

Purchase Order Change Requests to Existing Contracts

1. Project Name: 2021 Water and Wastewater Master Servicing Plan Update

Request: Ilija Stetic, Project Manager

Consultant: GM BluePlan Engineering

Purchase Order Number: 85330

Increase original contract amount of \$891,100 (excl. HST) by \$265,480 for a new total of \$1,156,580.

Rationale for Increase

The Region has been approached by:

1. **Town of Lincoln** about the local Water System Modeling Assessment identified in their Operational Budget. This work includes hydraulic modeling, which is also a major portion of the Regional Master Servicing Plan Update this year. This collaborative effort by two levels of government to work together on a shared infrastructure project represents an opportunity to gain operational efficiencies coupled with a greater likelihood of reducing the overall tax burden on Regional taxpayers. The technical reasons are as follows:
 - An update to the Region's trunk water model is included in the baseline scope. Inclusion of the local distribution system into development of an all-pipe model as part of the master plan assignment provides efficiency relative to independent/future updates.
 - Development of a single all-pipe model for the Regional Master Servicing Plan Update will ensure consistent accuracy and more precise reporting of system capacity and performance of both distribution systems.
 - Including the local system into the Regional model will reduce the likelihood of future inconsistencies and/or conflicting recommendations if different companies were working on the modeling assignment in the future.
 - GMBP has the capacity to complete these works without negatively impacting the Master Servicing Plan Schedule.
2. **City of St. Catharines** about their Stormwater Drainage Master Plan and Sanitary Sewer Master Plan as identified in their City Council Report EFES-066-2021. Part of their work includes hydraulic modeling, which is also a part of the Regional Master Servicing Plan Update this year. This collaborative effort by two levels of government to work together on a shared infrastructure project represents an opportunity to gain operational efficiencies coupled with a greater

likelihood of reducing the overall tax burden on Regional taxpayers. The technical reasons are as follows:

- An update to the Region's trunk wastewater model is included in the baseline scope. Completion of the all-pipe model as part of the master plan assignment provides efficiency relative to independent/future updates.
- Development of a single all-pipe model for the Master Servicing Plan update will ensure consistent accuracy and reporting of system capacity and performance in both the Region and the City's Master Plan, reducing the likelihood of future inconsistencies and/or conflict of recommendations.
- GMBP has the capacity to complete these works without negatively impacting the Master Servicing Plan Schedule.

Alternatives Reviewed

(i) Do nothing

- Both Regional models would be less accurate in assessing Regional trunks and local capacities for the water system in Lincoln and the wastewater system in St. Catharines. Even though this arose after the Regional project scope was developed and the consultant hired for the job, this alternative would be inefficient and not representative of the One Team approach.

(ii) Proceed with competitive RFP process:

- Similar to the "Do Nothing" alternative the Master Servicing Plan schedule would be negatively impacted and an input to the DC Study would not be provided as accurately as would be per the staff recommendation.

Funding Source

Original PO **\$891,100**

Change PO **\$265,480** (no HST)

Total changed unit price **\$1,156,580**.

Total Budget: **\$1,156,580** (\$86,780 funded through a Cost Sharing Agreement with the Town of Lincoln and \$178,700 funded through a Cost Sharing Agreement with the City of St. Catharines)

Expenditures including commitments: \$891,100

Budget Remaining: \$265,480

There is sufficient budget in the project budget to assign this change PO.

Purchase Order Requests for Approval

2. Request: Sole source purchase of Zinc5 Battery Backup Systems (BBS)

Supplier: Econolite Canada

Single source purchase of traffic signal cabinet battery backup systems required for twenty (20) signalized intersections at a total cost of \$219,867.60 (exclusive of HST).

Rationale for Purchase

This request is for the approval for a sole source purchase of vehicle traffic signal cabinet battery backup systems as an interim measure, while Staff continue to further assess the market for the purposes of developing a suitable procurement strategy. This request will fulfill the immediate need while this investigative process is finalized.

This purchase is for the materials needed for installation of traffic signal cabinet battery backup systems at twenty (20) signalized intersections falling under both Regional and local area municipality jurisdiction. This product has proven to meet all Regional operational and performance standards consistently at other locations for years without issue.

The Region has standardized to install battery backup systems (BBS) in all new traffic signal installations and/or rebuilds. Product availability has resulted in delays since the

last purchase. These systems are intended to be installed at signalized intersections that have newly constructed or rebuilt.

ZincFive has the patent on sealed Nickel-Zinc (NiZn) batteries which are physically safer, has a wider operating temperature range, and a longer life than traditional batteries. The ZincFive batteries are also intelligent and can self-monitor performance and are hot-swappable. The ZincFive systems have a central system management platform which can continuously monitor equipment health and report faults. The result is a system which requires little preventative maintenance.

Since 2014, the Region has invested over \$700,000.00 in ZincFive systems at seventy plus (70+) signalized intersections throughout the Niagara Region. The product is a proven performer.

Alternatives Reviewed

- (i) Do nothing – Inefficient operation and increased safety issues of a signalized intersection during a brown out, black out, and utility power issues with increase driver delays and frustration, resulting in potential safety issues as the intersection goes out completely.
- (ii) Procurement strategy under review – currently, there are only two (2) known suppliers of the Zinc5 Battery Backup Systems that meet operational criteria as mentioned above. Staff received quotes and are proceeding with the lowest one which is before PWC today for approval. Risk of procuring products of unproven performance may cause safety and/or operational concerns at affected signalized intersections which is why staff under the larger procurement strategy, are reviewing what other manufacturers may exist with a comparable product which could then be piloted and added to the vendors list if compatible.

Recommendation by Transportation Services

Proceed with single source purchase of traffic signal cabinet battery backup systems detection equipment.

3. Request: Sole source purchase of Polara Accessible Pedestrian Signal (APS) button systems

Supplier: Tacel Ltd.

Sole source purchase of Polara Accessible Pedestrian Signal (APS) button systems required for twenty (20) signalized intersections at a total cost of \$184,000.00 (exclusive of HST).

Rationale for Purchase

This request is for the approval for a sole source purchase of Polara Accessible Pedestrian Signal (APS) buttons as an interim measure, while Staff continue to further assess the market for the purposes of developing a suitable Procurement Strategy. This interim request will fulfill the immediate need while this investigative process is finalized.

This purchase is for the materials needed for the installation of Polara Accessible Pedestrian Signal (APS) button systems at twenty (20) signalized intersections falling under both Regional and local area municipality jurisdiction. This product has proven to meet all Regional operational and performance standards consistently at other locations for years without issue.

In accordance with the Accessibility for Ontarians with Disabilities Act, 2005 (AODA), the Region is installing Accessible Pedestrian Signal (APS) button systems at all new traffic signal installations and/or rebuilds.

Polara owns the patent for a 2-wire Accessible Pedestrian Signal (APS) system which allows for installation in existing signal infrastructure with minimal cost and resources. Competitive products use a 3-5 wire system which would require new cabling to be installed throughout the signal plant.

Since 2006, the Region has invested over \$1.6 million in Polara Accessible Pedestrian Systems at one hundred and seventy-one plus (171+) signalized intersections. When accommodating citizens with visual/auditory challenges, it is important to ensure equipment has a consistent look, sound, and feel. Staff have standardized their installation methods, which has allowed for optimization when installing, maintaining and troubleshooting this product. The product is a proven performer and has evolved to provide non-contact actuation where citizens can activate the buttons by simply waving their hand in front of it.

Alternatives Reviewed

- (i) Do nothing – Not a recommended option. AODA regulation mandate that APS buttons be installed at all new signal installations and/or signal rebuilds.
- (ii) Procurement strategy is under review:
 - Staff are reviewing products that use a 3-5 wire system and will evaluate their compatibility with the Region's current wiring scheme. The risk of procuring products of inconsistent appearance, operation, and unproven performance may cause safety and operational concerns at affected signalized intersections.

Recommendation by Transportation Services

Proceed with sole source purchase of Polara Accessible Pedestrian Signal (APS) button systems at this time.