Agenda – Council – February 22, 2017

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – January 30, 2017

Item No. 2 Approval of Contract Over-Expenditure No. 1 for Wilkes Reservoir North Cell Rehabilitation Bid Opportunity No. 930-2015

STANDING COMMITTEE RECOMMENDATION:

On February 8, 2017, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and submitted the following to Council:

1. That a contract over-expenditure in the amount of $613,239.00, plus GST and MRST, as applicable, be approved for Bid Opportunity No.930-2015 for Wilkes Reservoir North Cell Rehabilitation.

2. That the Chief Administrative Officer be delegated the Authority to approve future over-expenditures where there are sufficient funds in the approved budget and the total over-expenditure does not exceed $2,317,600.00 (20% of the original contract value).

3. That the Proper Officers of the City by authorized to do all things necessary to implement the intent of the foregoing.

Report – Standing Policy Committee on Water and Waste, Riverbank Management and the Environment – January 30, 2017

DECISION MAKING HISTORY:

EXECUTIVE POLICY COMMITTEE RECOMMENDATION:

On February 8, 2017, the Executive Policy Committee concurred in the recommendation of the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment and submitted the matter to Council.

STANDING COMMITTEE RECOMMENDATION:

On January 30, 2017, the Standing Policy Committee on Water and Waste, Riverbank Management and the Environment concurred in the recommendation of the Winnipeg Public Service and submitted the matter to the Executive Policy Committee and Council.

ADMINISTRATIVE REPORT

Title: APPROVAL OF CONTRACT OVER-EXPENDITURE NO. 1 FOR WILKES RESERVOIR NORTH CELL REHABILITATION
BID OPPORTUNITYNO. 930-2015

Critical Path: Standing Policy Committee on Water and Waste, Riverbank Management, and the Environment

AUTHORIZATION

Author	Department Head	CFO	CAO
G. K. Patton, P.Eng Manager of Engineering Services	M. Geer, CPA, CA Acting Director, Water and Waste Department	M. Ruta	D. McNeil

EXECUTIVE SUMMARY

The Wilkes Reservoir North Cell was originally constructed in 1960 and has been maintained and improved since being placed into service. A recent inspection of the reservoir identified areas of rehabilitation work that were required to maintain service.

A competitive bid opportunity for the identified rehabilitation work was advertised and the work was awarded to Graham Construction and Engineering LP. The AACE (Association for the Advancement of Cost Engineering) Class 1 estimate for the work was $15,230,000.00. Graham's price to complete the work was $11,588,000.00. The Council approved budget for the Pumping Stations and Reservoirs Structural Upgrades project is $17,945,000.00. A project contingency was included to account for risk and unforeseen conditions in the Council approved budget.

Additional project costs have been identified for items that will reduce the overall life cycle cost of the operation and maintenance of the Wilkes Reservoir and for work that could not be identified during detailed design. The increase in project costs of $613,239.00 plus GST, as applicable, exceeds the original assignment of $11,588,000.00 plus applicable GST by 5.0%.

This report recommends the approval of additional projects costs and also recommends the delegation of future additional project cost approvals as long as these do not exceed 20% of the original contract value or Council approved budget. Delegation of the approval of future construction costs will ensure timely decision making during an active construction project to maintain the project schedule and reduce overall project administration costs.

RECOMMENDATIONS

1. That a contract over-expenditure in the amount of $613,239.00, plus GST and MRST, as applicable, be approved for Bid Opportunity No.930-2015 for Wilkes Reservoir North Cell Rehabilitation.

2. That the Chief Administrative Officer be delegated the Authority to approve future over-expenditures where there are sufficient funds in the approved budget and the total over-expenditure does not exceed $2,317,600.00 (20% of the original contract value).

3. That the proper officers of the City by authorized to do all things necessary to implement the intent of the foregoing.

REASON FOR THE REPORT

Where the accumulated amount of the contract, including over-expenditures, exceeds five million dollars ($5,000,000) the approval of the Standing Policy Committee on Water and Waste, Riverbank Management, and the Environment is required (pursuant to Administrative Standard FM-002).

The increase in project costs of $613,239.00 plus GST, as applicable, exceeds the original assignment of $11,588,000.00 plus applicable GST by 5.0%.

IMPLICATIONS OF THE RECOMMENDATIONS

Funds in the amount of $17,945,000.00 are included in the 2013-2016 Capital Budgets for Pumping Stations and Reservoirs Structural Upgrades, Account Distribution No. 443 181000 200751 20050012YY Contractex.

HISTORY / DISCUSSION

The award of Bid Opportunity No.930-2015 for Wilkes Reservoir North Cell Rehabilitation to Graham Construction and Engineering LP in the amount of $11,588,000.00, GST extra, was approved by the Standing Policy Committee on Water and Waste, Riverbank Management, and the Environment on February 29, 2016.

The work of this contract consists of rehabilitation works at Wilkes Reservoir North Cell. Specific work items include:

- replacement of the existing reservoir building envelope;
- replacement of and repairs to deteriorated hollowcore roof slabs;
- replacement of existing beam bearing pads;
- repairs to leaks in the reservoir floor slabs;
- repairs to deteriorated roof beams;
- repairs to wall expansion joints; and
- installation of a roof temperature monitoring system.

The Wilkes Reservoir North Cell is divided into two (2) sections, an east section and a west section. Due to the volume of work, construction was scheduled to occur over two (2) years, with each section being rehabilitated separately. Stage 1 – rehabilitation of the west section is currently underway. Stage 2 – rehabilitation of the east section will occur in 2017.

The contract change orders covered by this over-expenditure report are listed in the Table 1 and detailed further in the text below.

Table 1: List of Applicable Change

Change Order No.	Description	Amount
1	Replace 167 hollowcore slabs instead of repair	$242,683.00
2	Credit for reduction in scope for washdown piping works	($42,512.00)
3	Revised roof jacking procedure	$66,919.00
4	Replacement of an additional 61 hollowcore slabs	$262,514.00
5	Removal of fasteners at expansion joints	$6,345.00
6	Revised EPDM roof membrane joint procedure	$23,890.00
7	Additional efforts to complete gel injection	$53,400.00
TOTAL		$613,239.00

Change Order #1

$242,683.00 is requested to pay for 167 additional hollowcore slab replacements. These slabs were identified for repair in the bid opportunity as a strategy to minimize construction costs. With submitted unit prices as reference and prior to the start of construction a slab repair vs replace value engineering process was completed as slab replacement costs were lower than expected. The analysis indicated that it was beneficial, on a life cycle basis, for the City to replace the identified hollowcore slabs. Slabs that are replaced will have a longer service life than those repaired. Future reservoir operation and maintenance costs would be reduced in a replace vs repair strategy. This cost includes a credit for the deletion of the repair work for these 167 slabs. This change applies to both Stage 1 and Stage 2 construction.

The over-expenditure for Change Order #1 was previously approved by the Manager of Engineering. The delegation of authority for approval of over-expenditures under FM-002 was revised around the time this request was made.

Change Order #2

The original Contract included the removal and re-installation of washdown piping used in reservoir cleaning operations. During construction a decision was made to replace the existing washdown piping with new piping, as the existing piping was in a more deteriorated condition than originally identified. It was decided to have City forces undertake the piping replacement in order to minimize the impact on Graham's construction schedule. A reduction of $42,512.00 was credited for the decrease in work. This credit is for both Stage 1 and Stage 2 construction.

Change Order #3

$66,919.00 is requested to pay for additional work associated with a revised roof jacking procedure. The original procedure specified in the contract was shown to be introducing unexpected stresses to the hollowcore roof slabs. A revised jacking procedure was devised; however the new procedure required the contractor to re-lift some locations where work had already been completed. This change applies to Stage 1 construction only. The contractor will be using the revised method for all of Stage 2 construction and it is not anticipated that additional costs will be incurred.

Change Order #4

$262,514.00 is requested to pay for the replacement of an additional 61 hollowcore roof slabs. The original work plan did not call for the repair or replacement of these slabs. During construction, when the building envelope was removed, these slabs were found in a deteriorated state that required replacement. The condition of some of the roof slab could not be identified during detailed design. This change is for Stage 1 construction only.

A project contingency has been included in the Council approved budget for work that could not be fully identified during detailed design. The project risk was known and mitigated by the inclusion of a project contingency in the Council approved budget. It is anticipated that additional slabs requiring replacement may be identified on the east section in 2017. The exact number of slabs will not be known until Stage 2 construction begins and the building envelope on the east section is removed.

Change Order #5

$6,345.00 is requested to pay for the removal of the fasteners at the roof expansion joints. When the original membrane covering the roof expansion joints was removed, protrusions from the membrane fasteners were left behind. These protrusions were not shown on the original drawings and were not identified in the tender documents. The protrusions were required to be removed prior to installation of the new roof membrane. This change applies to both Stage 1 and Stage 2 construction.

Change Order #6

$23,890.00 is requested to pay for a change in the joint detail for the installation of the new EPDM roof membrane. The installation method specified in the contract was revised by the contract administrator after a small section of the membrane had been installed to improve durability of the new membrane. The change applied to the remaining roof area and no re-work was required on the part of the Contractor. This change applies to both Stage 1 and Stage 2 construction.

Change Order #7

$53,400.00 is requested to pay for work required to repair a leak beneath the floor slab. The leak was identified for repair during the detailed design stage. During construction it was found that the volume of leakage was much higher than originally anticipated. Additional work was required to control the leakage in order to properly fix the leak. This additional work was beyond the scope of work identified in the contract. This change applies to Stage 1 construction only.

It is anticipated that additional change orders will be required to complete the Stage 2 work. The Department requests that the Chief Administrative Officer be delegated the authority to approve additional over-expenditures where there are sufficient funds in the approved budget and the total of these over-expenditures does not exceed $2,317,600.00. This will ensure timely

decision making during an active construction project to maintain the project schedule and reduce overall project administration costs.

There are sufficient funds in the approved Pumping Stations and Reservoirs Structural Upgrades Project for these costs.

The increase in project costs of $613,239.00 plus GST, as applicable, exceeds the original assignment of $11,588,000.00 plus applicable GST by 5.0%.

Engineering staff of this Department are satisfied that the $613,239.00 increase in project costs is reasonable and recommend approval.

The financial status of the Wilkes Reservoir North Cell Rehabilitation contract is as follows:

Contract Award Amount (includes MRST)		$11,588,000.00
Previous Over-Expenditure	$ 0.00	
Amount of this Recommendation	$613,239.00	
Total Estimated Value of Extra Work	$613,239.00	$ 613,239.00
Estimated Final Contract Amount		$12,201,239.00

The financial status of the Pumping Stations and Reservoirs Structural Upgrades project is as follows:

Authorized Capital		$17,945,000.00
Amount of Previous Awards or Expenditures	$14,798,543.76	
Amount of this Expenditure	$ 613,239.00	
Estimated Interim Financing Costs	$ 12,264.78	
Estimated Administration Costs	$ 7,665.49	
Total Estimated Cost	$15,431,713.03	$15,431,713.03
Estimated Residual for Remaining Projects		$ 2,513,286.97

FINANCIAL IMPACT

Financial Impact Statement

Date: December 29, 2016

Project Name:

First Year of Program **2016**

APPROVAL OF CONTRACT OVER-EXPENDITURE NO. 1 FOR WILKES RESERVOIR NORTH CELL REHABILITATION, BID OPPORTUNITY NO. 930-2015

	2016	2017	2018	2019	2020
Capital					
Capital Expenditures Required	$ 478,294	$ 154,875	$ -	$ -	$ -
Less: Existing Budgeted Costs	478,294	154,875	-	-	-
Additional Capital Budget Required	$ -	$ -	$ -	$ -	$ -
Funding Sources:					
Debt - Internal	$ -	$ -	$ -	$ -	$ -
Debt - External	-	-	-	-	-
Grants (Enter Description Here)	-	-	-	-	-
Reserves, Equity, Surplus	-	-	-	-	-
Other - Enter Description Here	-	-	-	-	-
Total Funding	$ -	$ -	$ -	$ -	$ -
Total Additional Capital Budget Required	$ -				
Total Additional Debt Required	$ -				
Current Expenditures/Revenues					
Direct Costs	$ 15,055	$ 4,875	$ -	$ -	$ -
Less: Incremental Revenue/Recovery	15,055	4,875	-	-	-
Net Cost/(Benefit)	$ -	$ -	$ -	$ -	$ -
Less: Existing Budget Amounts	-	-	-	-	-
Net Budget Adjustment Required	$ -	$ -	$ -	$ -	$ -

Additional Comments: Funds for this expenditure is available from the approved Capital Budgets for Pumping Stations and Reservoirs Structural Upgrades, Account Distribution No. 443 181000 200751 20050012YY Contractex . This project is financed from Retained Earnings.

"Original signed by L. Szkwarek, CPA, CGA"

Lucy Szkwarek, CPA, CGA
Acting Manager of Finance and Administration

js
23-Nov-16

CONSULTATION

In preparing this report there was consultation with:

Materials Management

OURWINNIPEG POLICY ALIGNMENT

02-2 Environment

SUBMITTED BY

Department: Water and Waste
Division: Engineering Division
Prepared by: Rob Carroll, P. Eng., Senior Project Engineer
Date: January 20, 2017
File No.: W-856

c: Director of Legal Services/City Solicitor, Legal Services Department (email**)**
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