City of Winnipeg Organics Planning Study – Proposed Scope of Work

(March 22, 2021)

HDR would like to propose a four-part scope of work to assist the City of Winnipeg in understanding its options for organics management and associated cost implications. We note that HDR previously supported the City in the development of an Organics Diversion Strategy and that work was never finalized at the request of the City. It is our understanding that a number of decisions remain to made which will influence the City's path forward and ultimately the cost of implementing an organics diversion strategy. This includes the actual feedstock, collection approach, processing technology and desired end product.

Part 1 – Webinar for City of Winnipeg Staff

HDR would develop a presentation for City of Winnipeg staff to review the work done for the Organics Diversion Strategy from 2015 to 2017. This presentation would be conducted via Webex (or platform of the City's choice). We estimate the presentation would be an hour in duration.

The presentation would cover:

- Scope of work as per the original Organics Diversion Strategy RFP
    - The project comprised two components: conducting waste audits and characterization studies and the development of the organics diversion strategy.
    - The waste audits consisted of City funded work (SFD, MFD, recycling depot materials, bulky and abandoned waste) and Provincially funded work (IC& and C&D materials delivered to BRRMF).
    - The development of an organics diversion strategy was envisioned as being completed in three phases (Phase 1 - step 1, Phase 2 - steps 3-6, and Phase 3 – step 7).
- Review of Original Scope of Organics Diversion Strategy
    - Phase 1, Step 1
        - Waste audits and characterization studies
        - Background review and development of organics diversion options
    - Phase 2:
        - Step 2 – finalize the City's goals and objectives for the organics strategy
        - Step 3 – identify the reasonable range of options for longer term organics management
        - Step 4 – develop an evaluation approach to select the range of options that best meets the City's needs

        - Step 5 - complete the evaluation and select the preferred option
        - Step 6 – identify the implementation plan for the preferred option
    - Phase 3, Step 7 – Final report and financial summary
- Review of Work Completed
    - Phase 1, Step 1
        - Review of current waste management system in Winnipeg
        - Review of select municipal organic waste collection and processing programs
        - Review of organics collection systems – on-site management (e.g. backyard composting, in-sink disposal units), self-haul of vegetative waste, curbside collection (four waste streams explored)
        - Review of alternative containers and approaches for separating material (types of liner bags, collection container types, frequency of collection)
        - Organic material categories (leaf and yard waste, vegetative, expanded, other organics)
        - Processing options (aerobic composting, anaerobic digestion, landfill with landfill gas generation)
        - Funding mechanisms (federal, provincial, municipal)
        - Deliverable - Final Draft TM#1 - Background Review and Development of Organics Diversion Options (August 2017)
    - Step 2
        - overview of consultation with City staff, stakeholders (WDAC), proposed goals and objectives, final TM#2 Goals and Objectives
        - Deliverables – Organics Workshop (September 2015), Final TM#2 Step 2: Goals and Objectives (August 2017)
    - Step 3 and 4
        - development of evaluation criteria, collection and processing criteria, overview of evaluation process and results for collection and processing (top ranking options)
        - Deliverable - Final TM#3: Identify the Reasonable Range of Diversion Options, Evaluation Process and Results (August 2017)
    - Step 5
        - Analysis of short-listed collection and processing options (application of waste audits to project tonnes to be managed, collection system modelling to inform fleet size and GHG emissions, capital and operating cost estimates for the top ranking options, estimates per SFD tonne for collection (carts, liner bags).

        - Deliverable - Draft Final TM#4 –Analysis of Short-listed Collection and Processing Options draft Final Report (November 2017)
    - Organics Implementation and Procurement Considerations
        - Pilot program design and procurement strategies for collection and processing
        - Deliverable - Final Memo on Organics Implementation and Procurement Considerations (December 2017)
- City direction to conclude project

At the conclusion of Part 1, we propose to hold another meeting with the City to discuss the scope of the remaining work and how the project can move forward. For discussion would be how the pilot will inform the remaining work, integration of the rate study, and what information the City would require for its decision-making process.

At this time, based on our understanding of the City's needs, we would propose the following scope to assist the City in understanding costs and considerations related to an organics program and processing facility.

Part 2 – Review Current System

- Review previous population and tonnage projections and waste composition against new information (including pilot information)
- Review collection contract end-dates and potential to make changes to collection
- Review pilot program methodology
- Outline linkages between tonnages, composition, collection and end product (compost, RNG) with processing technology
- Identify the decisions that need to be made regarding selection of technology, and what/how materials are collected
- Deliverable: TM #1
- A meeting is proposed following the City's review of TM#1 to discuss decisions about feedstock and technology considered in Part 3.

Part 3 – Review Collection and Processing Approaches

- Review evaluation methodology and options to be evaluated with updated methodology
- Review evaluation criteria and weighting
- Update evaluation process for collection and processing
- Recommend short list of processing approaches based on feedstock

- Develop conceptual layouts of one aerobic composting facility and one anaerobic digestion facility
- Costing of short list of processing facilities – propose one aerobic and one anaerobic option
- Complete City NPV and Risk/Opportunity Register documents
- Deliverable: TM#2 (including conceptual layouts, CAD drawings, costing)
- A meeting is proposed following the City's review of TM#2 to discuss decisions that need to be made about feedstock and processing facilities and direction for Part 4 in terms of information required to assist Council with direction on how to proceed.

Part 4 – Develop Consolidated Recommendations

- Summary of decision points
- Recommendations for pilot to inform decision making (e.g. overall satisfaction with program, range of costs willing to pay, use of liner bags etc.)
- Recommended implementation considerations (e.g. use of liner bags)
- Recommended feedstock
- Recommended processing technologies
- Procurement options
- Timing to develop a facility, and roll out program
- Estimated cost per household
- Deliverable: Final Report with Recommendations

Part 5 – Project Management

- Regular project management activities
- Project meetings as required

Schedule and Budget

- Anticipated schedule
    - Project initiation – late April 2021
    - Project completion - December 2022/January 2023
- Budget – Estimated cost to complete Parts 1 – 5 is $160,000 plus GST.