



August 27, 2020

City of Kawartha Lakes  
Public Works Department  
Engineering & Corporate Assets  
12 Peel St., Lindsay, ON  
K9V 3L8

**Attention: Mr. Nafiur Rahman, P.Eng., PMP**

**RE: LINDSAY WATER POLLUTION CONTROL PLANT (WPCP) UPGRADE AND EXPANSION – PHASE 1 – CONSTRUCTION ADMINISTRATION SERVICES**

Dear Mr. Rahman:

CIMA Canada Inc. (CIMA+) is pleased to submit our proposal to the City of Kawartha Lakes (City) for the provision of construction administration services for the Phase 1 Upgrade and Expansion of the Lindsay Water Pollution Control Plant (WPCP).

The project will address numerous operational deficiencies and increase the rated capacity of the Lindsay WPCP to 24,500 m<sup>3</sup>/d and primarily involve the following major work components:

- Upgrades to the headworks process and building including replacement of the existing mechanical screen, installation of inlet channel covers and reconfiguration of the overflow control system to the equalization lagoons.
- Upgrades to the existing secondary clarification process including replacement of waste-activated-sludge (WAS) and return-activated-sludge (RAS) pumping systems including replacement of process piping in the basement of the headworks building complete with provision of magnetic flowmeters and valving for enhanced control of sludge removal from the existing clarifiers.
- Construction of two (2) cast-in-place concrete two (2) pass extended aeration tanks (each ±31 m x ±71 m x ±6.5 m side water depth) to replace the existing aerated lagoon, with inlet distribution box, inlet channel, inlet gates, outlet weirs, outlet gates, outlet channel, submersible mixers, air supply piping (from blower building) and in-tank air diffusion systems.
- Construction of a new aeration process blower building complete with three (3) 300 HP blowers with provisions for a fourth blower in the future including building mechanical systems.



- Provision of flow monitoring downstream of the headworks including a 750 mm magnetic flowmeter and isolation valves, housed in an underground concrete structure.
- Miscellaneous site works including construction of intermediate berms within existing Lagoon #3, removal of waste sludge from the southern portion of Lagoon #3, underground piping connections between treatment processes (headworks / aeration tanks / secondary clarifiers / tertiary treatment), backfilling, site grading and restoration.

Our proposal is based on providing full-time inspection over an anticipated 24-month construction period (22 months to substantial performance plus 2 months to total completion).

It is noted that the provisional Construction Administration requirements outlined in the City's April 2018 Request for Proposal (RFP) and CIMA's May 2018 proposal were based on the somewhat conceptual upgrading strategy and capital cost estimate of approximately \$10 Million as identified in the City's Municipal Class Environmental Assessment (Class EA) – Environmental Study Report (ESR) for expansion of the Lindsay WPCP, which we understand was initiated in 2006 and subsequently filed in 2015.

At this time, the capital cost estimate to implement the project is approximately \$19 Million to satisfy the current Ministry of Environment, Conservation and Parks (MECP), Ontario Clean Water Agency (OCWA) and City design and regulatory requirements.

As you are aware, in addition to a later construction start and extended construction duration, now extending into 2022, implementation of the now fully developed (tender ready) design involves sludge removal from the existing lagoon(s) and construction of concrete aeration tankage inside the existing lagoon, including critical phasing/staging/sequencing requirements, which is much more complex in nature than the conceptual strategy outlined in the Class EA ESR. As such the project is considered to require significantly more effort from a construction coordination, inspection and administration perspective.

## **1.1 SCOPE OF SERVICES DURING CONSTRUCTION**

Based on the current (tender ready) design, CIMA+'s proposed scope of services during construction of the Lindsay WPCP Phase 1 Upgrade and Expansion includes the following:

- Overall project management and coordination including consultation with MECP as well as the City's project manager, building department, operating authority and system integrator.
- Provide agendas, attend, chair and prepare minutes for meetings including pre-construction meeting, progress meetings (maximum 24) and pre-commissioning meeting.
- Review contractor payment requests and prepare payments certificates for City PM authorization and payment including monthly progress payments, holdback release payment and maintenance security release payment.



- Review contractor requests for and prepare substantial performance and total performance certificates.
- Log and review contractor shop drawing submissions including technical reviews by relevant design discipline leads (civil, process, structural, architectural, mechanical and electrical).
- Full-time site inspection services based on a 24-month construction period (22 months to substantial performance plus 2 months to total completion).
- Review and respond to contractor RFI's and claim's and issue site instructions, request for quotations and change orders as required.
- Review of contractor's schedule, procedures, sequence of works, phasing/staging plan, and testing/commissioning plan.
- Development and tracking of uncompleted work and deficiency list.
- Site reviews by discipline design Engineers (Engineers of Record) including civil, process, structural, architectural, mechanical and electrical.
- Review of contractor supplied equipment manuals, prepare operations training plan and update WPCP operations manual(s).
- Prepare as-built drawings and record information package.
- Assistance during warranty period including site visits and final warranty inspection and review meeting.
- Coordination of materials testing (sub-grade inspection, analysis of fill and granular backfill materials, compaction testing, testing of potentially contaminated soils, berm inspection/monitoring and concrete testing) and review of results with the relevant design disciplines and the City PM.
- Additional Permit to Take Water monitoring if required by the MECP included as a provisional allowance

The project management team during the construction phase will consist of Mina Yousif, M.Eng., P.Eng. and Brian Draper acting as the overall project manager and assistant project manager.

Given the complexity and duration of the Lindsay WPCP upgrade and expansion project, CIMA proposes to utilize a local senior inspector with over 20 years of experience having experience with the new Construction Act and experience managing numerous complex construction projects of this nature having construction costs in excess of \$20 million. Our senior inspection will assist the project management team with contract administration duties while providing primary site inspection with part-time assistance from junior inspectors on an as needed basis when multiple contractor crews are working on-site concurrently.

## 1.2 FEES FOR SERVICES DURING CONSTRUCTION

CIMA's proposed fees for the provisions of services during construction of the Lindsay WPCP Phase 1 Upgrade and Expansion is **\$997,800** (excluding HST).



Further breakdown of the fees, which includes a \$90,000 allowance for materials testing and specialty inspections and \$20,000 allowance for PTTW monitoring is provided in the attached time-task matrix.

It is noted that CIMA+'s proposed fees for the provision of services during construction (including the recommended \$110,000 allowances) represent  $\pm 5\%$  of the current construction cost estimate of \$19 Million, which is within the typical industry range for specialized projects of this nature.

In comparison to other recent projects of this nature undertaken by the City, it is our understanding that Construction Administration and Inspection Services for the Rivera Park Sewage Pumping Station (completed in 2018) were  $>6\%$  of the construction (tender) value.

CIMA+ is fully committed to the success of this important City infrastructure project and continuing to support the project as needed. Should you have any questions or concerns, please do not hesitate to contact the undersigned.

Sincerely,

**CIMA Canada Inc.**

A handwritten signature in blue ink, appearing to read 'T. Briggs', with a long horizontal flourish extending to the right.

Troy Briggs, M.Eng., P.Eng.  
Partner, Director of Wastewater  
[Troy.Briggs@cima.ca](mailto:Troy.Briggs@cima.ca)

A handwritten signature in blue ink, appearing to read 'Mina Yousif', with a large, stylized initial 'M'.

Mina Yousif, P.Eng.  
Project Manager  
[Mina.Yousif@cima.ca](mailto:Mina.Yousif@cima.ca)

Encl.

cc: Corby Purdy, City of Kawartha Lakes

Name	Role on Project	Task Total	Disbursements	Total Fees including Subconsultants	Total CIMA Time Commitment	M. Yousef	B. Draper	K-Y. Ho	Al. Robb	R. Proglamer	D. Finley	A. Gypor	M. Gayed	A. Rabaha	K. Green	Senior Site Inspector and Contract Administrator	Junior Construction Inspector	Engineering Support	CAD Support	Admin. Support	
		\$	\$	\$	hours	\$180.00	\$115.00	\$155.00	\$155.00	\$130.00	\$130.00	\$135.00	\$100.00	\$135.00	\$155.00	\$120.00	\$95.00	\$95.00	\$95.00	\$60.00	
		\$	\$	\$	hours	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	CIMA	
	<b>G. Construction Phase</b>	<b>\$ 887,800</b>	<b>\$ 34,143</b>	<b>\$ 853,550</b>	<b>7,128</b>																
	Pre-Construction Meeting			\$ 2,370	18																
	Project Meetings (Assume 24)			\$ 3,240	27																
	Monthly Progress Payment Certificates (Assume 24)			\$ 9,450	81			6													
	Release of Holdback Payment Certificate			\$ 390	3																
	Release of Maintenance Security Payment Certificate			\$ 390	3																
	Substantial Completion Certificate/Documentation			\$ 390	3																
	Respond to RFIs and Issue Change Orders			\$ 44,950	338			80													
	Shop Drawings - Logging & Processing			\$ 7,720	56				40												
	Shop Drawings - General & Civil Reviews			\$ 4,800	36																
	Shop Drawings - Mechanical Reviews			\$ 5,920	44																
	Shop Drawings - Architectural Review			\$ 10,800	81						16										
	Shop Drawings - Electrical & Control Reviews			\$ 10,800	81							80									
	Shop Drawings - Building Mechanical Reviews			\$ 4,320	32										32						
	Full-Time Inspection Services (96 weeks @ 45 hrs/week) to Substantial Performance + 8 weeks @ 40 hrs / week to Completion			\$ 577,100	4830											4730	100				
	Process Site Reviews (Assume 2) - Covered by PM			\$ 2,760	24																
	Structural Site Reviews (Assume 12)			\$ 7,800	60					60											
	Architectural Site Review (Assume 2)			\$ 1,300	10						10										
	Electrical & Controls Site Reviews (Assume 4)			\$ 2,350	20							10									
	Mechanical Site Reviews (Assume 2)			\$ 1,080	8																
	Coordination of Materials Testing			\$ 3,600	28																
	Review Contractors Testing & Commissioning Plans			\$ 4,500	40																
	Attend Factory Acceptance Testing - Control Panel			\$ 800	8																
	Testing/Commissioning Training (Assume 5 Days)			\$ 6,010	46																
	Operations Training Manual			\$ 4,770	40																
	Review Contractors Equipment Manuals			\$ 2,500	25																
	Update Existing Facility Operations Manual			\$ 9,080	68																
	Deficiency List (Develop & Track)			\$ 690	6																
	As-Built Drawings & Record Information Package			\$ 9,220	69																
	Site Visits During Warranty Period (Assume 4)			\$ 2,880	24																
	Final Warranty Inspection			\$ 400	3																
	Overall Project Management & Coordination			\$ 40,000	450																
	Services During Construction Phase (CIMA) - Subtotal	\$ 887,800	\$ 34,143	\$ 853,550	7,128	524	450	220	40	400	36	110	66	60	0	4765	100	155	92		230
	<b>PTTW Monitoring (Provisional)</b>	\$ 20,000	\$ 2,950	\$ 17,050																	308
	<b>Materials Testing Allowances</b>	\$ 90,000																			
	<b>Total - Services During Construction Phase (excluding HST)</b>	\$ 997,800																			