



**PUBLIC AGENDA
STANDING POLICY COMMITTEE
ON ENVIRONMENT, UTILITIES
AND CORPORATE SERVICES**

Tuesday, February 9, 2016, 2:00 p.m.

Council Chamber, City Hall

Committee Members:

Councillor A. Iwanchuk (Chair), Councillor Z. Jeffries (Vice-Chair) , Councillor E. Olauson, Councillor M. Loewen, Councillor P. Lorje, His Worship Mayor D. Atchison (Ex-Officio)

Pages

- 1. CALL TO ORDER**
- 2. CONFIRMATION OF AGENDA**
- 3. DECLARATION OF CONFLICT OF INTEREST**
- 4. ADOPTION OF MINUTES**

Recommendation

That the minutes of Regular Meeting of the Standing Policy Committee on Environment, Utilities and Corporate Services held on January 11, 2016 be adopted.

- 5. UNFINISHED BUSINESS**
- 6. COMMUNICATIONS (requiring the direction of the Committee)**

6.1 Delegated Authority Matters

Recommendation

That the request for extension to The Noise Bylaw as outlined in 6.1.1 be approved subject to any administrative conditions.

- | | |
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| 6.1.1 Noise Bylaw Extension, Miles for Smiles Run/Walk, September 10, 2016, 8:00 a.m. to 12:00 p.m. (Noon), Rotary Park, Caitlin Yeager [File CK. 185-9] | 4 - 4 |
|---|--------------|

6.2 Matters Requiring Direction

- | | |
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| 6.2.1 Saskatoon Indigenous Accord - Strengthening Relationships | 5 - 8 |
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**Between the City of Saskatoon and Urban Indigenous Peoples
(File CK. 100-10)**

Recommendation

That the letter be referred to the Administration for a report.

6.3 Requests to Speak (new matters)

7. REPORTS FROM ADMINISTRATION

7.1 Delegated Authority Matters

- 7.1.1 Remai Modern Update (Files CK. 620-5, CC. 4130-2 and CS. 4130-3) 9 - 12**

Recommendation

That the report of the General Manager, Corporate Performance Department dated February 9, 2016, be received as information.

7.2 Matters Requiring Direction

- 7.2.1 Transit IT Roadmap (Files CK. 7300-1 and CP. 0425-1) 13 - 17**

Recommendation

That the report of the General Manager, Corporate Performance Department dated February 9, 2016, be forwarded to City Council for information.

- 7.2.2 Generating Energy from Elm Wood (Files CK. 752-1 and CP. 0758) 18 - 22**

A request to speak from Brit MacDonald, Saskatoon Food Bank and Learning Centre, dated January 20, 2016 is provided.

Recommendation

That the report of the General Manager, Corporate Performance Department dated February 9, 2016, be forwarded to City Council for information.

- 7.2.3 Award of RFP - Energy Performance Contracting (EPC) Owner's Consultant (Files CK. 752-1 and CP. 7838) 23 - 28**

Recommendation

That the Standing Policy Committee on Environmental, Utilities, and Corporate Services recommend to City Council:

1. That the proposal submitted by Econoler to be the City's Energy Performance Contracting Owner's Consultant for a total estimated cost of \$84,600 (including GST and PST) be accepted; and
2. That His Worship the Mayor and the City Clerk be authorized to execute the contract documents, as prepared by the City Solicitor under the Corporate Seal.

7.2.4 WWTP - Asset Replacement - Primary Heating Study and Biogas Bypass - Award of Engineering Services (Files CK. 670-1 and WWT. 7990-107)

29 - 31

Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That the proposal submitted by Associated Engineering (Sask) Ltd. for engineering services for the Primary Heating Study, and the design and construction of a biogas bypass at a total upset fee of \$104,127.90 (including taxes) be approved; and
2. That the City Solicitor be requested to prepare the appropriate agreement and that His Worship the Mayor and the City Clerk be authorized to execute the agreement under the Corporate Seal.

8. MOTIONS (NOTICE PREVIOUSLY GIVEN)

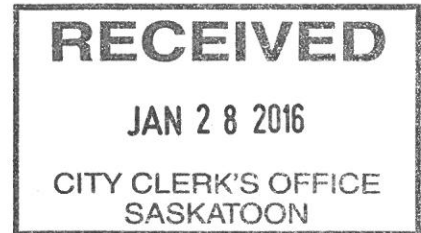
9. GIVING NOTICE

10. URGENT BUSINESS

11. IN CAMERA SESSION (OPTIONAL)

12. ADJOURNMENT

From: City Council
Sent: Friday, January 29, 2016 8:24 AM
To: City Council
Subject: FW: Noise Bylaw Extension Request File CK 185-9



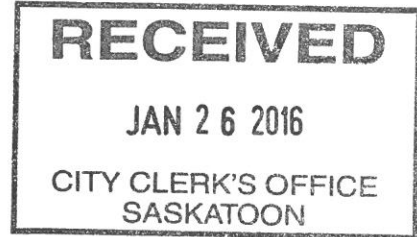
-----Original Message-----

From: Yeager, Caitlin [mailto:cmy571@mail.usask.ca]
Sent: Thursday, January 28, 2016 11:39 AM
To: Web E-mail - City Clerks
Subject: Noise Bylaw Extension Request File CK 185-9

Hello,

I am organizing the annual Miles For Smiles run/walk that raises money for the Children's Hospital Foundation. I would like to apply for a Noise Bylaw Extension for this event. The event will take place in Rotary Park on Saturday, September 10th, 2016, from 8 am - noon. Please contact me if you have further questions or require additional information.

Thank you,
Caitlin Yeager
31 Rivers Edge Lane
Saskatoon, SK
S7K3J9



January 26, 2016

His Worship Donald J. Atchison
Office of the Mayor
222 Third Avenue
North Saskatoon, SK S7K 0J5

Dear Mayor Atchison and Council:

*Re: Saskatoon Indigenous Accord – Strengthening Relationships Between the
City of Saskatoon and Urban Indigenous Peoples*

On behalf of the Aboriginal Affairs Coalition of Saskatchewan (AACS), I'm pleased to submit to your attention a draft *Saskatoon Indigenous Accord*. The objective of this Accord is to build and support good relations between the City of Saskatoon and our organization, which represents the rights and interests of status and non-status Indians living off-reserve and Métis. We are an affiliate member of the Congress of Aboriginal Peoples which is one of the five national Aboriginal organizations that represents Aboriginal peoples at the federal level.

In 2011, the National Household Survey reported that there are 23,895 Aboriginal people living in Saskatoon. According to the 2006 Census, Saskatoon has the second highest *per capita* Aboriginal population in Canada and we account for 9.3% of the total population. Unfortunately, by any metric one would choose to use, on average we are worse off than other citizens, and poverty, marginalization and social despair are all too prevalent. This Accord can be a burst of hope that we have achieved a basic framework for understanding between the City of Saskatoon and AACS.

Sincerely,

Kim Beaudin
President
Aboriginal Affairs Coalition of Saskatchewan
182 Neatby Crescent
Saskatoon, SK S7M 4W7
Tel: 306-717-1429

SASKATOON INDIGENOUS ACCORD

WHEREAS the City of Saskatoon is dedicated to strengthening its relationship with Indigenous peoples in the urban setting with a principle based agreement with the Aboriginal Affairs Coalition of Saskatchewan (AACS);

AND WHEREAS the Saskatoon Indigenous Accord has been drafted to provide the overall framework upon which the City will build agreements and actions plans in partnership with the Aboriginal Affairs Coalition of Saskatchewan;

NOW THEREFORE BE IT RESOLVED THAT:

The City of Saskatoon lies in the Traditional Territory of the Plain and Wood Cree, Saulteux, and Dakota/Sioux and Métis. People from around the globe have come to call Saskatoon home and our community prides itself in its cultural diversity. Indigenous peoples have always been part of this diversity and play an integral role that deserves recognition.

The City of Saskatoon acknowledges the significant contributions that Indigenous people have made to this community.

Together, we acknowledge and honour our ancestors, traditions and the spirit of this place that first drew Indigenous peoples together. We acknowledge and honour the long history of service to the community that continues to be embodied by the City of Saskatoon and its employees. We acknowledge that we reside on Treaty Six and together call upon our traditions and spirit to maintain a strong and special and lasting relationship between Saskatoon and Indigenous peoples.

We believe that all people in the Saskatoon area are served well by the positive relationships between the city and Indigenous peoples. We have a mutual need for Indigenous people to be involved in all aspects of the community and to ensure the ongoing development of culturally sensitive municipal services that meet Indigenous community needs.

We believe that good relationships must be based upon a foundation of the shared values of honesty, respect, mutual sharing and contribution. These values enhance our community as well as our collective social, spiritual, economic and physical well-being. They also serve our shared interest within the guidelines of accountability, transparency, inclusiveness, responsiveness and shared stewardship.

This principle-based relationship agreement between Indigenous peoples and the City of Saskatoon establishes commitments and objectives to be put in place in order to make Saskatoon a better place for all residents and visitors.

This Accord shall provide the framework for the development of further agreements regarding but not limited to, the following:

- The recognition and respect of Indigenous peoples and cultures;
- Leadership in demonstrating how municipal government can work with Indigenous peoples;
- Development of protocols of understanding and cooperation to establish and maintain improved lines of communication;
- Supporting Indigenous culture and the development of recreational activities that are culturally appropriate;
- Encouraging Indigenous investment in Saskatoon in areas including, but not limited to, people, culture, business and community and social participation;
- Increasing Indigenous peoples participation in our local economy;
- Improving our community by making it more economically vibrant and sustainable;

- Investing in our youth, the future of our community, by ensuring cultural, recreational, education, and career opportunities are readily available;
- Addressing root causes relating to public safety, so that all residents and visitors feel safe.

His Worship Donald J. Atchison
Mayor of Saskatoon

Kim Beaudin
President
Aboriginal Affairs Coalition of Saskatchewan

Remai Modern Update

Recommendation

That the information be received.

Topic and Purpose

The purpose of this report is to provide the Standing Policy Committee on Environment, Utilities and Corporate Services with an update on the Remai Modern.

Report Highlights

1. The Contractor is estimating that the building construction will be complete in the late third to fourth quarter of 2016, premised on the project not experiencing material delays going forward.
2. The Gallery Administration is planning the move, transition, preparation and opening of the Remai Modern.
3. The project schedule and cost continues to be negatively impacted by delays and details related to a variety of items.
4. The project is currently projecting a potential funding shortfall of \$2.5 to \$4.5 million.

Strategic Goals

This project supports the Quality of Life Strategic Goal, relating to the implementation of the Municipal Culture Plan. It supports the four year priority to enhance the quality of life in Saskatoon by directing expenditures toward amenities in neighbourhoods to enhance and protect property values and encourage private investment.

Background

City Council approved the construction of a new Art Gallery in Saskatoon. Smith Carter Architects and Engineers Inc. (now Architecture 49) were hired in 2010 to design, tender and administer the construction. A construction contract was awarded in 2013 to Ellis Don Corporation, with a target for completion in 2016.

Report

Much progress is being made on the construction of the Gallery, and the following identifies some of the accomplishments:

- Feature stairs in the atrium have been installed (1st floor to 3rd floor)
- Metal panel cladding has begun to be installed, as well as the exterior antique bronze sheeting
- All elevators are being installed
- Permanent power has been commissioned
- 65% of the drywall has been installed, with 25% of the mudding and taping complete, and ready for finishing and primer
- HVAC ducting is 80-90% complete

- The mesh mock-up for the exterior is up and generally approved
- A sample of the wood ceiling has been submitted for approval

However, the project continues to face challenges respecting cost increases and schedule changes. This report is intended to update the likelihood and magnitude of the cost and schedule risk the project faces.

Financial Risk

The current approved budget is \$84,634,160. Throughout 2015 and continuing into 2016, the project's final cost estimate has changed, and cost increases have been encountered. There have been a tremendous amount of requests for information, and change orders to clarify and correct the Issued for Construction drawings. This, compounded with delay claims, and contract issues, has resulted in the project completion being delayed and in a number of cases, additional costs incurred. There have also been changes to the project versus the original design (changes to the Atrium such as adding washrooms and a stairway, expanded full-service café to a restaurant based on a strong business case, and re-configuration of office space), and the Gallery is also proceeding with fitting out the shell gallery and building a glass wall for the restaurant and a security screen at the front foyer. The project is proceeding on notice from the Contractor that all work is essentially on the critical path at this point, and any corrections, fixes or alterations required by the Architects for the building to meet code or deal with conflicts or problems with the design are on a time and materials basis, with delay consequences as well.

Actions have been taken to address the budget overages. The Administration project team has made the Consultant team aware of the cost position of the project. In general, the only changes that are allowed are architectural or engineering items to correct errors to ensure that the building meets code and/or minimum operational requirements.

The project is still projecting a potential funding shortfall of \$2.5 to \$4.5 million. This range is estimated as there continues to be a lack of certainty based on the project experience to date and with approximately \$10 million remaining in construction costs.

This translates to an estimated total Capital Project cost of \$87,150,000 to \$89,150,000, which is an increase of 3.0% to 5.3% compared to the current approved budget.

Schedule Risk

The Contractor is currently estimating total performance, or full completion of their contract, by the fall of 2016. The certainty of a completion date will improve as construction continues; however it should be noted that there is still significant work to complete and the potential for additional delays to arise.

The Remai Modern is planning the move, and transition into the building which can begin once substantial completion as defined by the Builders' Lien Act is achieved, and continue past total performance. Details of this plan are still being worked on, but does rely upon certainty on total performance of the construction contract and internal Gallery

responsibilities and operations. In addition, the buildings environmental readings must reach international standards with stability in order for displays to be allowed. Assuming the current schedule holds, it is expected that the building would be turned over to the Gallery completely at total performance of the contract this fall, at which time the Gallery can complete its transition and full move into the building. It is currently estimated that the Gallery would open to the public in early 2017. The schedule does continue to face risk and the Administration and Gallery Administration will continue to update the Committee and Council on the opening date and plans.

Financial Implications

Capital Project 1813 Remai Modern (formerly #1786) has been approved for funding in the amount of \$84,634,160.

The funding is made up of the following components:

- \$22,095,160 – Remai Gallery Pre & Post 2013 Fundraising
- \$30,287,000 – City Contribution
- \$ 488,000 – Remai Board Loan from City for Kitchen Equipment
- \$ 4,093,000 – Provincial Funding – Building Communities
- \$12,651,000 – Provincial Funding – Building Canada
- \$13,020,000 – Federal Funding – Building Canada
- \$ 2,000,000 – Private Donation by the Ellen Remai Foundation for final fit out of the Shell Gallery and Main Floor Security Additions

\$84,634,160 – Total

In addition to the construction costs the Remai Modern is funding transition and implementation costs associated with becoming the Remai Modern.

The Administration continues to explore opportunities to address the projected shortfall of funding to complete this project. This includes reducing the minimum expenditure required for furniture, fixtures and equipment needed to open the gallery in 2017. Additional opportunities for private funding are also being discussed with the Gallery. In addition, the 2016 Business Plan and Budget included an increased provision of \$1.365 million to accommodate the increased requirements to operate a building five times larger than the Mendel Art Gallery and based on a September 2016 opening. \$800,000 of this provision has been allocated to the assist in offsetting the project shortfall, and the balance has been allocated to the Remai Modern to prepare for the opening of the new Gallery.

The Administration will continue to report on the status of both the potential funding shortfall and project completion as more clarity surfaces over the next few months.

Public and/or Stakeholder Involvement

No public and/or stakeholder involvement is required.

Communication Plan

All public project reports and updates are being posted to the City's Website.

Environmental Implications

Construction and operation of the new Remai Modern will result in the consumption of non-renewable resources and the generation of GHG emissions.

Other Considerations/Implications

There are no policy, privacy, or CPTED implications.

Due Date for Follow-up and/or Project Completion

The next project update will be brought to the Standing Policy Committee on Environment, Utilities and Corporate Services in the late spring of 2016.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Report Approval

Written by: Mike Gutek, Director of Major Projects
Reviewed by: Catherine Gryba, General Manager, Corporate Performance Department
Jeff Jorgenson, General Manager, Transportation & Utilities Department
Approved by: Catherine Gryba, General Manager, Corporate Performance Department

Transit IT Roadmap

Recommendation

That the report of the General Manager, Corporate Performance Department dated February 9, 2016, be forwarded to City Council for information.

Topic and Purpose

This report responds to inquiries made by City Council regarding enhancements to Saskatoon Transit's service, and introduces the Transit IT Roadmap plan to address these and other concerns.

Report Highlights

1. A new service for Access Transit is expected to decrease cancellation rates and positively impact the denial rate.
2. A Business Intelligence initiative is underway to facilitate the goal of increasing Transit ridership.
3. Service improvements designed to enhance the real-time information available to citizens are underway.

Strategic Goals

This report supports the long-term strategy of leveraging technology and emerging trends to reach our goals, serve citizens and connect meaningfully with our stakeholders under the Strategic Goal of Continuous Improvement. The report also supports the long-term strategy of significantly increasing transit ridership by establishing transit as a viable option for transportation under the Strategic Goal of Moving Around.

Background

Access Transit currently experiences a high rate of customer trip cancellations and "no-shows" (customers not there when Access Transit arrives) representing a significant operational cost in excess of \$500,000 annually. These wasted trips also lead to an increased denial rate for trip bookings, decreasing the service provided to citizens.

The Administration reported on December 7, 2015, changes to the IT Division that resulted in strategic business partnerships in providing innovative business solutions for our citizens. The IT Division and Saskatoon Transit have developed a joint Technical Roadmap to guide activities over the next 4 years with a focus on 2016 initiatives.

In January of 2015, updates to Transit's technical infrastructure were put in place and a new service was implemented to display real-time bus locations to the public. At the same time, an updated version of the Transit online Trip Planner was made available. These services have proven to be unsatisfactory.

For 3 years, transit route and schedule information has been published under our Open Data framework and license. Numerous third party vendors consume this data and make it available to citizens in a variety of ways: web sites, “apps,” etc. However, to this date there has been no sharing of real-time information with any third party.

Report

Decreasing Cancellation Rates for Access Transit

Access Transit will implement a new service that will automatically telephone citizens who have booked trips well in advance so they may confirm their booking or cancel it if it is not needed. This service is expected to dramatically decrease the number of no-shows and will help ensure buses make valid trips, positively impacting the denial rate.

Implementation of this service is in progress and expected to complete in the third quarter of 2016. Access Transit will track improvements and report back in the 2nd quarter of 2017 as part of regular reporting.

Ridership Business Intelligence Initiative

Business Intelligence is a technology-driven process for analyzing data and presenting actionable information to help the business make informed decisions. A Business Intelligence initiative for Saskatoon Transit is underway and expected to complete in the second quarter of 2016 and will include:

- A review of Saskatoon Transit’s Key Performance Indicators and the data required to measure them.
- A comprehensive review of data that has been collected to date. This data is not fully understood or analysed and may contain errors. A plan to correct errors going forward is expected to be completed in the first quarter of 2016.
- Analysing ridership patterns and on-time performance to identify efficiencies in routes and stops, areas of high and low usage, and how traffic congestion impacts on-time performance.
- Analysing patterns of equipment usage and operator activities to identify areas for improvement

Real-time Transit Information

Providing real-time information to the public is a service that citizens have come to expect. Municipalities have struggled to deliver this type of service as it requires operational changes to the way public transit delivers services, as well as technological changes. Saskatoon Transit is experiencing similar challenges; to address these, Transit will:

- Implement a service to publish real-time transit data (“GTFS-RT”) under our Open Data license (scheduled for early in the second quarter of 2016).
- Engage in discussions with the vendor which could result in discontinuing support for the current web application in the second quarter of 2016.
- Examine the options available in the marketplace for apps and choose an appropriate solution for citizens in the long term.
- Review transit maintenance processes.
- Monitor where transit operators are using the system incorrectly and conduct appropriate follow-up.

Public and/or Stakeholder Involvement

- To date, responses to inquiries from third party organizations about real-time transit data have been to inform them that our intention is to publish real-time information, but no timeframe has been committed. This will be done as part of the communications plan.
- Publishing this information will proceed under the current Open Data license; we are in discussion to determine whether any changes to the Open Data license will be required as a result.

Communication Plan

A communications plan will be developed to target the local development community in an effort to provide them access to real-time data for transit under our Open Data license. Some elements may include email communication, one-on-one meetings and direct mail. Once the Open Data is being utilized to build tools and apps, which will improve the transit customer experience, a broader communications and marketing plan will be developed to inform existing Saskatoon Transit customers and the general public of new technological advances and digital products. The overall goal of the broader plan would be to retain existing ridership while attracting new Saskatoon Transit customers.

A communications plan will also be developed to reach Access Transit customers regarding the automated confirmation system. The majority of this communication will be done through direct mail, on transit signage and direct contact by transit staff.

Financial Implications

- The estimated cost of the automated telephone service for Access Transit is \$50,000, funded from Transit's operating budget.
- The estimated cost to publish real-time data is \$25,000, funded from Saskatoon Transit's operating budget.

Privacy Implications

The Privacy Officer has been consulted regarding the acceptable use of data for the Business Intelligence initiative. A full Privacy Impact Assessment (PIA) will be completed as part of the initiative.

Other Considerations/Implications

There are no policy, environmental, or CPTED implications or considerations

Due Date for Follow-up and/or Project Completion

Progress reports will be submitted in July, 2016

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Attachment

1. Cost analysis of Access Transit cancelled and no-show trips

Report Approval

Written by: Jonathan Moore-Wright, Information Management Coordinator
Harold Matthies, Transit IT Coordinator

Reviewed by: Paul Ottmann, Director of IT
James McDonald, Director of Saskatoon Transit

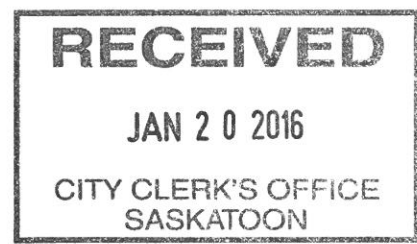
Approved by: Catherine Gryba, General Manager, Corporate Performance
Department
Jeff Jorgenson, General Manager, Transportation and Utilities
Department

Cost analysis of Access Transit cancelled and no-show trips

As of December 5, 2015

Month	2011	2012	2013	2014	2015
January	1,500	1,473	1,560	1,582	1,352
February	1,276	1,288	1,358	1,458	1,298
March	1,497	1,742	1,603	1,642	1,472
April	1,168	1,260	1,389	1,519	1,418
May	1,199	1,417	1,326	1,399	1,377
June	1,235	1,438	1,440	1,375	1,402
July	1,267	1,369	1,295	1,440	1,180
August	1,169	1,306	1,251	1,239	1,286
September	1,303	1,233	1,350	1,266	1,440
October	1,388	1,425	1,475	1,514	1,401
November	1,455	1,397	1,568	1,466	1,539
December	1,327	1,496	1,470	1,385	-
Total	15,784	16,844	17,085	17,285	15,165
Cost per trip	\$32.21	\$32.87	\$34.20	\$35.25	tbd
Cost of cancellations	\$508,402.64	\$553,662.28	\$584,307.00	\$609,296.25	\$ -

From: Brit MacDonald of Saskatoon Food Bank and Learning Centre
<brit.m@saskatoonfoodbank.org>
Sent: Wednesday, January 20, 2016 8:53 AM
To: City Council
Subject: Form submission from: Write a Letter to Council



Submitted on Wednesday, January 20, 2016 - 08:53
Submitted by anonymous user: 142.165.165.91
Submitted values are:

Date: Wednesday, January 20, 2016
To: His Worship the Mayor and Members of City Council
First Name: Brit
Last Name: MacDonald of Saskatoon Food Bank and Learning Centre
Address: 202 Ave C S
City: Saskatoon
Province: Saskatchewan
Postal Code: s7m 1n2
Email: brit.m@saskatoonfoodbank.org

Comments:
Hello,

This is a request to speak at the upcoming Standing Policy Committee on Environment, Utilities & Corporate Services Meeting on February 9th. A report on the use of waste elm wood for biomass heating will be presented to the committee by Joshua Quintal, which affects and includes the Saskatoon Food Bank and Learning Centre. We would like to present the results of our recent feasibility study, which investigated a Community Greenhouse Centre facility concept. As we enter the next phase of our process, we would like to present how our facility could make use of City of Saskatoon waste elm wood, and the resulting positive impact on operational costs and efficiency to the Saskatoon Food Bank. Thank you very much for your time and consideration. I can be reached at brit.m@saskatoonfoodbank.org, or at 306-664-6565. I look forward to hearing from you.

Best,
Brit MacDonald

The results of this submission may be viewed at:
<https://www.saskatoon.ca/node/398/submission/59990>

Generating Energy from Elm Wood

Recommendation

That the report of the General Manager, Corporate Performance Department dated February 9, 2016, be forwarded to City Council for information.

Topic and Purpose

The purpose of this report is to provide information outlining an opportunity for the City of Saskatoon (City) to handle elm and waste wood to innovatively divert waste from the landfill, provide low cost energy, and reduce the cost of civic programs that manage Saskatoon's urban forest.

Report Highlights

1. The first case of Dutch Elm Disease (DED) was found in Saskatoon in July 2015. The City manages DED and its urban forest through an annual pruning program.
2. Provincial regulations allow for the disposal of elm wood through burying or burning at an approved facility. Several hundred tonnes of wood is buried each year at the City landfill.
3. The wood typically buried at the landfill has value as an energy source which could provide heat or combined heat and power to a civic or private facility.
4. If wood is diverted from the landfill and burned for energy the City would reduce its reliance on natural gas for heating, recognize savings in landfill airspace and reduce landfill tipping fees paid by civic tree trimming programs.

Strategic Goals

This report addresses the Strategic Goal of Environmental Leadership, specifically waste diversion and achieving the Performance Target of diverting 70% of waste from the landfill. This report also supports the four-year priority to implement energy-efficient practices in City buildings, transportation and operations.

Background

On November 23, 2012, City Council approved funding from the Reserve for Capital Expenditures (RCE) to Capital Project #2183 – Greenhouse Gas Reduction Strategy for the investigation of a variety of energy-related opportunities. Specifically, \$50,000 was approved to review the feasibility of using elm and other waste wood to generate heat and/or power.

Report

Dutch Elm Disease

Dutch Elm disease (DED) is a serious disease caused by a fungal pathogen transported between trees on the body of elm beetles. The disease was introduced into North America in the 1930s, and has wiped out millions of elms across Canada and the United States. On July 21, 2015, one case of Dutch Elm Disease (DED) was confirmed in Saskatoon. The tree, located in the Queen Elizabeth neighbourhood, was immediately removed and sent to the Saskatoon landfill. Sampling of adjacent trees found no further infected trees.

Generated Energy from Elm Wood

Provincial regulations exist to prevent DED from spreading within Saskatchewan. The regulations state that no elm pruning can occur between April 1 and August 31 when the elm beetle is most active. Any elm wood that is pruned or otherwise removed from an elm must be immediately transported to the nearest permitted disposal site.

Permitted disposal includes burying the wood with soil or burning the bark. The City of Saskatoon landfill is a permitted disposal site where the wood is buried.

Saskatoon Pruning Program

To keep the City's urban forest vibrant and healthy, the Parks division maintains boulevard and park trees on a regular pruning cycle. Regular tree maintenance is essential for providing a healthy, sustainable, aesthetically pleasing urban forest. Removing dead, damaged and diseased branches help prevent insects and organisms from entering the tree. Saskatoon Light and Power also conducts tree pruning as part of their annual operations.

During times when elms are allowed to be pruned, the City and its contractors prune and dispose of 700-900 tonnes of wood waste, including elm, at the City landfill each year. In 2015, disposing of elm cost the pruning program approximately \$75,000 in tipping fees at the landfill.

Waste Wood Energy Availability

In 2013, the City commissioned the Saskatchewan Research Council (SRC) to conduct a study on the feasibility of using elm wood as a biomass energy source. SRC collected samples of the wood from Parks vehicles immediately after pruning and chipping. The physiochemical properties of the wood and its suitability as an energy source were determined. The 700-900 tonnes of wood landfilled when elm pruning is allowed contains approximately 3,200 MWh of heat energy. This would be enough, for example, to reduce the natural gas used at the Harry Bailey Aquatic Centre by nearly 85%.

The City is not the only source for waste wood. The total amount of wood delivered to the City Landfill each year for burying is approximately 1,600 tonnes.

Biomass Energy

A biomass energy system includes a boiler that uses wood chips or pellets to provide the energy required to heat a facility. There are several heating-only and combined heat and power systems that are proven in Canada (or in similar climates) to efficiently use biomass.

In Saskatoon, elm and other waste wood could be separated and processed in future waste facilities (for example, as a component of Recovery Park) rather than landfilled. Wood chips or pellets could then be transported to facilities for use in biomass energy systems. Modern biomass transport, storage and fuel delivery systems are efficient, clean and compact.

Generated Energy from Elm Wood

The Administration is not aware of an existing public or private facility in Saskatoon or surrounding area that has a biomass boiler large enough, or heating demand large enough to utilize all of the wood waste.

The Administration will therefore look for a variety of opportunities to divert the elm for energy generation within new or existing civic facilities such as the civic conservatory renovations, future COC facilities, future and existing Parks facilities (i.e. greenhouses), Harry Bailey Aquatic Centre, etc. The ideal opportunity will incorporate a biomass boiler into the design of a new facility so that the other components of the HVAC system could be sized and designed accordingly. Retrofitting a system to an existing building is also feasible and will produce savings, but is always more challenging.

Financial Implications

The Administration modeled a scenario for an existing civic aquatic facility to compare the costs of utilizing a biomass boiler instead of a conventional boiler. The biomass boiler showed annual savings in natural gas use of approximately \$75,000 and an additional \$75,000 in savings in avoided landfill tipping fees.

Preliminary estimates indicate the capital cost of a biomass boiler may be approximately \$400,000 more than a conventional boiler. While actual savings and costs for a project would be dependent on building heating loads and other design considerations, the modeled scenario suggests this innovative approach to utilizing waste elm and other wood would generate an economic pay-back.

Environmental Implications

The International Panel on Climate Change (IPCC) defines renewable energy as any form of energy from solar, geophysical or biological sources that is replenished by natural processes at a rate that equals or exceeds its rate of use. Whether or not biomass can be considered renewable energy depends on whether or not it is burned at a quicker rate than it is replaced through growth.

Year over year wood quantities from the elm program have not increased or decreased significantly and the trend is not expected to change unless DED begins to spread through the City. If the amount of elm trimmed each year is approximately equal to the new growth in the overall forest then the net greenhouse gas emissions would be zero.

The diversion of 700 – 900 tonnes of elm wood each year will help extend the life of the landfill and contribute to achieving the performance target of 70% diversion by 2023.

Public and/or Stakeholder Considerations

Preliminary discussions have been held with organizations that have shown an interest in using a portion of Saskatoon's urban forest trimmings and elm wood to heat their facilities, included is the Saskatoon Food Bank who recently completed a feasibility study on a Food Discovery Centre and community greenhouse. The Centre would include a 6,000 square foot greenhouse, classrooms, a kitchen, a social enterprise and offices. The Food Bank has expressed interest in using a portion of Saskatoon's urban

Generated Energy from Elm Wood

forest trimmings and elm wood to heat the facility and greenhouse (400 tonnes annually). The economics of operating a greenhouse in Saskatchewan's climate become much more favourable using a biomass fuel source, especially one that is typically landfilled.

Other Considerations/Implications

There are no policy, Communications, Privacy, or CPTED implications or considerations.

Due Date for Follow-up and/or Project Completion

The Administration will provide a report once a potential project has been identified. The potential to include elm and waste wood diversion at Recovery Park will be discussed in a future report on Recovery Park provided to the Standing Policy Committee on Environment, Utilities and Corporate Services in the fall of 2016.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Report Approval

Written by: Josh Quintal, Project Engineer, Energy and Sustainability Engineering, Environmental & Corporate Initiatives

Reviewed by: Chris Richards, Energy and Sustainability Engineering Manager, Environmental & Corporate Initiatives
Darren Crilly, Director of Parks
Tim Halstead, Director of Facilities and Fleet Management
Brenda Wallace, Director of Environmental & Corporate Initiatives
Randy Grauer, General Manager, Community Standards Department

Approved by: Catherine Gryba, General Manager, Corporate Performance Department

Administrative Report – Elm Wood Energy Project Update.docx

Award of RFP for Energy Performance Contracting (EPC) Owner's Consultant

Recommendation

That the Standing Policy Committee on Environmental, Utilities, and Corporate Services recommend to City Council:

1. That the proposal submitted by Econoler to be the City's Energy Performance Contracting Owner's Consultant for a total estimated cost of \$84,600 (including GST and PST) be accepted; and
2. That His Worship the Mayor and the City Clerk be authorized to execute the contract documents, as prepared by the City Solicitor under the Corporate Seal.

Topic and Purpose

The purpose of this report is to complete the award of the Request for Proposal (RFP) for an Energy Performance Contracting (EPC) Owner's Consultant that will provide specialized expertise to assist the City in the development of this new form of contract with an Energy Services Company (ESCO). The report also provides an update on additional meters installed at civic facilities to prepare for an EPC.

Report Highlights

1. The Administration recommends awarding the EPC Owner's Consultant service to Econoler, the company submitting the highest scoring proposal.
2. The experience Econoler has with ESCO's and the knowledge they bring of the requirements of a successful EPC will help reduce risk for the City.
3. The City of Saskatoon (City) has been preparing for its future work in EPC by installing additional meters in key civic facilities to identify savings opportunities, measure savings that will be generated through the EPC, and provide feedback to building operators and users in order to maintain savings over the long term.

Strategic Goal

The recommendation contained in this report supports the Strategic Goal of Environmental Leadership by implementing energy efficient technologies and practices in civic facilities.

Background

On December 2, 2014 City Council approved using an EPC approach for delivering utility and greenhouse gas savings through retrofits made to civic facilities. The approach described by the report included the hiring of a consultant to assist with planning the project and the installation of additional utility metering equipment.

Report

Award of RFP

On November 3, 2015, an RFP was issued to engage an Owner's Consultant to facilitate EPC development and the process of engaging an ESCO. Through an EPC project, the City can identify and implement improvements to civic facilities that will

achieve strategic goals, including cost savings. Proposals were received from the following companies:

- Econoler
- EPCetera
- TECH-MORE Sustainability Resources Ltd.
- Thurston Engineering Services
- Ernst & Young LLP
- EnviroVest Energy Ventures Inc.
- ICF International

The proposals were evaluated by a multi-divisional committee including Environmental and Corporate Initiatives, Facilities and Fleet Management, and Finance, using the following criteria points as outlined in the RFP:

50 points – Qualifications & Experience

30 points – Proposal Value – Financial Considerations

10 points – Proposal Value – Documents & Resources

10 points – Proposal Overall Completeness & Quality

Each of the evaluators made independent evaluations using a common scoring matrix. The highest scoring proponent was Econoler.

Metering Equipment

In addition to releasing and scoring the RFP for an Owner's Consultant, the Environmental and Corporate Initiatives, Facilities and Fleet Management, Saskatoon Light and Power, and Saskatoon Water Divisions collaborated on the installation of metering equipment in civic facilities that currently consume large amounts of electricity or water. A summary of the current status and brief examples of the reporting that is possible from the meters is provided in Attachment 1.

Metering increases the accuracy of project plans and business cases and helps reduce the risk of project underperformance by providing long term feedback on the performance of the retrofit. For example, automatic performance reports can now be sent to building operators on a regular basis to highlight any irregularities that may need to be investigated and corrected (i.e. water leaks, equipment working too hard, etc.).

Public and/or Stakeholder Involvement

The project is being managed by a multi-division team that includes Environmental and Corporate Initiatives, Facilities and Fleet Management, Solicitors, Finance and Purchasing. Local public vendors, contractors, and professional service providers may be engaged by the owners' consultant to determine budget costs, competencies, and interest to supply materials and services.

Communication Plan

Part of the role of the EPC Owner's Consultant will be to advise on public communication requirements. Once an ESCo is selected, a communication plan will be developed and will include input from the Owner's Consultant.

Financial Implications

Capital Project #2568-03 was created for the purpose of funding this project and has funding sufficient for the recommended work.

Environmental Implications

The implementation of EPC projects will reduce civic utility costs and greenhouse gas emissions. The scale of the retrofits that will occur has yet to be determined.

Preliminary planning has focussed on reducing utility use across twenty civic facilities by 20%. This would reduce greenhouse gas emissions by 4,600 tonnes per year and is equivalent to removing approximately 970 cars from our roadways each year.

Other Considerations/Implications

There are no policy, privacy, communications or CPTED implications or considerations to report at this time.

Due Date for Follow-up and/or Project Completion

It is expected that the Administration will report back to City Council at least twice in 2016 prior to entering into an Energy Performance Contract:

- A report recommending the EPC project acceptance criteria (e.g. payback period requirements) and overall plan for the EPC approach is anticipated by September; and
- A report recommending the terms for the release of an RFP to engage an ESCo, including the financial (e.g. borrowing) implications is anticipated by the end of December.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Attachment

1. Meters and Monitoring Update

Report Approval

Written by: Blaine Knoblauch, Project Engineer

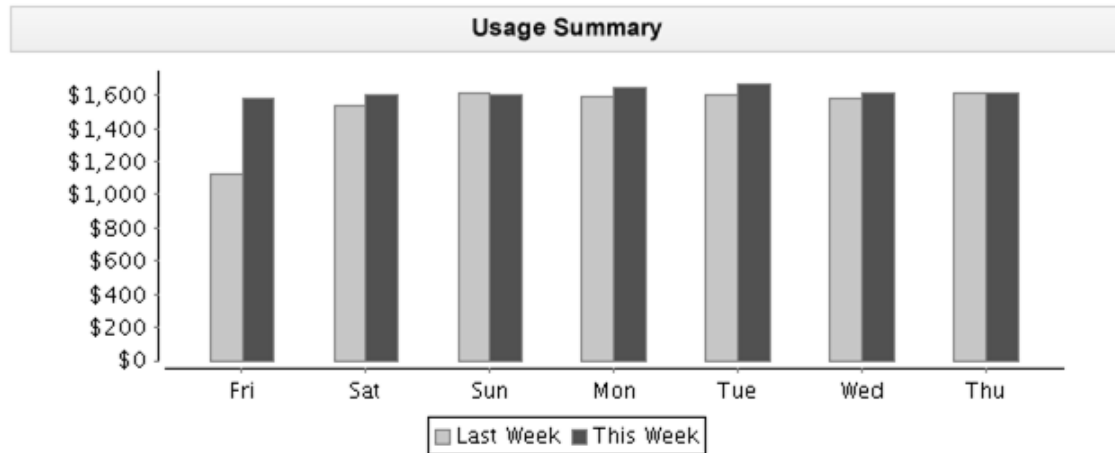
Reviewed by: Chris Richards, Energy and Sustainability Engineering Manager
Brenda Wallace, Director of Environmental and Corporate Initiatives

Approved by: Catherine Gryba, General Manager, Corporate Performance
Department

Administrative Report - Award of RFP EPC Owners Consultant.docx

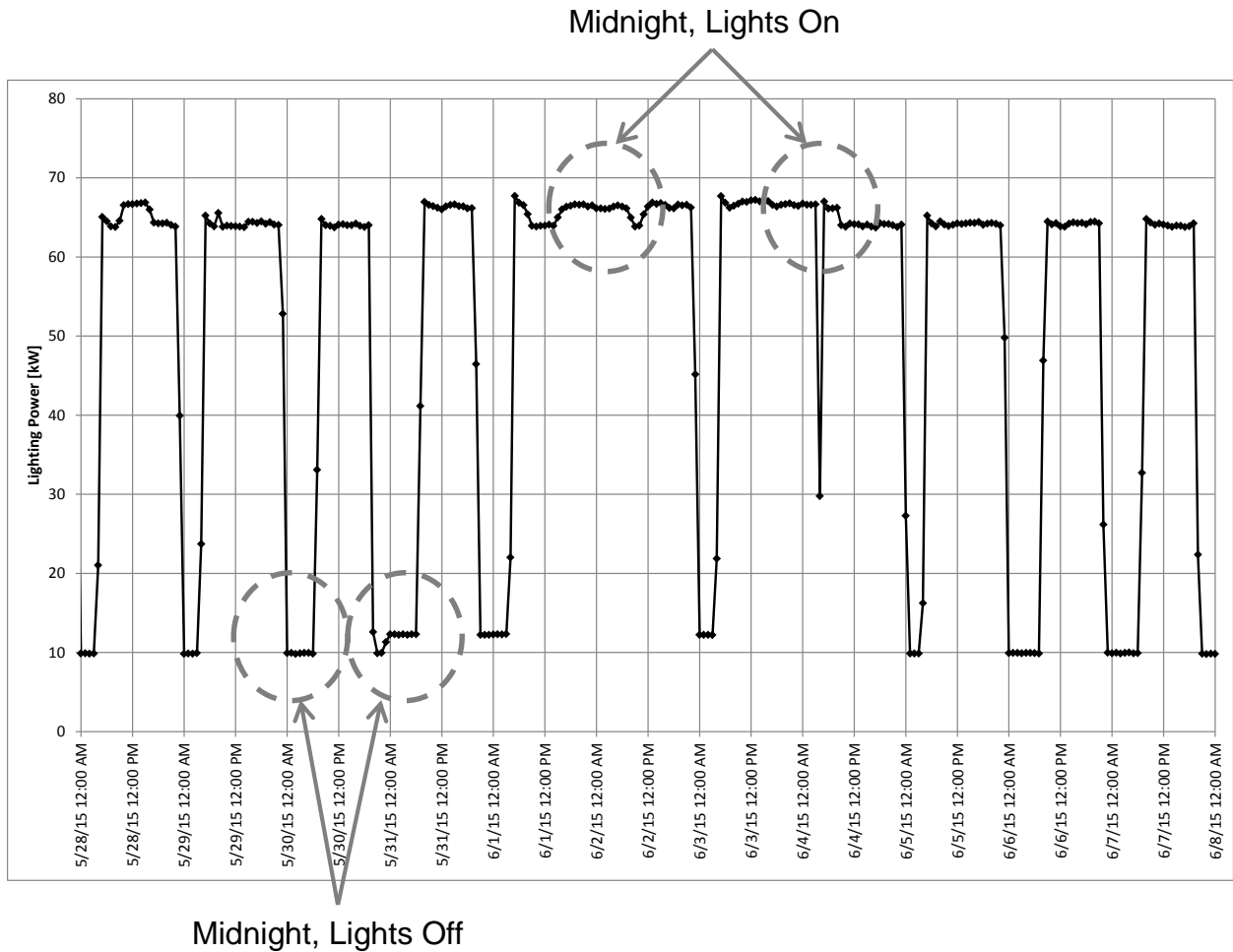
Meters and Monitoring Update

The following is a sample of the type of report that could automatically be generated and emailed to people that impact or manage utility costs in a facility. Actions can be taken to investigate operational problems suggested by changes in energy usage trend. A quicker response to implementing corrective action is enabled with this type of energy usage information. Operators are also shown the financial impact of increased energy use.

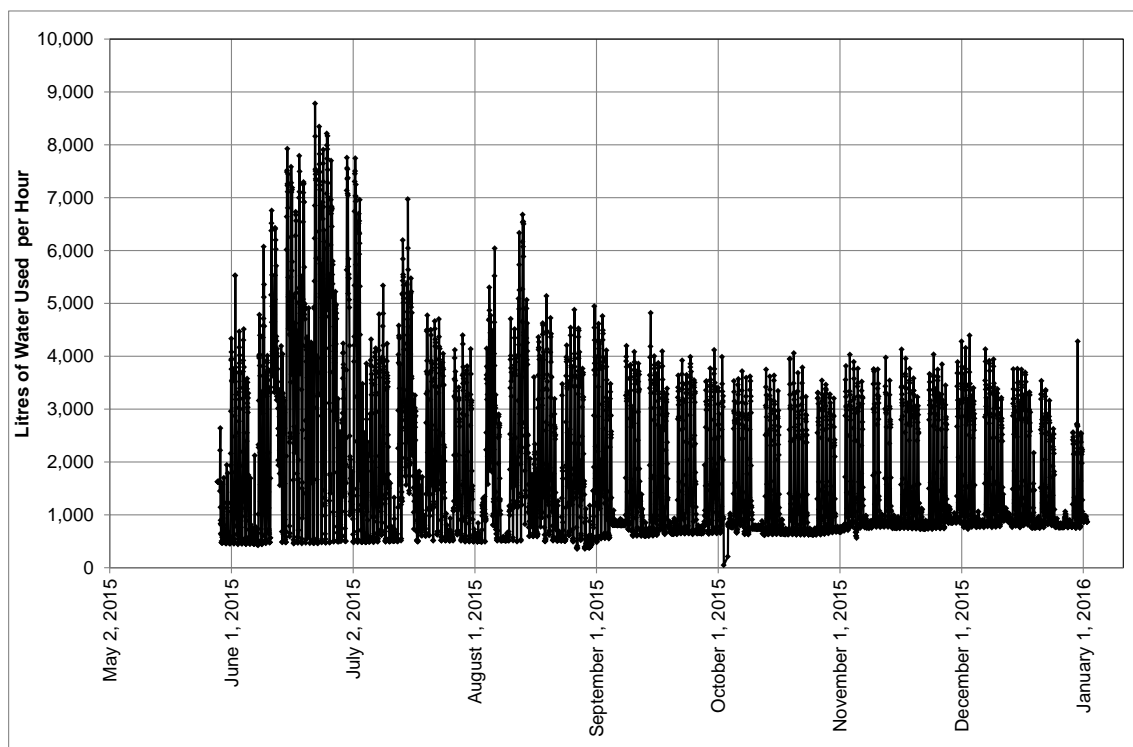


Measurement	Energy [kWh]	Cost per Week [\$]	% Change vs. Last Week	\$ Change vs. Last Week
Entire Building	94,990	\$11,333	6%	\$639
Pool Equipment	37,063	\$4,422	2%	\$89
Air Conditioning / Chiller	16,451	\$1,962	25%	\$394
Lights and Plugs (Area 1)	7,460	\$890	7%	\$57
Overhead Lighting	6,824	\$814	14%	\$101
Air Handling Unit 1	5,972	\$712	26%	\$146
Equipment (Area 2)	5,167	\$617	-8%	-\$53
Equipment (Area 3)	4,255	\$508	2%	\$7
Air Handling Unit 2	3,098	\$370	1%	\$4
Other	3,069	\$366	25%	\$122
Lights (Area 2)	2,621	\$313	10%	\$28

The following figure shows 11 days of electricity consumption for large overhead lights in a major civic facility. This metering report reveals that on two of the days the lights were left on overnight.



Saskatoon's City Hall spends over \$65,000 per year on water. The following figure shows the hourly water use of this facility.



Water use in City Hall almost never falls below 500 L per hour, day and night, even when there are no occupants in the building.

Having detailed information significantly reduces risk in pursuing energy and water saving through retrofits and supports buy in from operations staff. Communicating successful energy savings builds confidence and encourages operations staff to seek more opportunities for energy management. Problems that may occur with a retrofit system's performance is more readily identifiable.

Diagnostics is enhanced and solutions can be implemented in less time. A detailed analysis of the data, especially during specific operating conditions (e.g. water or electricity use on a holiday when no occupants are in the building) allows for more reliable calculations of expected savings. This is particularly the case when retrofitting equipment directly used by occupants (e.g. toilets, urinals, faucets) versus equipment used in other building systems (e.g. heating and cooling, cafeterias, hallway lighting, etc.).

WWTP – Asset Replacement – Primary Heating Study and Biogas Bypass – Award of Engineering Services

Recommendation

That the Standing Policy Committee on Environment, Utilities and Corporate Services recommend to City Council:

1. That the proposal submitted by Associated Engineering (Sask) Ltd. for engineering services for the Primary Heating Study, and the design and construction of a biogas bypass at a total upset fee of \$104,127.90 (including taxes) be approved; and
2. That the City Solicitor be requested to prepare the appropriate agreement and that His Worship the Mayor and the City Clerk be authorized to execute the agreement under the Corporate Seal.

Topic and Purpose

The purpose of the report is to obtain approval to award a contract to Associated Engineering (Sask) Ltd. (AE) to provide a study of the primary heating system at the Wastewater Treatment Plant (WWTP), as well as to provide detailed design, tendering, and construction engineering services to create a bypass for the main biogas header at the WWTP.

Report Highlights

1. A study of the primary heating system at the WWTP is required in order to provide direction for upgrades and expansion.
2. The main biogas header at the WWTP needs to be bypassed to allow for maintenance activities and mitigate any risks associated with a header failure.
3. A Request for Proposal (RFP) was advertised on November 30, 2015, for engineering services. Of the three proposals received, AE was rated as superior.

Strategic Goal

This project supports the Strategic Goal of Continuous Improvement by providing information and equipment which will increase the reliability, redundancy, and efficiency of the WWTP.

Background

The primary heating system is an important process of the WWTP which heats the primary buildings as well as the digester process. The digester process is the most critical part of the primary heating system, in that the digesters must be maintained at 30°C at all times.

WWTP – Asset Replacement – Primary Heating Study and Biogas Bypass – Award of Engineering Services

The WWTP main biogas header is responsible for the collection of all biogas produced off the digesters and is used to fire boilers. The collected biogas contains high levels of moisture, H₂S (very corrosive), and other particulates which lead to corrosion and maintenance challenges throughout the biogas header and associated equipment.

Report

Primary Heating System

Currently, the biogas header isolation valves do not function. These valves are critical to isolate components of the gas train for maintenance while keeping the digester system operational. A biogas bypass is required to divert gas from the main biogas header while maintaining digester operation. Construction completion is required by October 15, 2016.

Request for Proposal

An RFP was advertised on November 30, 2015, on SaskTenders and three proposals were received from the following consultants:

- Associated Engineering (Sask) Ltd. (Saskatoon, SK)
- Stantec Consulting Ltd. (Saskatoon, SK)
- Allnorth Consultants Limited (Saskatoon, SK)

Following a systematic evaluation of all proposals, the evaluation committee rated the proposal from AE as superior and confirmed it met the scope-of-work defined in the Terms of Reference.

Options to the Recommendation

An option would be to award the engineering services to a lower rated proponent.

Communication Plan

The proposed work will not produce odour or noise from the WWTP.

Financial Implications

The net cost to the City for the engineering services would be as follows:

Project Management	\$ 12,568.00
Heating System Study	28,174.00
Biogas Bypass Design	25,220.00
Engineering Services during Tender	2,928.00
Construction and Commissioning	<u>17,568.00</u>
Total Base Fee	\$ 86,458.00
Contingency (20%)	<u>17,291.60</u>
Sub-Total Upset Fee	\$103,749.60
GST (5%)	5,187.48
PST (5% of 30% of \$25,220-Detailed Design)	<u>378.30</u>
Total Upset Fee	\$109,315.38
GST Rebate	<u>(5,187.48)</u>
Net Cost to City	<u>\$104,127.90</u>

There is sufficient funding in Capital Project #0687-89 - WWT – Asset Replacement – Heating Building – Pumps/Piping/Process.

Environmental Implications

This project will not result in environmental implications outside of those associated with standard WWTP operations.

Safety/Crime Prevention Through Environmental Design (CPTED)

This project involves work on the roof of the digesters at the WWTP site, and at this time, has no aspects that need to be considered by CPTED.

Other Considerations/Implications

There are no public and/or stakeholder involvement, policy, or privacy implications

Due Date for Follow-up and/or Project Completion

The project will be completed by October 15, 2016.

Public Notice

Public Notice pursuant to Section 3 of Policy No. C01-021, Public Notice Policy, is not required.

Report Approval

Written by: Jared Nelson, Project Engineer, Saskatoon Water
Reviewed by: Larry Schultz, Engineering Services Manager, Saskatoon Water
Reid Corbett, Director of Saskatoon Water
Approved by: Jeff Jorgenson, General Manager, Transportation & Utilities
Department

EUCS JN – WWTP – Asset Replacement Primary Heating Study and Biogas Bypass AES.docx