

# 27<sup>th</sup> Annual National Organics Recycling Conference

September 18 - 20, 2017

Calgary, Alberta



# Agenda

- ▶ Project Drivers
- ▶ Procurement Process
  - ▶ DBFOM PPP
  - ▶ Why PPP?
- ▶ Team Structure
- ▶ Key Technical Requirements
- ▶ Current Status
- ▶ Design and Construction
- ▶ Four Keys to Project Success
- ▶ Value Based Process
- ▶ Equitable Risk Transfer
- ▶ Understanding the PPP Process
- ▶ True Partnering
- ▶ Post Award
- ▶ Operational Design Perspective
- ▶ Key Operational Terms



# Project Drivers

- ▶ The City of Calgary initiated this process to respond to two concerns:
  - ▶ Diversion of organic waste from the landfill as part of the City's ambitious and sustainable municipal stewardship objectives, and
  - ▶ Compliment the existing biosolids management program (Calgro) in a way which wouldn't directly compete with that program through the diversion of biosolids to compost
- ▶ Facility needed to align with:
  - ▶ Roll out of the City's green cart program - community participation
  - ▶ Upgrades to the Bonnybrook Wastewater Treatment Plant - biosolids dewatering
- ▶ City leaders toured facilities in North America and Europe for an understanding of best practices



# Procurement Process

- ▶ Procurement process employed by the City of Calgary included:
  - ▶ RFEOI (Request for Expression of Interest) - a market-wide investigation of available technologies and processes
  - ▶ Open RFQ (Request for Qualifications) - hopeful process participants were invited to showcase the suitability and relevance of their proposed processes, and their teams' ability and history in delivering similar projects. As this was a DBFOM PPP (design-build-finance-operate-maintain public-private-partnership), the City evaluated both the technical and financial capabilities of each team
  - ▶ RFP (Request for Proposal) process was open to the four highest scoring teams. Criterion included the evaluation the Proponents technical and financial (price) offer as well as their ability to secure project financing. An honorarium of \$250,000 was provided to Proponents which submitted compliant proposals but failed to secure the project



# Procurement Process

- ▶ Timeline for the procurement process was as follows:
  - ▶ Release of RFQ: November 12, 2013
  - ▶ Submission of RFQ: January 23, 2014
  - ▶ Release of RFP: July 25, 2014
  - ▶ Submission of Technical Proposal: February 11, 2015
  - ▶ Submission of Financial Proposal: March 4, 2015
  - ▶ Financial Close: June 2, 2015
  - ▶ Substantial Completion: June 29, 2017

The project was completed on time and on budget



# Procurement Process - DBFOM PPP

- ▶ The procurement process employed by the City of Calgary was a design-build-finance-operate-maintain, public-private-partnership project requiring private construction financing and a 10-year operational period
- ▶ While PPP projects have grown more popular in recent years for other forms of municipal infrastructure, the Calgary Composting Facility was the first DBFOM PPP for composting in Canada
- ▶ Securities Required:
  - ▶ Parental company guarantee for 40 per cent of the Construction value
  - ▶ PPP performance bond provided for 50 per cent performance guarantee and a three per cent liquid component intended to cover any liquidated damages to the Lenders in case of a delay in achieving substantial completion - a first for a Canadian PPP project
  - ▶ 50% labour and materials bond
  - ▶ Obligation to require bonding from all subcontractors with contract values of \$200,000 or higher.



# Procurement Process - Why PPP?

- ▶ There are several successful municipal aerated, static pile, in-vessel composting facilities throughout Canada, why did the City of Calgary chose DBFOM PPP?
  - ▶ No post-award negotiations
  - ▶ Ensure price and schedule certainty by leveraging private financing and associated lender requirements
  - ▶ Operational period ensures that the team designs and builds the facility with the future in mind
  - ▶ Operation and maintenance of advanced in-vessel composting facilities is a specialty field in the North American market. By leveraging the full benefit of the DBFOM PPP model, the City was able to ensure a high quality design and construction project, and a (at least) 10 year period of expert, private operations
  - ▶ Engagement of Fairness Monitor



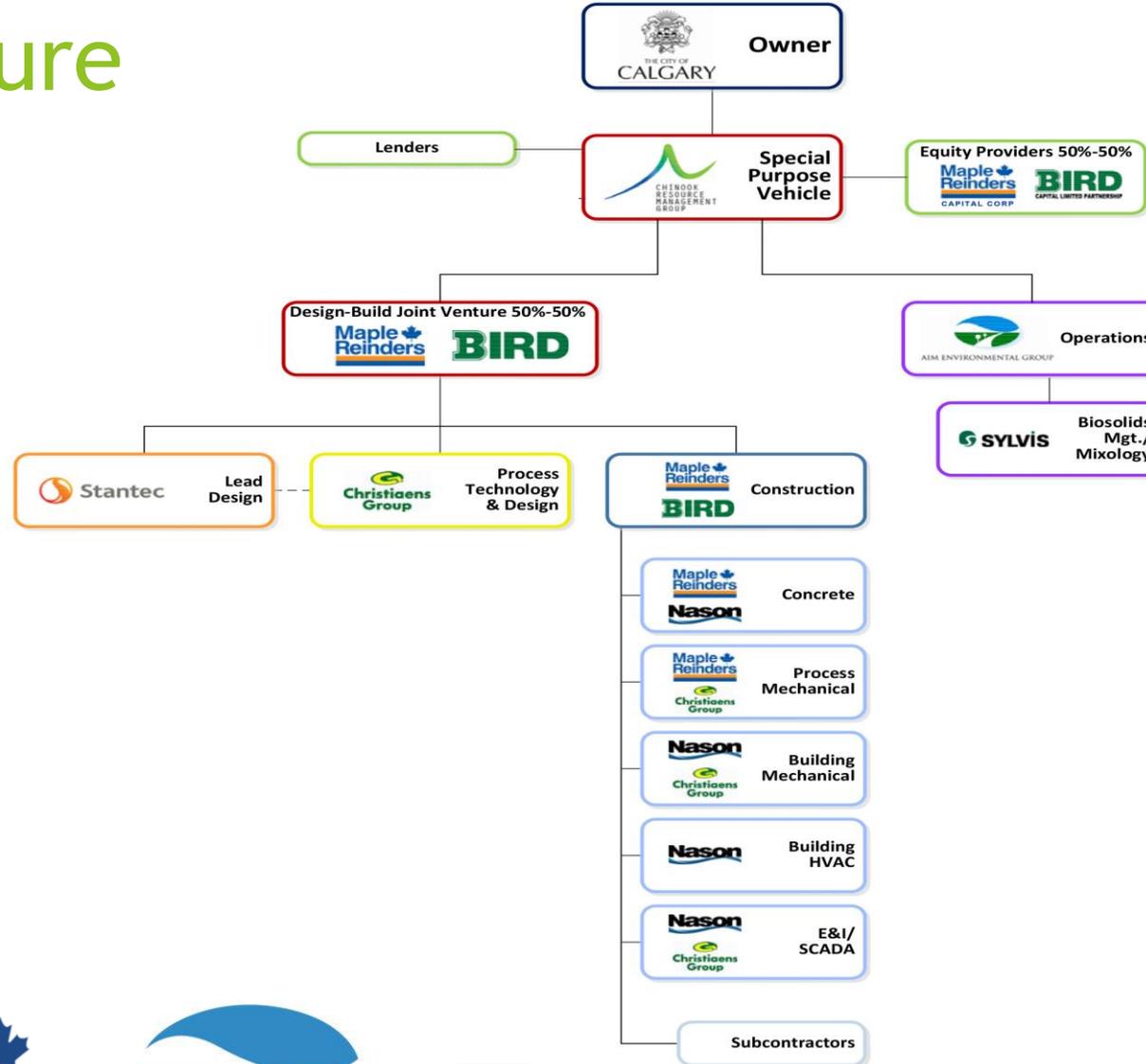
# Team Structure

- ▶ Naming itself the, 'Chinook Resource Management Group', members formed this limited partnership (also referred to as a 'Project Company' or 'Project Co'). Members included:
  - ▶ Maple Reinders Group - 50% Project Co owner
  - ▶ Bird Design-Build Construction - 50% Project Co owner
    - ▶ Together the 'Chinook Resource Management Group'
  - ▶ Maple Reinders Constructors (subsidiary to the Maple Reinders Group)
  - ▶ Nason Construction (subsidiary to Bird Design-Build Construction)
    - ▶ Together the 50/50 Design-Build-Joint-Venture (DBJV)
  - ▶ AIM Environmental Group - Operations and Maintenance provider
  - ▶ Christiaens Group - Compost Process Designer
  - ▶ Stantec Consulting - Balance of Plant Designer



# Team Structure

► Corporate Org Chart:



# Key Technical Requirements

- ▶ Facility had to be designed and built to receive 100,000 tonnes of source separated organics (SSO) and 40,000 tonnes of digested biosolids annually
- ▶ City required that facility be capable of keeping these waste streams separate - but did not require the private operator to operate in that fashion for 10 years
- ▶ Availability of materials did not align, Proponent would receive SSO prior to biosolids
- ▶ Financial holdbacks (key feature of PPP procurement) included:
  - ▶ \$11M holdback until SSO prove-out complete
  - ▶ \$4M holdback until biosolids prove-out complete



# Current Status

- ▶ Chinook Resource Management Group has reached substantial completion and is in the process of achieving SSO and biosolids prove out
- ▶ Once these are complete, related financing will be returned to Project Co owners and a Letter of Credit of \$4M will be required of the operator - AIM Environmental Group
- ▶ Pending City of Calgary approval, ownership of Chinook Resource Management Group will transfer to the AIM Environmental Group



# Design and Construction (T)

- ▶ Provide a Balanced DBJV Perspective
- ▶ What was Done Well
- ▶ What Could Have Been Better
- ▶ 4 Main Keys to Project Success



# 4 Main Keys to Project Success (T)

- ▶ Value Based Process
- ▶ Equitable Risk Transfer
- ▶ Understanding the P3 Process
- ▶ True Partnering



# Value Based Process (T)

- ▶ Process Allowed Innovation
- ▶ Typical Process - Indicative Design
- ▶ Performance Based RFP
- ▶ Leveraged Proponent Knowledge
- ▶ Result was Value Based Selection



# Equitable Risk Transfer (T)

- ▶ Risk Transfer Many Times One Sided
- ▶ Permitting Identified as Risk with Cost
- ▶ Financial Relief During RFP
- ▶ Extensive Preparatory Work by City of Calgary
- ▶ Pre-Emptive Meetings with Permitting Departments
- ▶ Building Permit in 7 Days



# Understanding the PPP Process (T)

- ▶ Issues Result From Not Understanding PPP Process
- ▶ Experienced PPP Design Builder
- ▶ Less Experienced PPP Owner
- ▶ Thorough Understanding of PA by City
- ▶ Thorough Understanding of Review Process by City



# True Partnering (T)

- ▶ Difficult To Maintain Focus Through Project
- ▶ All Issues Resolved at Project Level
- ▶ No Involvement of Executive Level
- ▶ Many Contributing Factors
- ▶ Project Was Definition of Construction Partnering
- ▶ Example to Industry



# Operational Design Perspective

- ▶ Clear project objectives in relation to biosolids and co-collected SSO and Leaf and Yard Material
  - ▶ Seasonal variations for processing SSO vs. biosolids to optimize facility utilization and related process sizing requirements
- ▶ Significant background data available
  - ▶ Studies regarding the SSO and Leaf and Yard mix and anticipated volumes
  - ▶ Projections of required processing quantities for dewatered biosolids
  - ▶ Pilot test data available to Proponents



# Operational Design Perspective

- ▶ Design consideration for potential future thermal hydrolysis of biosolids
  - ▶ Potential requirement for supplemental energy
- ▶ Owner requirements guided Proponents while allowing ingenuity
- ▶ Data regarding traffic patterns/truck routing plan
- ▶ Sensitivity to adjacent landfill operations
- ▶ Recognition of permitting which encompassed landfill



# Key Operational Terms

- ▶ OMR term of 10-years
  - ▶ Sufficient length of OMR term to ensure operational perspective on specification to manage lifecycle costs
- ▶ Clear mandate to manage all maintenance and lifecycle costs over the term of the agreement
- ▶ Proponent responsible for:
  - ▶ Utility consumption
  - ▶ Supply and maintenance of rolling stock
  - ▶ Proponent responsible for sourcing and cost associated with biosolids amendments
- ▶ Owner responsible for volatility in utility unit cost
- ▶ Requirement to provide product branding and marketing



Special thanks to the City of  
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Questions?

