projection, and this is where the project manager/design engineer has the authority to estimate and analyze what system should be applicable to the project. The designer has different options for the retention system that will go under the ground, such as: Corrugated Metal Pipe (CMP), Plastic Arches (HDPE) and Precast Concrete. However, not all the systems behave the same. Flexible systems are extremely dependent of the soil envelope and installation techniques which can be an issue, considering the fact, that installation sometimes can be very tricky if the contractor does not have enough experience to execute the installation for plastic materials. Precast retention systems are not very dependent of the soil envelope, and structurally speaking offer a great solution if the site has live loads and dead loads that needs to be addressed. The retention precast concrete systems are manufactured in a controlled environment which can save time in the procurement process of the project since the manufacturer can control production; saving time to the owner in terms of the installation and more importantly, money.

The Tanger Outlet Mall in Lancaster, Pennsylvania, U.S. summer 2018 installed an HDPE underground detention system that quickly failed.

It is imperative to recognize the difference on each material and its behavior. Selecting a product without knowing how the material will perform can be considered as negligence and can be punished by the association or any jurisdiction competent that can prove negligence.

Purchasing a good watch can be expensive, but in the long run, a watch that was bought with meticulosity and patience will be more reliable than a watch that "will do the trick". At some point what cost less will be more expensive than the reliable watch that cost a little extra more.

As the analogy of the watch, engineers and contractors have options to install something that can be cheap from the get-go, but if the whole system collapses after the installation; what options do we have? Blame the product? Blame ourselves or blame the contractor? Ideally no one, but that is part of the real world. The only solution is to select the right material from the beginning. Precast retention systems can be a powerful solution that can offer capacity to withstand heavy loads upon the structure (live loads, dead loads, lateral forces etc.) inclusive, this material due to its density can be more reliable to buoyant forces than its counterpart, the flexible materials.

Protect yourself as an engineer and take care of that seal that was given to you. Do it right the first time, it can be less expensive.

CCPPA 2019/2020 Seminars

The Canadian Concrete Pipe and Precast Association (CCPPA) has a staff of five engineers with over 80 years of combined work experience that includes engineering design, the concrete industry, and both the flexible and rigid drainage products ndustries. CCPPA is also heavily involved with technical committees of various other industry associations, and product standards committees for ASTM (American Society for Testing and Materials) International and CSA (Canadian Standards Association) Group such as: A257, A23.1, A23.2, A23.4 and B1800.

Due to the overwhelmingly positive response from those who attended the technical seminars entitled “Protecting Yourself as a Gravity Pipe Engineer or Inspector” that were previously offered, the CCPPA is planning to extend this technical seminar series to more locations in the coming months. Design engineers, project managers, and field inspectors from the private and public sectors across Canada will have an opportunity to learn from industry professionals on how to specify both rigid and flexible underground pipe systems.

At the end of this seminar, attendees will have a better understanding of:

- Assessment of pipe systems
- Rigid and flexible pipe design and installation
- Trenching issues
- Precast concrete boxes
- Product quality and inspection

The seminars are free of charge and a certificate for five professional development hours will be presented to each person who attends.

Dates and locations for this seminar series are as follows:

- Winnipeg - December 3rd, 2019
- Saskatoon - December 4th, 2019
- Regina - December 5th, 2019
- London - January 21st, 2020
- Kitchener Waterloo - January 22nd, 2020
- Niagara - January 23rd, 2020
- Burnaby - February 4th, 2020
- Victoria - February 6th, 2020
- Edmonton - March 3rd, 2020
- Calgary - March 5th, 2020

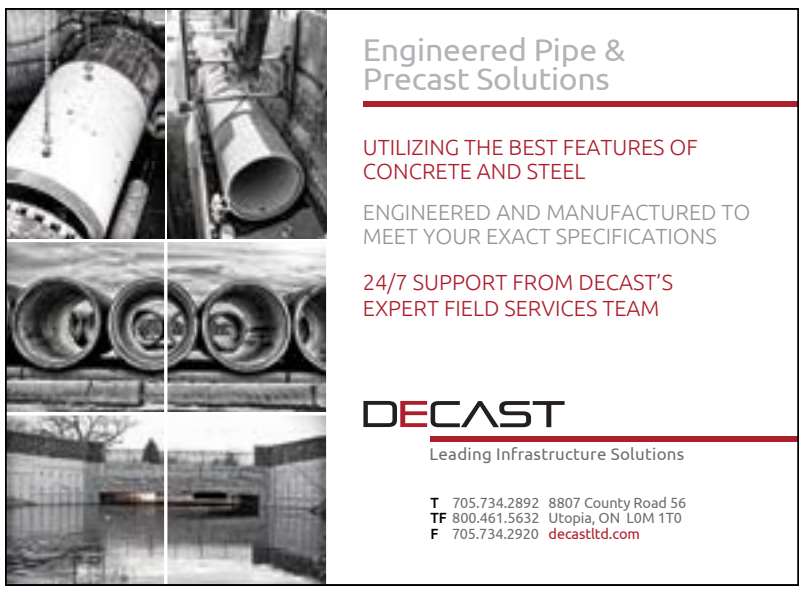
To register please visit our website ccppa.ca or contact resources@ccppa.ca

M CON Products Inc. Expands Plant to Increase Wet Cast Production Capabilities

M CON Products Inc. has been working hard to update and expand its Carp, Ontario production facility with the latest industry technology and equipment since 2013. The 2018 year-end saw the erection of precast concrete panels that were used as the exterior walls of the newly expanded Wet Cast production area, timely before the cold Ontario weather hit.

Originally built in 1992, Phase 4 of the current plant was the home of a Hawkeye VUP machine (1200 mm to 3000 mm pipe). In 2017, the machine was removed, upgraded and installed in a much larger production bay. With the completion of the extension of Phase 4, the Wet Cast bay comes in at 1256 m2 (13,500 sq. ft.). The new wet cast bay has been equipped with two 25,000kg cranes, one 5,000kg half-gantry crane and 9.75m of lifting height capacity. After removing the original VUP machine, the bay was left with a 2.7m deep pit which will now to be used to produce taller precast products. The pit will be covered with a precast concrete panel floor when not in use. The Phase 4 expansion also includes one 7.3m x 7.3m overhead door enabling wider product to be produced and removed from the plant. Steel cage fabrication, and any custom wood formwork for specialized pieces, will also be housed in this bay. With a dedicated 3000L Haarup concrete mixer, this bay is ready to produce much larger structures, increasing M CON Product‘s capacity and providing more efficient production.

MCON Wetcast: Picture of the new wet cast bay interior.



Northwest Storm Trunk Project – City of Medicine Hat, AB

Greg Christensen, P.Eng.
Project Manager, MPE Engineering Ltd.

The existing storm water drainage system in the northwest sector of the city of Medicine Hat, Alberta was over capacity and could not meet the demands of the continual commercial and industrial growth in the area. The City of Medicine Hat imposed development restrictions in the sector until a solution could be found to relieve the capacity issues. Furthermore, the high traffic intersection of Box Springs Road & Saamis Drive NW would flood frequently during rain events and would often require closure for public safety.

In 2016, the City of Medicine Hat decided to proceed with the Northwest Storm Trunk project to install a new storm water trunk main to address the issues. The Northwest Storm Trunk will convey storm water discharged from several existing and proposed Storm Water Management Facilities to an outfall, discharging to the South Saskatchewan River.

Installation of T-riser section.

The City of Medicine Hat engaged MPE Engineering Ltd. (MPE) through a request for proposal process to provide storm water modeling, preliminary design, detailed design, tender documents, contract administration, site inspections, and quality assurance testing for the project.

The Northwest Storm Trunk alignment closely followed a proposed alignment for a sanitary sewer trunk main that was also being planned for the northwest sector. The designs of both trunk mains were completed simultaneously by MPE and combined into one construction tender.

Generally, the project included the design of a storm water and sanitary sewer trunk main, railway crossings, pipeline crossings, river outfall upgrades, energy dissipation structures, roadway design, and a storm water dry pond.

The design was completed, and the project was tendered for construction in March 2018. The construction contract was awarded to BYZ Enterprises Inc., of Medicine Hat. Construction began in June 2018 and is expected to be complete in October 2019.

Technical scope for Northwest Storm Trunk included the following concrete pipes:

- 880m of 1,350mm diameter Class III RCP
- 1,275m of 1,350mm diameter Class IV RCP

Flexible pipe systems and rigid pipe systems were reviewed during the design process for the Northwest Storm Trunk. Upon analysis of the project conditions, both MPE and the City of Medicine Hat concluded that flexible pipe systems were not suitable for the Northwest Storm Trunk; as such only rigid RCP was specified.

The decision to use RCP was based on the following project challenges:

- Depth of bury
  - The selected alignment had approximately 800m of pipe buried between 6m and 8m deep and over 300m of pipe buried between 8m and 10m deep.
- Expected significant groundwater infiltration within the pipe zone and poor quality loose native soils
  - Geotechnical investigations indicated that ground water would be above the pipe depth for portions of the alignment and to expect varying native soils including loose to very loose gravelly, sandy, wet soils.

The flexible pipe design for sections of this project would require specifying Class I material compacted to 95 percent. Although it is possible to design an embedment material and compaction effort to support a flexible pipe installation, it was our opinion that it is not practical to assume a contractor will consistently achieve greater than 95 percent compaction within the pipe embedment zone especially with large diameter pipe, at significant depths, while facing groundwater infiltration and loose soils.

The inherent strength of RCP compensates for any construction shortcomings dealing with trench depths and trench conditions rather than relying on the pipe embedment for strength. Specifying RCP carried less risk in the installation for this project. RCP allowed for a more consistent installation as it is less structurally dependent on bedding and haunching which would have been very challenging to install adequately to support other pipe materials in the wet trench conditions.

Also, the shorter pipe lengths of RCP allowed for easier install in deep, wet, loose native trench conditions versus a 6m long section of flexible pipe.

Furthermore, at the depths and conditions expected, there was negligible expected cost savings specifying flexible pipe systems over RCP. With at least three RCP manufacturers in Alberta alone, competitive pricing was seen in the tender and the project is coming in on-budget.

Other project challenges included:

Steep Grades
Long Segments of the Northwest Storm Trunk have grade in excess of 6 percent. The potential for pipe abrasion was reviewed with RCP pipe manufacturers. Energy dissipation structures were designed to reduce the energy grade line of the Northwest Storm Trunk and manhole structures required reinforcement to prevent scouring.

Access to properties
The Northwest Storm Trunk alignment is located within existing roads and installation required road closures. To maintain access to residences and businesses along the route the project had to be phased around important intersections. Temporary roads were constructed parallel to the workspace to maintain through traffic. Effected property owners were engaged during the design phase to discuss access requirements and review options. By engaging the effected property owners during design and having them provide input on the temporary access design, it reduced the frustration of the property owners during construction.

RCP was critical to overcoming many of the project challenges and will provide the City of Medicine Hat with a reliable storm water trunk for many years.

Backfilling and compacting around reinforced concrete storm pipe.

Construction 2018 to 2019

Client: City of Medicine Hat, Municipal Works Department

Consultant: MPE Engineering Ltd.

General Contractor: BYZ Enterprises Ltd.

Reinforced Concrete Pipe Manufacturer: Precon

Mayor of Ottawa, Jim Watson Tours M CON Products Production Facility

The mayor of Ottawa, Jim Watson, congratulated M CON Products on their role in some of the city's largest construction projects over the last 30 years. During the company's 30th anniversary celebration BBQ, Jim Watson toured the production facility and joined employees, customers, and friends for a bite to eat. The mayor presented Mr. John Mion, President of M CON Products and his team with a congratulatory plaque for 30 years of service to the Ottawa business community and supplying quality product to infrastructure projects in the city. He tweeted, "Congratulations to @mconproducts for celebrating 30 years in the construction industry. Manufacturing pre-cast concrete products M CON has contributed to some of the City's biggest infrastructure projects."

The mayor was impressed with the size of the facility and the amount of technology that has been introduced over the years. He also commented on the quality and size of the product, and capacity of the operation to fulfill the needs of Ontario's growing infrastructure.

Jim Watson (Mayor for the City of Ottawa) presents a congratulatory plaque for 30 years' service supplying quality pre-cast concrete to Ottawa.

This was the first time a high-profile city councillor toured M CON Products' facility. The aim was to show Jim Watson where key city infrastructure products are manufactured, and to view the various trades and skilled jobs provided by M CON. The mayor asked insightful questions and showed concern regarding sourcing materials and potential challenges with tariffs and fees. He was pleased with the company's use of Canadian and local sources. He showed particular interest in employment needs and the skills required for the unique machinery and equipment that is utilized in the yard and plant, as well as concern with the decreasing amounts of skilled trades workers coming into the workforce.

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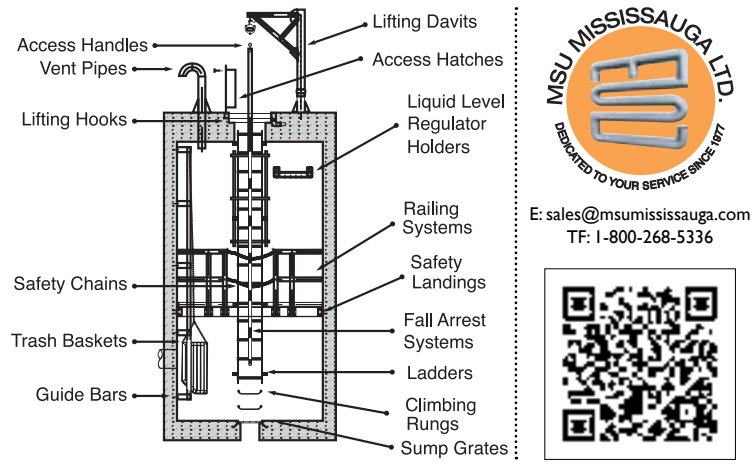

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Con Cast Pipe
Location: Guelph, ON
Tel: 1-800-668-7473
Fax: 519-763-1982
Email: sales@concastpipe.com
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Contact: Brian Wood or Jason Spencer

DECAST Ltd.
Location: Barrie, ON
Tel: 1-800-461-5632
Fax: 705-734-2920
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Contact: Nathalie Wainman

Langley Concrete Group
Locations: Langley, Victoria & Chilliwack, BC
Tel: 604-533-1656
Fax: 604-533-8191
Email: pipeman@langleyconcretegroup.com
Website: www.langleyconcretegroup.com
Contact: Mark Omelaniec

M CON Products Inc.
Location: Carp, ON
Tel: 1-800-267-5515
Fax: 613-831-2048
Email: sales@mconproducts.com
Website: www.mconproducts.com
Contact: Carlo Taverna

M-Con Pipe & Products Inc.
Location: Ayr, ON
Tel: 519-632-9112
Fax: 519-632-7440
Email: dgalloway@mconpipe.com
Website: www.mconpipe.com
Contact: Doug Galloway

Rainbow Concrete Industries Ltd.
Locations: Sudbury, ON
Tel: 1-800-461-6281
Fax: 705-566-4813
Email: sales@rcil.ca
Website: www.rcil.com
Contact: Boris Naneff

Souris Valley Industries
Locations: Weyburn, SK
Tel: 306-842-5854
Fax: 306-842-1011
Email: dustin@sviprecast.com
Website: www.sviprecast.com
Contact: Dustin Bell

Gaskets and Connectors

Hamilton Kent
Location: Etobicoke, ON
Tel: 1-800-268-8479
Fax: 416-674-6960
Email: bernard.gregoire@hamiltonkent.com
Website: www.hamiltonkent.com
Contact: Bernard Gregoire

Press-Seal Gasket Corporation
Location: Fort Wayne, IN
Toll-free: 800-348-7325
Cell: 617-803-1750
Email: mtomkinson@press-seal.com
Website: www.press-seal.com
Contact: Matt Tomkinson

Trelleborg Pipe Seals
Location: Milford, NH
Tel: 800-262-2180
e-mail: Terry.macdonald@trelleborg.com
Website: www.trelleborg.com
Contact: Terry Macdonald

Reinforcing Steel

Laurel Steel
A Division of Harris Steel ULC
Location: Burlington, Ontario
Tel: 800-265-6811
Fax: 905-634-7888
Email: grant.fraser@laurelsteel.com
website: www.laurelsteel.com
Contact: Grant Fraser

Numesh Inc.
Location: Laval, PQ
Tel: 1-800-363-0847
Fax: 450-663-9049
Email: john.nesbitt@numesh.com
Website: www.numesh.com
Contact: John Nesbitt

StelCrete Industries Limited
Location: Niagara Falls, ON
Tel: 1-866-924-0837
Fax: 905-735-3955
Email: bhansen@stelcrete.com
Website: www.stelcrete.com
Contact: Bob Hansen

Safety Climbing Equipment

MSU Mississauga Ltd.
Location: Mississauga, ON
Tel: 1-888-220-2213
Fax: 905-823-4947
Email: sales@msumississauga.com
Website: www.msumississauga.com
Contact: Virginia Junkin

Stepcon Industries Inc.
Location: Mississauga, ON
Tel: 1-888-783-7266
Fax: 905-897-6001
Email: stepcon@on.aibn.com
Website: www.stepconindustriesinc.com
Contact: Michael Greer

Precast Manufacturing Equipment and Accessories

HawkeyePedershaab
Location: Mediapolis, IA
Tel: 800-626-1453
e-mail: rbeelman@hawkeyepedershaab.com
website: www.hawkeyepedershaab.com
Contact: Randy Beelman

Mel C. Marshall Industrial Consultants Inc.
Location: Delta, BC
Tel: 604-943-8512
Fax: 604-943-2738
Email: melmarshall@telus.net
Website: www.precastconcretebc.com
Contact: Mel Marshall or Braden Marshall

J D Industrial Sales
Location: Cambridge, ON
Tel: 519-267-4340
Cell: 519-841-2554
Fax: 888-463-7598
Email: drewblack@jdindustrialsales.com
Website: www.jdindustrialsales.com
Contact: Drew Black