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May 27, 2024
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Town of Amherstburg
512 Sandwich Street South
Amherstburg, Ontario, N9V 3R2

Attention: Mr. Todd Hewitt
Manager of Engineering & Operations

Dear Mr. Hewitt,

Reference: Proposal for Engineering Services
Amherstburg Water Treatment Plant Expansion - Class Environmental Assessment

Per our recent discussions, we have prepared and are pleased to submit our proposal for consulting engineering services to carry out a Class Environmental Assessment (Class EA) for the Amherstburg Water Treatment Plant (AWTP) expansion.

This proposal outlines our scope of services, professional fees, and terms & conditions to carry out the assignment.

1.0 UNDERSTANDING OF ASSIGNMENT

The Amherstburg Water Treatment Plant, which was constructed in 1971, supplies potable water to the Town of Amherstburg as well as portion of surrounding communities of Lasalle and Essex. The plant has a rated capacity of 18,184 m³/d. The AWTP receives its source water from the Detroit River, which links Lake St. Clair with Lake Erie.

The AWTP consists of the follow major treatment process units: pre-chlorination for zebra mussel control, clarification with chemical addition of aluminum sulfate and polyelectrolytes, dual media (sand-anthracite) filtration, and chlorination. Other post treatment chemical additions include fluoride and powered activated carbon. Process residuals including clarification/sedimentation sludge, filter backwash water, and filter-to-waste, discharge to the Detroit River.

Town of Amherstburg has recently experienced unprecedented residential growth, far exceeding that outlined in the official plan and development study projections. The AWTP has operated in the range of 70% to 80% of its rated capacity in recent years. Based on the 2022 AWTP Capacity Study, projections indicate that the plant will reach 90% of its rated capacity by 2029. In accordance with Ministry of the Environment, Conservation and Parks (MECP) Guidelines, 90% is typically a trigger point for planning and design of a capacity expansion. Due to ongoing residential, commercial, and industrial growth within the Town, each development plan will need to consider its impact on the total water demand, particularly if it accelerates the demand above 90% of the plant capacity before 2029.

The purpose of this Class EA will be to establish the preferred means of the AWTP capacity expansion to meet the water demands for the ongoing and future developments while complying with regulatory requirements and MECP Guidelines. The following sections outlines our scope of services in greater detail.

2.0 SCOPE OF SERVICES

Our scope of services includes undertaking tasks related to the requirements defined and outlined in the Municipal Engineers Association document entitled "Municipal Class Environmental Assessment (October 2000, as amended in 2007, 2011, 2015 & 2023)" for a Schedule C activity as it relates to this project.

Tasks generally consist of problem identification via the collection, review, and analyses of pertinent data; evaluating alternative solutions to the problem; establishing the recommended alternative solution; coordinating and obtaining public participation; confirming and selecting the preferred alternative solution;



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and preparing an environmental study report (ESR) to document the process. Following is a summary of activities and tasks making up our work plan:

1. Phase 1 – Review of Background Information & Problem Identification

Pending award of contract, Stantec is to hold a “kick-off” meeting with the Town to review the study procedure and expectations. This meeting is to establish any restrictions and prioritize wants and needs. This will avoid the development of unacceptable or unreasonable design options. A notice of Study Commencement is to be advertised.

Concurrently, Stantec is to perform a background investigation, including consultation with regulatory authorities (eg. MECP, ERCA, DFO, Transport Canada, etc.), adjacent municipalities, Indigenous Community, public, and utility companies. Requirements under the Canadian Environmental Assessment Act is also to be confirmed at this time and, if required, the Federal EA Coordinator is to be identified. Included in the background investigation is an evaluation of the water demand issues, including applicable MECP requirements associated with the water quality.

2. Phase 2 – Evaluation of Alternative Solutions

In Phase 2, potential solutions to address water demands for ongoing and future developments are to be identified and evaluated. Alternative solutions are to be identified based on a review of technical literature, background documents, previous experience, and consultation with the Town, relevant review agencies, and Indigenous Communities. The work is to follow the Class EA procedure. The preferred alternative solution(s) to address the problem or opportunity is to be selected by taking into account natural environmental, social, technical, and economic criteria with consideration for public, Indigenous Community and review agency input.

A Public Information Centre (PIC) is to be held during this phase. Stantec is to prepare information boards, handouts and other relevant materials outlining the problem, EA process, background studies, evaluation of alternative solutions, potential impacts and mitigation measures for each option, opinion of probable cost and recommended alternative solution(s).

3. Phase 3 – Evaluation of Alternative Design Concepts

The recommended alternative solution(s) developed in Phase 2 are to be further refined with the evaluation of alternative design concepts and selection of a recommended design concept. As part of the development of alternative design concepts, the following information will be required to successfully develop and evaluate design options:

- Topographical surveys at sites and routes where works could be installed as identified during the evaluation of alternative design concepts.
- Geotechnical investigations at sites where major works (e.g. clarifiers, filters, etc.) could be installed as identified during the evaluation of alternative design concepts.
- All record information available pertinent to potential sites, including record drawings of any works and improvements at and adjacent to the sites, existing utility record information, etc.
- Assessment of natural heritage features which are to include flora, fauna, and their habitat to properly address archaeological, species at risk, social, cultural, economic and other issues.
- Review of public health and safety considerations.
- Other information that may be identified during the course of the study.

All of the above information will be required to enable Stantec to properly evaluate alternative design options with respect to their anticipated environmental impacts, property requirements, utility relocations, phasing,



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construction costs, etc.. The extent of the required data collection will be dependent on the number and extent of the alternative design concepts developed.

Planning aspects such as integration and compatibility with both existing and future water supply systems are to be considered along with identifying easement and/or property acquisitions that may be required. Alternative design concepts are also to be assessed and coordinated to minimize impacts to existing or proposed works at and around potential routes and sites.

The recommended alternative design concept is to be selected based on a review and assessment of potential improvements to would also address aging infrastructure issues. The development of alternative design concepts is to include consideration of Town's Official Plan. Regular meetings are to be held with the Town to evaluate alternative design concepts, opinions of probable cost, study progress and project schedule. When required, meetings are to be scheduled with other review agencies to provide feedback on the alternative design concepts.

A second PIC is to be held during this phase in much the same manner as in Phase 2, however, the focus will now be on the recommended alternative design concepts and the options for its implementation. The development of alternative design concepts is to conclude with the preparation of an alternative design evaluation matrix, addressing the factors outlined above, and recommendation of an alternative solution in consultation with the Town, Indigenous Community, the Public and relevant review agencies.

4. Phase 4 – Environmental Study Report

An ESR is to be prepared to document the evaluation and Class EA process including public participation. The preferred alternative solutions are to be finalized while addressing the comments received as appropriate and feasible, to a sufficient conceptual level of detail to allow for future preliminary and detailed design to proceed.

3.0 PROJECT SCHEDULE

The table below, summarizes the anticipated timelines for completion of the milestones identified in this work plan based on a notification of project award date and execution of professional service agreement in late June 2024. Based on our experience on similar work, the following project schedule is proposed:

Milestone	Duration	Completion Date
Project Initiation – Notice of Study Commencement	4 weeks	July 2024
Review of Background Information & Problem Identification	4 weeks	August 2024
Evaluation of Alternative Solutions	24 weeks	February 2025
Council Presentation & Resolution	-	March 2025
Public Information Center No.1	4 weeks	March 2025
Evaluation of Alternative Design Concepts	12 weeks	June 2025
Council Presentation & Resolution	-	July 2025
Public Information Center No.2	4 weeks	July 2025
Environmental Study Report	4 weeks	August 2025
Council Presentation & Resolution	-	August 2025
Notice of Completion	8 weeks	October 2025



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Upon project award and on through project meetings, the schedule is to be adjusted based on progress of the work and feedback from the Town. Stantec is to endeavor to complete the project ahead of schedule and keep the Town informed of work progress while providing updates on scheduling changes during regular project meetings.

4.0 ENGINEERING BUDGET

Our engineering budget fee is made up as follows:

<i>Phase 1 – Review Background Information & Problem Identification</i>	<i>\$30,000.00</i>
<i>Phase 2 – Evaluation of Alternative Solutions</i>	<i>\$85,000.00</i>
<i>Phase 3 – Evaluation of Alternative Design Concepts</i>	<i>\$115,000.00</i>
<i>Phase 4 – Environmental Study Report</i>	<i>\$45,000.00</i>
<i>Sub Total - Professional Fees</i>	<i>\$275,000.00</i>
<i>FRD @ 8% Flat Rate of Professional Fees</i>	<i>\$22,000.00</i>
<i>Total Engineering Budget Fee</i>	<i>\$297,000.00</i>

Professional fees shown are in Canadian dollars for engineering work related to the scope of work outlined herein. Expenses, including mileage, incidental printing costs, communications and general office expenses are covered under the Flat Rate Disbursement. The above total budget engineering fee is to be viewed as an upset budget limit for the engineering services outlined in this proposal. Work is to be invoiced on an hourly basis for the actual time & effort necessary to carry out the assignment up to the upset budget amount.

Please note that our engineering fee has been prepared based on the following assumptions:

- that the water distribution system hydraulic model, developed for the 2020 Amherstburg Master Plan, is to be modified for analyzing the water demands for ongoing and future development.
- that the Town has and will make available all data for:
 - Plant operation and maintenance reports.
 - Raw water quality data.
 - Previous study report including the 2022 AWTP capacity study
 - Water demands for ongoing and future developments.
- that all Detroit River water flow and water quality data will be obtained from government records.
- that all record information pertinent to potential sites, including record drawings of works and improvements at and/or adjacent to sites, existing utility record information, etc. are and can be made available to Stantec by the Town
- that our fee includes costs and fees for engaging archeological and biological consultants to carry out Stage 1 Archaeological Assessment and Biological Assessment. These assessments will identify natural heritage features including flora, fauna, and their habitat so as to properly address archaeological, species at risk, social, cultural, economic, and other issues.
- that all fees and costs related to permits and approvals including applications have not been included in this proposal and will be the responsibility of the Town.
- that all costs and fees for engaging survey firms to carry out topographical surveys at sites and routes where proposed works could be installed have not been included in this proposal and will be the responsibility of the Town.



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- that all costs and fees for engaging geotechnical consultants to carry out geotechnical investigations at sites where major works (eg. clarifiers, filters, etc.) could be installed as part of evaluating alternative design concepts have not been included in this proposal and will be the responsibility of the Town.
- that all costs and expenses associated with newspaper advertisements, notices, and public information centers have not been included in this proposal and will be the responsibility of the Town.
- that the effort to respond to public comments and concerns during the 30-day review period are based on the assumption that no major public concerns or requests for Part II Orders will result from this Class EA.
- should any significant and/or unforeseen project specific expenses arise during the project, which is not covered under this proposal, then the Town shall reimburse Stantec for the total cost of the expense plus a 10% markup.
- overall, should it become apparent that the scope of work expands beyond that identified in this proposal and additional engineering services are required to ensure the successful completion of this assignment; then Stantec shall advise and request authorization from the Town prior to proceeding with any additional work and the associated additional fees negotiated.

If the foregoing assumptions are incorrect, please advise us and we will amend our work plan and engineering budget to suit.

We trust that you will find our proposal fully meets your needs. We are prepared to commence work immediately upon the execution of a mutually acceptable professional services agreement (PSA).

Should you have any questions or require clarifications or additional information with respect to this proposal, please contact the undersigned at your convenience.

Sincerely yours,

Stantec Consulting Ltd.

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