

TO:	CHAIR AND MEMBERS CIVIC WORKS COMMITTEE MEETING ON APRIL 2, 2019
FROM:	KELLY SCHERR, P.ENG., MBA, FEC MANAGING DIRECTOR – ENVIRONMENTAL & ENGINEERING SERVICES & CITY ENGINEER
SUBJECT:	SINGLE SOURCE PROCUREMENT MATERIAL RECOVERY FACILITY OLD CORRUGATED CARDBOARD SCREEN UPGRADE

RECOMMENDATION

That, on the recommendation of the Managing Director - Environmental & Engineering Services & City Engineer,

- a) Approval **BE GIVEN** to exercise the single source provisions section 14.4 (d)(e) of the Procurement of Goods and Services Policy for purchase and installation of new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing Old Corrugated Cardboard Screen at the Material Recovery Facility for a cost greater than \$50,000;
- b) Single Source negotiated price **BE ACCEPTED** to hire Miller Waste Systems Inc., to purchase and install new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing Old Corrugated Cardboard Screen at the Materials Recovery Facility for a total estimated price of \$140,416.01 plus HST;
- c) Funding for this purchase **BE RELEASED** as set out in the Source of Financing Report attached hereto as Appendix "A", conditional that satisfactory terms and conditions can be negotiated and approved;
- d) Civic Administration **BE AUTHORIZED** to undertake all administrative acts that are necessary in connection with this purchase and the reallocation of the necessary capital funds; and,
- e) Approval hereby given **BE CONDITIONAL** upon the Corporation entering into a formal contract or having a purchase order, or contract record relating to the subject matter of this approval.

PREVIOUS REPORTS PERTINENT TO THIS MATTER
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Relevant reports that can be found at www.london.ca under City Hall (Meetings) include:

- Short-Term Contract Amendment for Recycling Services (October 30, 2018 meeting of the Civic Works Committee (CWC), Item #2.6)
- Updates: Proposed Amended Blue Box Program Plan; Food and Organic Waste Framework & Policy Statement; and Next Steps (May 28, 2018 meeting of the CWC, Item #2.9)
- Exercise Renewal Options for Curbside Collection and Material Recovery Facility Operations Contracts (January 9, 2018 meeting of the CWC, Item #3)
- Request for Comments on the Draft Amended Blue Box Program Plan (Prepared by Stewardship Ontario) (January 9, 2018 meeting of the CWC Item #9)
- Updates – Proposed Blue Box Program Plan Amendment and Waste Free Ontario Act Ontario (October 24, 2017 meeting of the CWC, Item #12)

STRATEGIC PLAN 2015-2019

Municipal Council has recognized the importance of solid waste management in its 2015-2019 - Strategic Plan for the City of London ([2015 – 2019 Strategic Plan](#)) as follows:

Building a Sustainable City

- Strong and healthy environment
- Robust infrastructure

Growing our Economy

- Local, regional, and global innovation
- Strategic, collaborative partnerships

Leading in Public Service

- Proactive financial management
- Innovative & supportive organizational practices
- Collaborative, engaged leadership
- Excellent service delivery

BACKGROUND

PURPOSE

The purpose of this report is to seek approval to exercise the single source provisions outlined in section 14.4 (d) (e) of the Procurement of Goods and Services Policy for purchase and installation of new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing Old Corrugated Cardboard (OCC) screen at the Material Recovery Facility (MRF) to improve the quality of paper products as end markets specifications continue to tighten.

CONTEXT

Miller Waste Systems Inc. (Miller Waste) was the successful proponent of the City of London RFP 08-03 Design, Construction and Operation of a Materials Recovery Facility (RFP 08-03). In fulfilling the requirements of RFP 08-03, Miller Waste engaged Machinex Industries (Machinex) as the main MRF sorting equipment supplier. Miller and Machinex have completed a number of similar projects in this arrangement (i.e., Miller as the design, build, operate proponent and Machinex as the sorting equipment supplier).

Miller Waste is currently operating the MRF under an amended agreement with the City. The amended agreement requires Miller Waste to sort, capture and sell recovered Blue Box materials that are received at the MRF for processing. The equipment installed to complete this work was selected based on the composition of the Blue Box materials that were to be received, the ability to ensure specified material capture rates within RFP 08-03, and end market criteria for recovered materials at the time RFP 08-03 was awarded (2010).

The composition of the Blue Box materials received and end market criteria for recovered materials have changed significantly since 2010. The main driver of this significant market change/tightening is the Chinese government's implementation of the National Sword program which has significantly limited North American access to the previously large Chinese recovered material market.

To address market conditions, Miller Waste has increased the number of sorters at the MRF and adjusted processing arrangements to increase quality control at certain key functional areas. The addition of mechanical changes is now a requirement as lower cost and/or more flexible solutions have been exhausted.

DISCUSSION

Updates on End Markets for Recovered Blue Box Materials

City staff have provided a number of updates to Committee and Council regarding the challenges with recyclable material end markets through both the budget monitoring and development process and through CWC reports on related topics. A brief timeline of the updates is below:

- 2017 year end, Chinese National Sword program identified as an emerging issue as part of budget monitoring process;
- 2018 mid-year, Chinese National Sword Program identified as likely to significantly limit North American access to the previously large Chinese market for recovered Blue Box materials, with the potential to significantly impact the budgeted revenue for recovered Blue Box materials;
- 2018 year-end, as a result of the significantly limited access to the Chinese market place, other global markets have become saturated with materials. This has resulted in a significant downward pressure on the market place and tightened specifications for recovered materials. For the majority of 2018, the Blue Box materials recovered from the MRF were able to be sold for revenues close to budget as a result of the high quality of materials produced and the end market relationships of Miller Waste. Currently recovered material end markets have deteriorated to a point where these advantages are no longer sufficient to obtain the revenues anticipated for recovered materials (predominantly paper products) without capital investment to address tightened market specifications.

Changing Composition of Blue Box Materials Received for Processing

The size and nature of OCC and Boxboard (e.g., cereal boxes, tissue boxes, small packaging boxes used for shipping items ordered from on-line shopping) received at the MRF for processing has changed significantly since the facility was designed and constructed. In general, there has been a significant increase in the amount of small OCC and Boxboard received for processing.

Smaller OCC and Boxboard is difficult to capture with the larger OCC and Boxboard (where it belongs) as the disc spacing of the current OCC screen is larger than the small pieces of OCC and Boxboard. As a result the smaller OCC and Boxboard falls through the screen and ends-up with the Newsprint where it is difficult to be further separated, as the items are similar in size. Recent audits of bales of recovered Newsprint indicate they contain approximately 25% to 30% by weight of small OCC and Boxboard. This percentage is problematic for end markets and is downgrading the value paid for the material. OCC and Boxboard is a different type of paper fibre from Newsprint and is a challenge for recovered Newsprint end markets to manage OCC and Boxboard in their production processes

Improvements to OCC Sorting Equipment

Upgrading the current OCC screen will enhance the MRFs ability to capture the small OCC and Boxboard with the larger OCC. The OCC screen upgrade will also enhance the quality of the recovered Newsprint products produced at the MRF. A brief summary of the changes to be made include:

- Existing frame, motors and oilers will be retained;
- Screen shafts and bearing assemblies will be replaced with larger square shafts; and
- Ancillary equipment such as guarding, fire suppressant piping will be replaced to accommodate the screen changes

Figure 1: Paper products moving across the triple deck OCC sorter. Upgrades will be made to this piece of equipment



Business Case

The table below summarizes the business case for upgrading the MRF OCC screen.

Simple Payback		
Recovered Newsprint Shipped to Market in 2018	13,000	Tonnes
Small OCC/Boxboard Content (estimated at 25% by weight)	3,250	Tonnes
Captured Small OCC/Boxboard with Screen Upgrade (60%) ⁽¹⁾	1,950	Tonnes
Purchase and installation price of required equipment	\$140,416	\$
Estimated annual, additional small OCC/Boxboard revenue ⁽²⁾	\$215,000	\$
Approximate Simple Payback Period	0.7	Years

(1) A conservative estimate of 60% capture efficiency was used for payback analysis. Actual capture rate may be greater producing higher revenues.

(2) Assumes obtaining \$110/tonne for small OCC and boxboard recovered.

Purchasing Process

It is recommended that this purchase be a single source purchase based on the following rationale in accordance with the Procurement of Goods and Services Policy:

14.4(d) "There is a need for compatibility with goods and/or services previously acquired...."

The existing OCC screen is not being replaced but upgraded and as such the upgraded screen decks and ancillary equipment is required to be compatible with the original equipment suppliers frame, motors and oilers (i.e., Miller Waste/Machinex)

14.4(e) "The required goods and services are to be supplied by a particular supplier(s) having special knowledge, skills, expertise or experience."

Miller Waste is the existing operator of the MRF. It is in the best interest of the City to hire Miller Waste to complete this upgrade as they will be able to schedule the work to be completed so as to not adversely impact MRF operations. Further hiring Miller Waste will not adversely impact existing contract obligations in terms of material specific capture rates.

In addition 7.4 of the Purchasing Policy allows the Managing Director in conjunction with the Manager of Purchasing to specify a specific product for essential functionality purposes. It is very advantageous for the City to maintain the existing equipment in the MRF versus introducing modifications based on equipment from a different supplier.

Financial Impact

Capital Budget:

The Capital budget for equipment upgrades is in the approved, original budget for the MRF. The funding is identified in Appendix A (Source of Financing attached). This equipment upgrade has a capital budget of \$140,416.01 plus HST.

Operating Budget:

There are no new operating costs for the equipment.

CONCLUSION

Based on discussion and the analysis above, Solid Waste Management are recommending the single source purchase and installation of new mechanical components (screen deck disk screens and ancillary equipment) to upgrade the existing OCC screen. The new equipment will substantially reduce the smaller OCC and Boxboard that falls through the screen and ends-up with the Newsprint where it is difficult to be further separated. The approximate simple payback period is about 0.7 years or about 8 months.

Acknowledgements

This report has been reviewed and supported by Purchasing & Supply.

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Appendix A - Source of Financing

c: John Freeman, Manager of Purchasing & Supply

Appendix A Source of Financing