



## Council Report

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**Report Number:** PUR2022-024  
**Meeting Date:** June 21, 2022  
**Title:** 2022-13-CP Water and Wastewater Servicing and Capacity Master Plan Update  
**Author and Title:** Linda Lee, Buyer

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### Recommendation(s):

**That** Report PUR2022-024 2022-13-CP Water and Wastewater Servicing and Capacity Master Plan Update, be received;

**That** T.Y. Lin International Inc. being the highest scoring proponent, be selected for the award of Request for Proposal 2022-13-CP Water and Wastewater Servicing and Capacity Master Plan Update for the amount of \$713,338.00 not including HST;

**That** the additional expenditure of \$209,777.00, be financed equally by the Water Treatment and Wastewater Treatment accounts of the Development Charges Reserve Fund;

**That** subject to receipt of the required documents, the Mayor and Clerk be authorized to execute the contract to award this Proposal; and

**That** the Procurement Division be authorized to issue a purchase order.

**Department Head:** \_\_\_\_\_

**Financial/Legal/HR/Other:** \_\_\_\_\_

**Chief Administrative Officer:** \_\_\_\_\_

**Background:**

The City recognizes the importance of planning for growth and supporting the sustainability of its water and wastewater infrastructures in the long term. The City has experienced a significant increase in growth over the recent years which is driving demands for improvements and upgrades to its water and wastewater infrastructures.

Since the previous UEM (2009-2011) master servicing and WSP (2014-2015) capacity plans were completed, provincial growth plan legislation has changed a couple of times, and the City continues to review and respond to numerous active and potential development interests and applications. The current water and wastewater servicing and capacity data and plans are outdated, limiting even the operational planning and decision-making.

At the Council Meeting of June 15, 2021, Council adopted the following resolution:

**CR2021-291**

**That** Report CAO2021-009, **Water-Wastewater Servicing and Capacity Master Plan**, be received;

**That** the Water-Wastewater Servicing and Capacity Master Plan be added as a project to the Studies and Special Projects program of the 2021 Water-Wastewater Capital Budget with an authorized expenditure of \$700,000 financed equally by the Water Treatment and Wastewater Treatment accounts of the Development Charges Reserve Fund;

**That** staff be authorized to initiate a request for proposals (RFP) for the purpose of retaining a consultant to prepare the Water-Wastewater Servicing and Capacity Master Plan.

**Carried**

A Request for Proposal (RFP) 2022-13-CP Water and Wastewater Servicing and Capacity Master Plan Update was called to retain professional consulting engineering services to undertake city-wide water and wastewater servicing and capacity assessment and update to the servicing plans. An update to the Water and Wastewater Master Plan will supersede the previous master planning works and provide a sustainable plan to support existing communities and growth consistent with the Growth Management Strategy (GMS) and other Official Plan and Policies.

The Study will provide sufficient detail to allow the City to make informed and due diligent decisions regarding short, medium and long term decisions on the capacity of infrastructure works and corresponding development phasing. The study will identify gaps in existing data, make recommendations to close those gaps and ultimately deliver updated models of existing infrastructure and conceptual plans for infrastructure replacement and/or new expansion to service the anticipated growth projections.

The City currently uses water and sanitary system hydraulic models for Lindsay, Bobcaygeon and Fenelon Falls developed with Bentley WaterGEMS and SewerGEMS software which were last updated in 2015. Since then, many new subdivisions have been developed, many changes to the population density and water consumption patterns have occurred, many old watermains and sanitary sewers have been rehabilitated and new infrastructures have been added to the water and wastewater systems. However, the existing hydraulic models have not been updated fully since the original implementation to include new infrastructure or system operation changes. The City has also considered to develop water and sanitary system hydraulic models for all other communities where no hydraulic models were developed in the past as provisional items in the RFP.

For the models to be accurate and to maximize its usability, a full update and calibration of the existing models are required. Therefore, additional field testing is required as part of this process to supplement information currently available. This will result in better information to represent existing conditions as well as the accuracy of the predictions for future conditions, evaluate system reliability, find operational efficiencies and understand system capacity constraints and capacity opportunities as well as improve the overall accuracy of the modelling results through integration of field data in model calibration.

Based on review of existing modeling results, planning and population growth data from the GMS, and site visit to assess the accessibility/suitability of the testing/monitoring sites identified, T.Y. Lin International Inc. will develop a Field Test Work Plan. This Work Plan will identify requirements and locations of various tests such as, Water Hydrant flow and C-factor tests in the water distribution system, temporary flow and pressure monitoring and drawdown test at sanitary pumping stations, and long-term flow monitoring at sanitary collection system.

Considering the above mentioned facts, it was hard to accurately estimate the type and extent of field testing required for the assessment of the servicing and capacity study update. Instead, staff considered and received unit prices from the Proponent for various field tests in the RFP. The current RFP allowed unit price for each type of field

test, as provisional. If additional field tests are required, a change order will be completed at the time the Field Test Work Plan is submitted. This cost would be entirely financed by the Water Treatment and Wastewater accounts of the Development Charges Reserve Fund.

Request for Proposal 2022-13-CP was advertised in accordance with the Purchasing Policy. The proposal was opened on April 7, 2022 by Launa Macey, Supervisor of Procurement with the following results:

| <b>Company Name</b>                |
|------------------------------------|
| CIMA Canada Inc                    |
| T. Y. Lin International Canada Inc |

Proposals were reviewed and evaluated by the Evaluation Committee by consensus to the criteria described in the RFP. The scoring was weighted at 70% for qualifications, experience, and proposed methodology, 15% for oral presentation, and 15% for financial consideration.

The submission received from T.Y. Lin International Inc., was found to be the highest scoring Proponent. References were checked and found to be favourable.

**Rationale:**

Staff recommends that the City award to T.Y. Lin International Canada Inc. for the total quoted price of \$713,338.00 not including HST.

T.Y. Lin International Inc. has partnered with Civica Infrastructure Inc., a specialized municipal water resources consulting company located in the City of Vaughan, who is currently engaged in an Inflow/Infiltration (I&I) investigation of the Lindsay wastewater collection system. This provides an added value to the City with Civica having knowledge of the current I&I condition and in assessing the design criteria and model calibration of the wastewater collection system in that community. For further flow monitoring in other communities this will allow the City to utilize their expertise, in-house equipment and crews with more competitive pricing, availability of service and better QA/QC controls.

**Other Alternatives Considered:**

No other alternative is being considered as a competitive process was issued and the highest scoring proponent is being recommended.

**Alignment to Strategic Priorities**

Servicing Master Planning supports the City’s priority of Good Government by planning for and providing critical assets and infrastructure in an affordable and sustainable manner. Water-wastewater infrastructure is critical in supporting a vibrant and growing economy.

**Financial/Operation Impacts:**

Commencement of the Water Wastewater Servicing and Capacity Master Plan Update was originally scheduled for 2019, but was deferred to 2022 in the City’s plans because of delays with commencement of the City’s Growth Management Study. In order to overlap preparation of the servicing capacity study with that of the GMS to ensure timely implementation of the GMS and to accelerate commencement, this Master Plan Update was added in mid-2021 through a request to Council as a project to the Studies and Special Projects program of the 2021 Water-Wastewater Capital Budget. An allocation of \$700,000.00 was authorized and financed equally by the Water Treatment and Wastewater Treatment accounts of the Development Charges Reserve Fund for this project.

The scope of this project is extensive and it would take 20 to 24 months to complete the work subject to the completion of GMS (availability of planning and population growth data) and extent of field investigation required. Considering the level of efforts by staff time, Staff estimates to consider additional funds of \$75,000.00.

Funds for 2022-13-CP Water and Wastewater Servicing and Capacity Master Plan Update was approved through the 2022 Capital Budget.

| <b>Project Number</b> | <b>Project Budget</b> | <b>Other Committed Funds<br/>*see below</b> | <b>Project Balance</b> | <b>Purchase Amount (excl. HST)</b> | <b>15% Contingency</b> | <b>HST Payable</b> | <b>Total Amount</b> | <b>Project Balance</b> |
|-----------------------|-----------------------|---|------------------------|------------------------------------|------------------------|--------------------|---------------------|------------------------|
| 998210408             | \$700,000             | \$75,000                                    | \$625,000              | \$713,338                          | \$107,000              | \$14,439           | \$834,777           | \$(209,777)            |

Other committed funds include actual and estimated internal staff labour charges.

Water and wastewater capital projects do not close with a surplus or deficit. Only the amount required is funded from Water Treatment and Wastewater accounts of the Development Charges, based on costs incurred, therefore the above project will close with a zero balance.

### **Servicing Implications:**

Master plans are long-range plans which integrate infrastructure requirements for existing and future land use with environmental assessment planning principles. This Water-Wastewater Servicing and Capacity Master Plan Update will identify all reasonable and feasible servicing solutions and infrastructure improvement projects with associated costs required to address each growth strategy as well as those projects needed for sustainability and security of current and future infrastructure capacity and operations. This Master Plan Update will also be an input into the budget and planning process in development of water-wastewater capital forecasts and work plans for City staff to proceed with those undertakings.

### **Consultations:**

Manager, Infrastructure Design and Construction  
Supervisor, Environment Capital Project Management  
Junior Accountant

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**Department Head:** Juan Rojas, Director of Engineering and Corporate Assets

**Department File:** 2022-13-CP