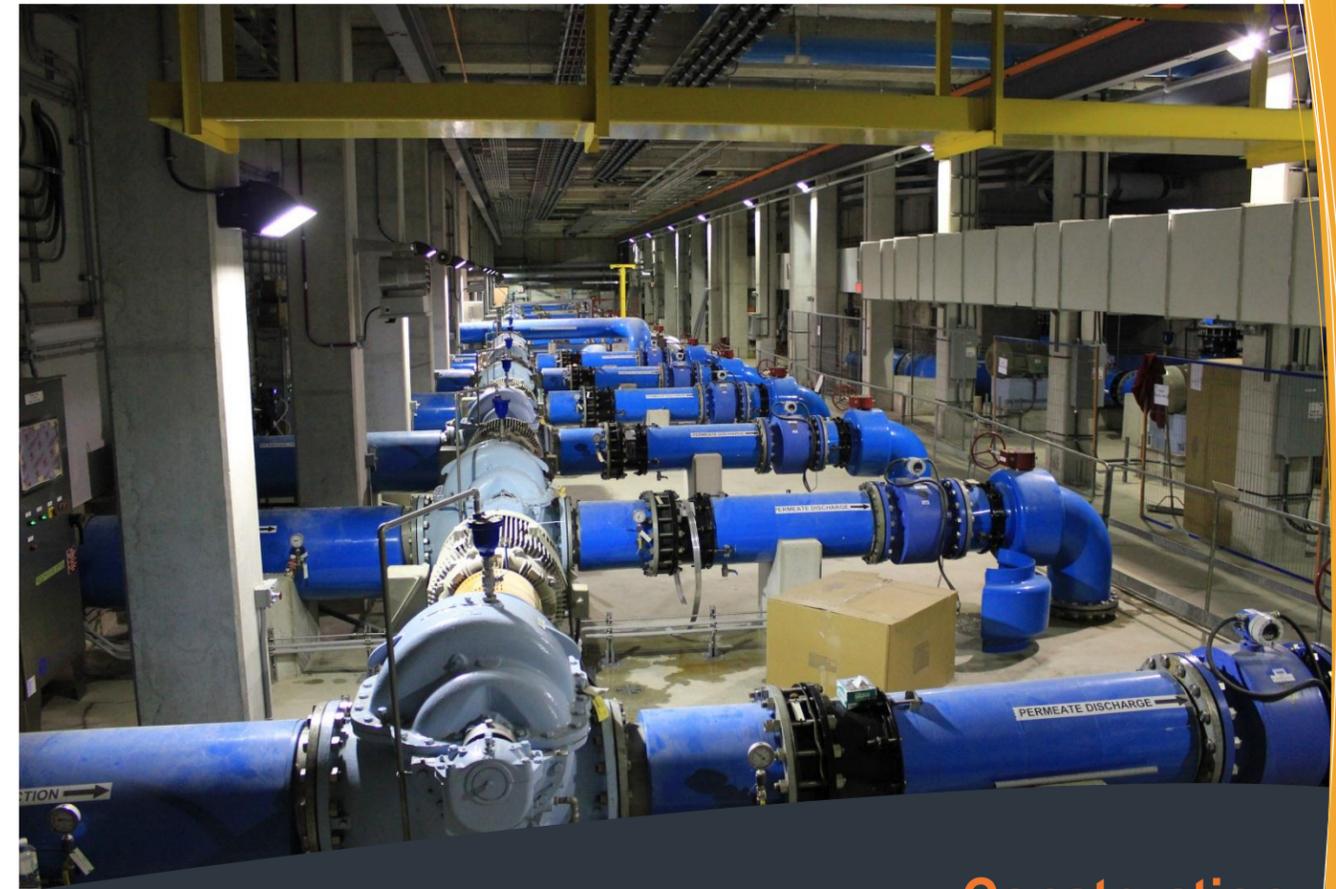


CONSULTING SERVICES DURING CONSTRUCTION

PROF&E Ltd. is Canadian owned consulting company specializing in project management, consulting and engineering support to construction. Our portfolio mostly consists of municipal infrastructure (including treatment plants, pumping stations, storage facilities and linear infrastructure), industrial facilities, bridges and buildings. For the work related to construction services, we work closely with the municipalities and other consulting companies in our industry to support them during tendering, construction, startup/ commissioning and warranty stages.

As one of the very few companies in this market with broad experience both in design and construction, we fully understand challenges that the consultants, contractors, plant operators and owners deal with during implementation of the construction contracts. With this knowledge we are in position to find the best solutions for the job while satisfying owners, operators, design consultants, and construction managers as applicable.

We carry Certificate of Authorization by PEO and Liability Insurance required for consulting businesses.



Construction Services

- contract administration
- field inspection
- construction safety
- startup and commissioning
- 'green' construction
- value engineering
- project tracking
- claims analysis



PROF&E SOLUTIONS

- PROJECT MANAGEMENT
- CONSTRUCTION MANAGEMENT
- CONTRACT ADMINISTRATION
- FIELD INSPECTION
- PERMITTING FOR CONSTRUCTION
- STARTUP AND COMMISSIONING
- CONSTRUCTION SAFETY
- REVIEW OF SHOP DRAWINGS
- GREEN CONSTRUCTION
- VALUE ENGINEERING
- SCHEDULING/PROJECT TRACKING
- LITIGATION SUPPORT
- CLAIMS ANALYSIS

Contract Administration

CALL US FOR A LUMP SUM QUOTATION

Our construction services section is designed to suit projects from relatively small to large, complex treatment plants. We have variety of field staff including junior, intermediate and senior construction engineers with broad experience in municipal infrastructure and buildings. PROF&E's approach is to work closely with the owners and their operators with the purpose to understand their immediate and long-term goals. Also, our active approach in construction is based on keeping daily contact with the general contractor and their sub-trades. This allows us to have full understanding of on-going challenges and targets by both sides, and helps us in streamlining the entire

construction team. In an effort to prevent surprises instead of dealing with issues in reactive mode, we put a lot of emphasis on planning the work. We ensure timely responses from the design team and the owner. Our construction teams have enough experience in design and operations, so we take active role in finding best technical questions, ensure continuity of construction and help reduce construction costs. Our role could be active in terms of construction management, or limited more in terms of engineering support to construction. As a result of our active approach, construction projects we were involved with were on schedule and within project allowances.



24-7 construction support

FIELD INSPECTION

We plan resources to suit the intensity of the construction work at various stages of construction. We did projects with one part-time field inspector to project that required complex full-time inspection teams. In PROF&E we have staff specializing in and fully dedicated to inspection of construction. Under the supervision of our contract administration staff and with the support of our affiliates that provide us with some specific services, we are capable of supervising any construction project. Our inspectors are trained to work with the contractors in problem solving if the work is within the scope of the contract. However, if the inquiry may result in a change, they will engage owner, design team or other inspection companies, as required

We offer the following inspection disciplines:

- Structural engineering
- Civil engineering
- Mechanical engineering
- Architectural
- Commissioning
- Corrosion engineering
- Through our affiliates we provide:
 - Automation/SCADA
 - Electrical
 - Soils engineering
 - Materials testing

INSPECTION SERVICES AND SHOP DRAWING REVIEW BY EXPERIENCED PROFESSIONAL STAFF

ASSESSMENT, REPAIR AND COMMISSIONING OF PIPELINES

As part of the construction services, we carried out inspection during installation, testing after installation and commissioning of the final product until it is fully in service. We have designed and supervised construction of concrete, iron, steel and PVC pipes from small to very large diameters. The assessment methods included pressure testing, CCTV inspection, GPR, sonar and man-entry. We commissioned pipelines that were installed by as many as 4 construction contracts. Flushing and disinfection were part of our services for potable water applications.



Based on the results of assessment, we have designed and supervised construction both of new pipelines and repair of existing pipelines using the following repair methods:

- Patching and wall injection,
- Internal lining,
- External grouting,
- External shotcreting,
- Concrete encasement.
- Bridging.

'GREEN CONSTRUCTION'

Most of public tenders in Canada both DBB and DB have different levels of environmental requirements. Our 'green' construction specialist will assist win environmental points during bid stage and implementation during construction. Our typical engagements are as listed below:

- Support during bid preparation
- Selection of 'green' materials and life-cycle cost analysis
- LEED certification

VALUE ENGINEERING

On our project we were able to save considerable construction cost by reviewing tender documents and providing value engineering assessment. The assessments were not limited to the evaluation of foundation methods, building layout, structural systems, selection of materials, construction sequencing, cross-disciplinary review, etc.

SCHEDULING/PROJECT TRACKING

We use the state-of-the-art project management tools to plan the projects, identify critical components of the work and risks associated with the execution. After we receive full commitment by all stakeholders involved on the project, we monitor progress and provide feedback necessary to maintain project targets.

STARTUP AND COMMISSIONING

On complex water/wastewater projects our commissioning managers would plan commissioning stage in advance to ensure uninterrupted startup. We would also coordinate commissioning activities with SCADA design team, operators. During commissioning we keep operators involved by maintaining two-way communication. Before a new facility is ready to be turned over to users, we provide hands-on training by taking the operators through various modes of operation.

CLAIMS ANALYSIS, DISPUTE RESOLUTION AND LITIGATION SUPPORT

In an effort to avoid formal litigations that are long and costly, we use alternative dispute resolution methods to resolve claims before they go to court. We have successfully implemented claims analysis on all our projects that assisted all parties better understand the primary causes of the dispute. We then used this information to streamline negotiation process until final resolution.





PROF&E Recent Project

LORNE PARK WTP PS AND WTP CAPACITY UPGRADE

In 2008 construction of new low lift pumping station and an upgrade of existing water treatment plant from 347 MLD to 500 MLD started. The project was implemented through two construction contract that were directly interrelated with three additional construction contract that provided intake pipe from the lake and a new Feedermain capable of delivering additional capacity into Peel's water system.

Our construction team was involved in managing consultants' field office and contract administration of C1 project.

Due to complexity of the design team and number of various stakeholders involved on the project, we recognized that the communication was the key. In order to keep all stakeholders involved in decision making process and in order to reduce response time, we developed team organizational chart with each company represented by a minimal amount of people each of them in charge of certain aspect of work. We organized bi-weekly project meetings and we invited key player for additional meeting to deal with specific aspect of the project. The project was completed on time and within the project allowance.

Client: Region of Peel

Engineering construction budget: \$8,000,000

JACK DARLING TWIN SANITARY FORCEMAIN AND PUMPING STATIONS

The project included construction of two new sewage pumping stations, construction of twin sanitary forcemain and sewers connecting to existing Peel's sewer network. By working closely with the contractor and our geotechnical sub-consultants, our project team successfully dealt with the challenges associated with the unforeseen soil conditions. Our field inspectors kept daily records of additional material requested by the geotechnical engineers, communicated changes to the client and our contract administration team and the approach resulted in minimal cost



to the client. During startup, our team successfully communicated with the design team to ensure safe implementation of temporary by-pass system of the existing sewer line.

Client: Region of Peel

Engineering construction budget: \$650,000

SHOAL LAKE AQUEDUCT

After some major areas of concern were identified in the condition assessment report, our project team implemented a 10 year rehabilitation program of the 100 mile long Shoal Lake Aqueduct that at the time was a sole source of potable water for the City of Winnipeg. Due to a complexity of the assignment, our team has divided the program into projects that was dealing with individual types of repairs and certain stretches of the pipeline. Our team was involved with uplift (buoyancy) protection, external repairs of the aqueduct, manhole repairs and culvert/siphon repairs. We worked closely with the City of Winnipeg during assessment, design and construction of various projects at SLA. In order to minimize costs and to ensure quality of work, we have pre-qualified general contractors. To maximize communication and keep delays to the minimum, design team was directly engaged during construction

The program was completed on time and on budget.

Client: City of Winnipeg

Engineering budget: \$10,000,000



PROF&E PROJECTS BY TYPE

- WATER TREATMENT PLANTS
- WASTEWATER TREATMENT PLANTS
- PUMPING STATIONS
- ADMINISTRATION BUILDINGS
- LINEAR INFRASTRUCTURE
- COMMERCIAL BUILDINGS
- INDUSTRIAL FACILITIES
- SLUDGE STORAGE TANKS
- DIGESTERS
- CHEMICAL STORAGE
- ELEVATED TANKS AND RESERVOIRS
- PUBLIC PARKS
- BRIDGES

Experts in contracting

