Winnipeg
Audit Department
Service de vérification

Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass Audit

for the Period of January 1 to March 31, 2018

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AUDIT AT A GLANCE

RECOMMENDATIONS

No recommendations accompany this report.

Project Background

Stage 2 of the Southwest Rapid Transitway and Pembina Highway Underpass is one of the largest capital projects that the City has embarked upon. Appropriate communication is important to allow key stakeholders to fulfill their roles in relation to the project; it also keeps the public informed on project performance.

The Audit Department will be releasing quarterly audit reports that provide assurance on the reporting processes and selected key project management areas throughout the construction of the project. This report is for Q1 2018, covering the period January 1 to March 31, 2018.

Current State of the Project

Construction for the Project is underway. Plenary Roads Winnipeg has taken responsibility for the design, construction, financing, operation, maintenance and rehabilitation of the infrastructure for the next thirty years. The City's project management team is responsible for project oversight.

Findings

The Public Service has produced the appropriate legislated and agreed upon reports, as well as public financial status updates for the Project from January 1 to March 31, 2018.

The Public Service has managed risk for the project in accordance with City project management requirements from January 1 to March 31, 2018.

Approved change orders for the period of January 1 to March 31, 2018 were deemed reasonable, and are within project budget and scope.

AUDIT BACKGROUND

The audit of this Project is to provide timely assurance on key project management areas on a proactive basis.

- Stage 2 of the Southwest Rapid Transitway and Pembina Highway Underpass ("the Project") is one of the largest capital projects that Winnipeg has initiated to date. An audit of the Project was added to the City Auditor's *Audit Plan 2015 – 2018* in order to provide timely assurance on key project management areas on a proactive basis. Our audit work began after the procurement phase of the Project due to a fairness monitor being secured to provide oversight on the procurement process (a requirement of the now repealed *Public-Private Partnerships Transparency and Accountability Act*).
- The audit plan was adopted by Council on July 15, 2015.
- Background on the Project is included in **Appendix 1**.
- Our audit methodology is located in **Appendix 2**.
- **Appendix 3** provides a flowchart of the audit process.
- Our risk assessment criteria for each audit area are provided in **Appendix 4**.

AUDIT OBJECTIVES

We had three objectives for this quarterly audit

- The objectives of this quarterly audit report were:
  - To provide assurance that appropriate reporting is occurring for the Project based on regulatory requirements, City policies and procedures.
  - To provide assurance that appropriate risk management is occurring in the Project.
  - To determine whether change orders are reasonable, within project scope and budget.

CONCLUSIONS

The reports required by legislation, by-law, administrative standards, and contractual agreements have been issued by the Public Service.

- The Public Service has submitted the formal reports required for this project during the period of this audit report.
- The following report was reviewed for the period of this audit:
  - "Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Quarterly Project Status Report, Project ID. 4230010514, No. 14 for the Period Ended March 31, 2018"
- The report was compared to the guidance given for such reports and was found to meet the standards of said guidance.
- Financial costs reported to the Standing Policy Committee on Finance were found to be in accordance with the generally accepted accounting principles on cost reporting issued by Canada's Public Sector Accounting Board and, in our opinion, fairly presented in all material respects the actual costs incurred for the Project for the quarter ending March 31, 2018.

Project management activities have met risk management requirements provided in the City's Project Management Manual.

- The risk management activities have met the requirements outlined in the City's Project Management Manual. Documentation that tracked risks was reviewed, including meeting minutes and the issues log.
- The risk allocation summary in the Fairness Monitor's Report summarizes the risk distribution for the Project. We have included a reproduction of the summary in **Appendix 5**.
- The private partner for the Project has also developed a risk management plan and risk registry for the Project, which is being updated on a timely basis.

Reviews and approvals of change orders have followed established processes.

- We observed that approved changes were reasonable based on the intended scope of the Project.
- The total amount spent on change orders to March 31, 2018 is just over $2 million of the $69 million contingency budget for the Project.

PROJECT REPORTING ANALYSIS

1.1 Reporting Requirements

Issue

- Has the Public Service communicated the proper reports required by legislation, by-laws, City of Winnipeg policies and standards, and project agreements?

Conclusions

- The Public Service has published the reports required by legislation, by-laws, policies, standards and agreements over the period of review for this audit report. We have performed limited testing on the information in the reports released and outlined below, and have found the information tested to be accurate.

Analysis

- The following reports are ongoing or are forthcoming for the Project for legislated and contractually agreed upon matters:
  - Actions that are outside the delegated authority of the Public Service (such as expropriation of lands, procurement in excess of delegated authority, or over expenditure reports)
  - Quarterly reporting to the Standing Policy Committee on Finance
- For the period of January 1 to March 31, 2018, the following report was required, and was published for the Project:
  - "Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Quarterly Project Status Report, Project ID. 4230010514, No. 14 for the Period Ended March 31, 2018"[1] (required by *Administrative Standard FM-004: Asset Management*)
    - The report presents the financial position and significant project updates for the Project up to March 31, 2018.
- Our audit work included examination of the report in relation to the legislated, regulated or agreed-upon requirements to communicate such reports. Limited testing of the accuracy of information included in the report was also completed based on our risk assessment of whether such information could be misstated.
- For this quarterly report, we audited the actual costs reported in the quarterly status update submitted to the Standing Policy Committee on Finance (see **Appendix 6**). In our opinion, the actual costs reported were fairly presented in all material respects, and were reported in accordance with generally accepted accounting principles issued by the Canadian Public Sector Accounting Board.
- To avoid potential misunderstandings, *Government Auditing Standards* require that we address items that could potentially be assumed to be within the scope of our audit. An administrative report was issued to Council on February 22, 2018 requesting a budget increase for the Jubilee Rapid Transit Station. This station relates to work performed for SWRT Stage 1, and is not related to SWRT Stage 2. As such, the report is outside the scope of our audit.

[1] Submitted as information to the Standing Policy Committee on Finance in its June 26, 2018 meeting.

RECOMMENDATION			
No recommendation accompanies this analysis.			
RISK AREA	Information Resources	**ASSESSMENT**	Moderate
BASIS OF ASSESSMENT	Reports that are not distributed or that contain inaccurate information affect stakeholders' ability to perform their roles, and could also affect legal compliance or funding agreements. To mitigate this risk, the Public Service has formed an experienced project management team that works closely with all interdependent departments to address all project management knowledge areas that require reporting.		

PROJECT MANAGEMENT KEY AREAS ANALYSIS

2.1 Risk Management Activities

Issue

- Has the project management team followed the risk management guidance given in the City's Project Management Manual?

Conclusions

- The Project management activities carried out have met the requirements of the City's Project Management Manual.

Analysis

- The City's Project Management Manual ("PMM") is required to be applied to all capital projects undertaken by the Public Service. The PMM details a project management methodology, and also states that the methodology used should be tailored to the specific project.
- Under a public-private partnership arrangement, the majority of the risks for costs, scope, schedule, and quality are transferred to the private partner. This leaves the City with a limited amount of risk. The City still retains risks on regulatory changes related to construction of the transitway, scope changes requested by the City, termination of agreement, maintenance of connecting roadways, and bus operations on the transitway. We have reproduced the Fairness Monitor's illustration of the risk distribution for the Project in **Appendix 5**.
- The risk management guidance in the PMM focuses on identifying, planning for, managing, and communicating risks. We observed that the City's project management team has an issues log that is regularly updated. We observed through meeting minutes that project risks are regularly discussed in project team meetings and Major Capital Project Steering Committee meetings. Significant risks and mitigation strategies have been included in the quarterly project status report to SPC on Finance for the general awareness of the committee. These practices are consistent with the guidance of the City's Project Management Manual.
- We observed that Plenary Roads Winnipeg has provided the Public Service with a project risk management plan and monthly reports that outline the anticipated risks in the projects, the mitigation strategies for the risks, and the estimated residual risks remaining after the mitigation strategies. This practice is consistent with generally accepted project management practices (such as the *Project Management Book of Knowledge* issued by the Project Management Institute) and is also consistent with the City's Project Management Manual.

RECOMMENDATION			
No recommendation accompanies this analysis.			
RISK AREA	Business Process	**ASSESSMENT**	Moderate
BASIS OF ASSESSMENT	Inadequate risk management could reduce the projected value for money savings for the Project.		

2.2 Change Order Status

Issue

- Were approved change orders for the period of January 1, 2018 to March 31, 2018 reasonable, and are costs within the established contingency?

Conclusions

- Approved changes were reasonable, within budget and intended project scope.

Analysis

- Change orders (COs) are part of the scope management and cost management processes. If change orders are not properly managed, they can pose significant risks for a project.
- The increase in change orders from January 01, 2018 to March 31, 2018 totaled approximately $997,000.
- The largest two COs making up the majority of the $997,000 change related to railway and utility design changes. Based on a review of the information received, the COs were deemed to be reasonable.
- Change orders totaled $2.09 million as at March 31, 2018. These are within the established contingency of $69 million for the Project.
- Change order reviews in future audit reports will depend on the nature and significance of the changes. A summary of COs will be provided in our final quarterly report.

RECOMMENDATION			
No recommendation accompanies this analysis.			
RISK AREA	Business Process	**ASSESSMENT**	Moderate
BASIS OF ASSESSMENT	Inadequate review and approval of change orders could have a negative impact on the Project's budget and/or scope.		

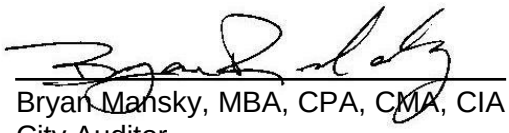
INDEPENDENCE

The Audit Department is classified as an independent external auditor under *Government Auditing Standards* due to statutory safeguards that require the City Auditor to report directly to Council, the City's governing body, through the Audit Committee.

The Audit Department team members selected for the audit have all attested that they do not have any conflict of interest related to the audit's subject matter.

ACKNOWLEDGEMENT

The Audit Department wants to extend its appreciation to all of the stakeholders who participated in this audit and especially to City's project team for their time and cooperation.



Bryan Mansky, MBA, CPA, CMA, CIA
City Auditor

November 2018
Date

APPENDIX 1 – Project Background

The Southwest Rapid Transitway (Stage 2) and Pembina Underpass Project

- Stage 2 of Winnipeg's first rapid transit corridor, and the expansion of Pembina Highway under the Jubilee Overpass, ("the Project") was approved by Council on June 25, 2014. The Project is being delivered under a public-private partnership methodology.
- After a competitive bidding process, an agreement was signed with Plenary Roads Winnipeg to design, build, finance, operate and maintain the infrastructure at an estimated total cost of $467 million.
- The scope of the Project includes the extension of the current southwest transit corridor (Stage 1) from Jubilee Avenue to the University of Manitoba. This extension is approximately 7.6 kilometers long and will include the construction of three new bridges (one for a railway and two for the transitway), two overpasses (for the transitway over McGillivray Boulevard and the CN Letellier rail line and spur lines), the reconstruction of Southpark Drive, two new drainage pump stations, a new pedestrian ramp at Investor's Group Field, a reconstructed bus staging area at the University of Manitoba, two new "Park and Ride" facilities, nine new transit stations, and an active transportation pathway along the entire length of the transitway.
- The Project also includes the widening of the northbound side of Pembina Highway under the Jubilee overpass from two to three lanes along with pedestrian and cycling facilities on both sides of Pembina Highway.

Project Funding

- The financing for the Project is:

Contributing Party	Contribution	Percent
City of Winnipeg	$ 181,400,000	39%
Province of Manitoba	187,000,000	40%
Government of Canada	93,300,000	20%
Canadian National Railway Co.	5,600,000	1%
Total	$ 467,300,000	

Reporting

- The following reports are ongoing or are forthcoming for the Project for legislated and contractually agreed upon matters:
  - Actions that are outside the delegated authority of the Public Service (such as expropriation of lands, procurement in excess of delegated authority, or over-expenditure reports)
  - Quarterly reporting to the SPC on Finance

APPENDIX 2 – Audit Methodology

MANDATE OF THE CITY AUDITOR

- The City Auditor is a statutory officer appointed by City Council under *The City of Winnipeg Charter*. The City Auditor is independent of the Public Service and reports directly to Executive Policy Committee, which serves as the City's Audit Committee.
- The City Auditor conducts examinations of the operations of the City and its affiliated bodies to assist Council in its governance role of ensuring the Public Service's accountability for the quality of stewardship over public funds and for the achievement of value for money in City operations.
- Once an audit report has been communicated to Council, it becomes a public document.

PROJECT RISK ANALYSIS

- Communication is essential for successful projects. Some of the most important communication in large-scale public capital projects occurs in the form of public reporting; however, few industry organizations give guidance on what exactly should be included in project performance reports. Reporting is mainly left to be agreed upon by project stakeholders, and much is left to the professional judgment of the project management teams. Improper communication can hold up projects or cause wasted efforts. Therefore, proper communication practices are essential to ensure that projects run smoothly and efficiently.
- Individual audit area risk assessments are provided for each issue discussed. The assessments discuss and detail the residual risk for issues after considering the City's mitigating risk controls.

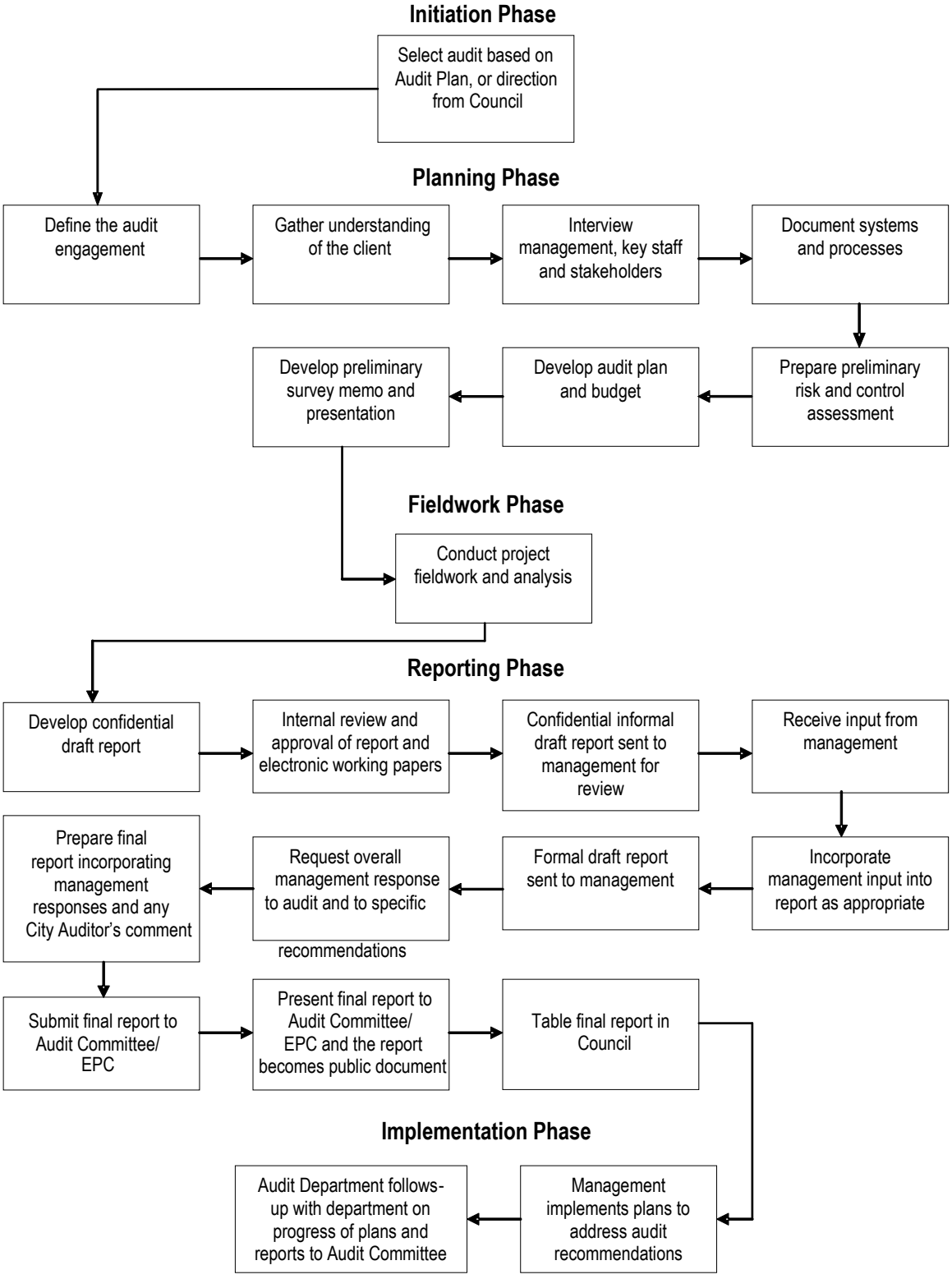
SCOPE

- The scope of our audit includes project communication management over the course of the project. The scope of our quarterly audit reports also includes the reporting on key management areas (such as risk, quality, schedule, and cost) as the Project progresses.
- Our audit runs concurrently with the project over the duration of the project, and reports are released on a quarterly basis.

APPROACH AND CRITERIA

- We conducted our audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient appropriate evidence to provide a reasonable basis for our observations and conclusions, based on our audit objectives. We believe the evidence we have obtained provides a reasonable basis for our observations and conclusions.
- To gather sufficient appropriate evidence for our audit, we reviewed Manitoba's legislated requirements for public-private partnership reporting, the City of Winnipeg's documented guidance for capital project reporting, and the public reporting requirements set out in funding and capital project management agreements. We also researched industry standards and guidance on capital project monitoring and reporting. We then conducted our fieldwork, which compared the public reporting for the project for the period covered by this audit report to all of the outlined guidance.
- The guiding documents we used include:
    - *The Public-Private Partnerships Transparency and Accountability Act* of Manitoba
    - *The Environment Act* of Manitoba
    - *The City of Winnipeg Charter* for Council's and its committees' legislated roles in relation to capital project decision making
    - *Administrative Standard FM-004: Asset Management* (and its precursors throughout the project)
    - Agreements with federal and provincial funding partners (P3 Canada, and the Government of Manitoba) and contracted service providers (Plenary Roads Winnipeg Transitway LP)
- Industry capital project monitoring and reporting practices we researched included:
    - Recommended practices 17R-97 and 56R-08 of The Association for the Advancement of Cost Engineering (AACE)
    - Accounting principles published by CPA Canada
    - *Effectiveness Reporting and Auditing in the Public Sector* published by the Canadian Comprehensive Auditing Foundation (CCAF)
    - Publicly available reporting information for the National Project Management System (NPMS)
    - *A Guide to the Project Management Body of Knowledge (PMBOK® Guide) Fifth Edition*
    - Projects IN Controlled Environments (PRINCE2)

APPENDIX 3 – Audit Process



APPENDIX 4 – Risk Assessment Worksheet

Potential Impacts / Likelihood	Insignificant - None or minor change in services, project or processes - Very limited exposure of sensitive information - Very minor, non-permanent environmental damage - Financial impact < $100K	Minor - Minor change in achievement of service objectives - Limited exposure of sensitive information - Minor, non-permanent environmental damage - Financial impact $100K – $500K	Moderate - Moderate change in delivery of essential services - Exposure of limited amount of confidential information - Moderate environmental damage - Financial impact $500K – $1M	Major - Significant change in delivery of essential services - Exposure of significant amount of confidential information - Significant change in quality of life indicators - Major environmental damage - Financial impact $1M – $10M	Extreme - Unable to perform essential services for extended period Exposure of critical confidential information - Very significant change in quality of life indicators - Significant damage to environment - Financial impact >$10M
Almost certain (Excepted to occur unless circumstances change)	M	M	H	C	C
Likely (Probably occur in most circumstances)	M	M	H	C	C
Possible (Might occur under different circumstances)	L	M	M	H	H
Unlikely (Could occur if circumstances change)	L	L	M	H	H
Rare (May occur in exceptional circumstances)	L	L	M	M	M

Legend

C Critical risk:	Requires urgent action, monitor and review at least weekly by Senior Management and COO, inform CAO and Committee of Council
H High risk:	High impact, monitor and review at least quarterly by management, inform COO
M Moderate risk:	Monitor and review at least quarterly by management
L Low risk:	Review periodically, no explicit action required.

APPENDIX 5 – Risk Allocation Summary

Risk	Retained by City	Transfer to Project Co	Shared	Notes on Any Changes to Risk as Previously Proposed
A. General				
1. Compliance with applicable law and standards		✓		N/A
2. Designated change in law	✓			
3. Changes in applicable law		✓		N/A
4. Changes in standards			✓	N/A
5. Permits, Licenses and Approvals (Including CN and Manitoba Hydro approvals)			✓	N/A
6. Access to Lands, Encumbrances, Liens			✓	N/A
7. Geotechnical		✓		N/A
8. Contamination			✓	N/A
9. Defects in Existing Infrastructure			✓	N/A
B. Design and Construction				
10. Design development (Detailed design)		✓		N/A
11. Construction management delays		✓		N/A
12. Construction latent defects		✓		N/A
13. Construction warranty for Maintenance-Exempt Work		✓		N/A
14. Scope changes initiated by City during construction	✓			N/A
15. Adverse weather conditions		✓		N/A
16. Labour relations			✓	N/A
17. Safety and security		✓		N/A
18. Stadium Access Works		✓		N/A
19. Utility Work			✓	• Project Co is responsible for all utility work for the Project, including Manitoba Hydro utility relocation work, however a cost sharing regime is in place as described below. o The City is responsible for reimbursing Project Co for certain utility costs that exceed a pre-determined baseline amount established by the City, subject to Project Co's obligation to mitigate such costs. o Project Co is entitled to relief from the City in the event that Manitoba Hydro fails to perform its obligations in accordance with the applicable utility agreement and causes delay to Project Co in achieving Substantial Completion.

APPENDIX 5 – Risk Allocation Summary (Continued)

Risk	Retained by City	Transfer to Project Co	Shared	Notes on Any Changes to Risk as Previously Proposed
20. CN Rail Interface			✓	• Project Co is responsible for all interface with CN Rail to compel them to fulfil their obligations, with the City required to provide assistance to resolve non-performance by CN. • Project Co is entitled to relief from the City in the event that CN Rail fails to perform its obligations that causes delays to Project Co in achieving Substantial Completion.
21. Traffic Management		✓		• Project Co is subject to payment deductions for lane closures during the construction period that exceed their target number of closure days as per their proposal.
22. Rectification of deficiencies		✓		N/A
23. Commissioning		✓		N/A
C. Maintenance and Rehabilitation				
24. Operational and preventive maintenance (Stage 1 and Stage 2)		✓		N/A
25. Rehabilitative maintenance – Stage 1	✓			N/A
26. Rehabilitative maintenance – Stage 2		✓		N/A
27. Winter Maintenance		✓		N/A
28. Bus operations – Stage 1 and Stage 2	✓			N/A
29. Maintenance of roadway connections between the Transitway and street system	✓			N/A
30. Default of Operator or Project Co		✓		N/A
31. Inflation risk			✓	N/A
32. Asset residual		✓		N/A
D. Force Majeure				
33. Force Majeure			✓	N/A
E. Relief Events				
34. Relief Events			✓	N/A
F. Termination of Project Agreement				
35. Termination for convenience of City	✓			N/A
36. Termination for default of Project Co		✓		N/A
37. Termination for Force Majeure			✓	N/A

Source: P1 Consulting (2016). *City of Winnipeg Request for Proposals to Design, Build, Finance, (Operate) and Maintain the Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass: Fairness Monitor's Report*. Retrieved from winnipegtransit.com.

APPENDIX 6 – Actual Costs Presented in Financial Status Reports

Appendix B – Financial Forecast

Appendix B - Southwest Rapid Transitway (Stage 2) & Pembina Highway Underpass Financial Forecast *
As at March 31, 2018

Project Component Deliverables	Budget (in 000's)			Actual Costs To Mar 31, 2018	Expenditure Forecast (in 000's)					Surplus (Deficit) From Amended Budget	Variance Last Report	Change in Variance
					Projected Costs							
	Adopted Budget	Council Approved Change**	Amended Budget		2018	2019	2020	2021 and Beyond	Total Forecasted Costs			
Engineering, Design and Other	$ 13,000	$ (1,694)	$ 11,306	$ 7,762	$ 1,764	$ 1,780	$ -	$ -	$ 11,306	$ -	$ -	$ -
Construction [1]	$ 476,750	$ (130,000)	$ 346,750	$ -	$ -	$ 210,043	$ 8,350	$ 128,357	$ 346,750	$ -	$ -	$ -
Land Acquisition	$ 23,000	$ 10,000	$ 33,000	$ 26,619	$ 6,381	$ -	$ -	$ -	$ 33,000	$ -	$ -	$ -
Internal Financing / Overhead Costs	$ 5,550	$ 1,694	$ 7,244	$ 1,736	$ 2,191	$ 3,317	$ -	$ -	$ 7,244	$ -	$ -	$ -
Contingency [2]	$ 69,000	$ -	$ 69,000	$ -	$ -	$ -	$ -	$ 68,952	$ 68,952	$ 48	$ 48	$ -
Change Order	$ -	$ -	$ -	$ 48	$ -	$ -	$ -	$ -	$ 48	$ (48)	$ (48)	$ -
Total Project Budget [3]	**$ 587,300**	$ (120,000)	$ 467,300	$ 36,165	$ 10,336	$ 215,140	$ 8,350	$ 197,309	$ 467,300	$ -		
% of Project Budget Spent (Actual Costs to Date / Adopted & Amended Budget)	6%		8%									

* Amended budget and actual costs to date have been agreed to the City's general ledger and Monthly Capital Expenditures Report.

** Amended Budget as reflected in Transit's 2018 Capital Budget submission.

1) Construction projection represents the estimated payment at substantial completion (60%) and the repayment of the remaining capital portion (40%) stated in nominal dollars over the 30 year maintenance period.

2) Change Orders in the amount of $2.554 million (capital) and $137k (operating & maintenance) have been approved with Plenary Roads Winnipeg of which $48,307 has been processed and reflected above. The remaining approved Change Orders will be reflected above as completed.

3) The 30-year Annual Service Payments (ASP) are not included in Total Project Budget with the exception of the 40% nominal construction amount (Note 1). The City anticipates cost sharing with the Province of Manitoba related to operations and maintenance. The forecasted amount for the total ASP in 2020 is $14.46 million for debt service, operation and maintenance and other annual expenditures. Operation and maintenance payments increase with inflation.

Of the total forecast for ASP of $493.1 million, $353.0 million relates to debt service payments, $123.9 million relates to operation and maintenance of the corridor over the 30 years, and $16.2 million relates to other annual expenditures.

Source: Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Quarterly Project Status Report, Project ID. 4230010514, Quarterly Project Status Report No. 14 for the Period Ended March 31, 2018.