Winnipeg
Audit Department
Service de vérification

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

for the Period of October 1 to December 31, 2016

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AUDIT AT A GLANCE

RECOMMENDATIONS

No recommendations accompany this report.

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.

Findings

The Public Service has produced the appropriate legislated and agreed upon reports, as well as public financial status updates for the Project, from October 1 to December 31, 2016.

The Public Service has managed risk for the project in accordance with City project management requirements from October 1 to December 31, 2016.

The scope of the Project has remained constant while the estimated costs have been reduced from $590 million to $467 million.

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.

AUDIT BACKGROUND

- 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 Public-Private Partnerships Transparency and Accountability Act*).
- The City Auditor's audit plan was adopted by Council on July 15, 2015.

AUDIT OBJECTIVES

- The objectives of this quarterly audit report are:
  - To provide assurance that appropriate reporting is occurring for the Project based on regulatory requirements, City policies and procedures, and agreements with third parties.
  - To provide assurance that appropriate risk management is occurring in the Project.
  - To provide assurance on the scope of the Project in relation to the estimated cost from $590 million to $467 million.

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. Our risk assessment criteria are shown in **Appendix 1.**

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. This is our fourth report, which covers the period of October 1 to December 31, 2016.

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 compared the public reporting for the project for the period covered by this audit report to the reporting required by regulation, City policies and procedures, and third party agreements.
- **Appendix 2** provides a flowchart of the audit process.

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 reports reviewed for the period of this audit included:
  - "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"
  - "Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass" Capital Project Detail Sheet in the 2017 Preliminary Budget
  - "Proposed Expropriation Settlement – Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Holding #27 – 1500 Parker Ave - Catia Aparecida Macieira (formerly Brigham)"
  - "Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Financial Status (Project No. 4230010514) Report No. 9 for the Period Ending December 31, 2016"
- The reports were compared to the guidance given for such reports and were found to meet the standards of said guidance.
- Financial costs reported to the SPC 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 the actual costs incurred for the Project for the period ending December 31, 2016.

***Project management activities meet 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 and verbal updates discussing and tracking risks were reviewed including meeting minutes and issue logs.
- 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 3**.

The Project scope has remained constant while the estimated costs of the Project have decreased by $120 million.

- The City signed an agreement with Plenary Roads Winnipeg to design, build, finance, operate and maintain the transitway over the next 30 years. The estimated costs of the Project from this process were reduced from $590 million to $467 million.
- A comparison of the project agreement to the original business case for the Project confirms that the scope of the Project has not been reduced along with the estimated costs of the Project.

INDEPENDENCE

The team members selected for the audit did not have any conflicts 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.

The Audit Team

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City Auditor

June 2017
Date

Project Background

1.1 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 four new bridges (one for a railway, one for the active transportation pathway, 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. An illustration of the Project is included in **Appendix 4**.

1.2 Project Funding

- The financing for the Project is:

Contributing Party	Contribution	Percent
City of Winnipeg	$ 188,050,000	40%
Province of Manitoba	188,050,000	40%
Government of Canada	91,200,000	20%
Total	$ 467,300,000	

1.3 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 30 years. Project risks are being shared with the private partner; this is detailed in **Appendix 3**. The City's project management team is responsible for project oversight.

1.4 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
  - Report on the final results of the Project

Project Reporting Analysis

2.1 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

- For the period of October 1 to December 31, 2016, the following reports have been required, and have been published for the Project:
  - "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"[1] created by P1 Consulting (required by *The Public-Private Partnerships Transparency and Accountability Act)*
    - The report provides assurance relating to the fairness and appropriateness of the public-private partnership procurement process.
  - "Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass"[2] Capital Project Detail Sheet in the 2017 Preliminary Budget (required by *The City of Winnipeg Charter*)
    - The project detail sheet was updated to communicate the reduction in project costs and adjustments to project financing.
  - "Proposed Expropriation Settlement – Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Holding #27 – 1500 Parker Ave - Catia Aparecida Macieira (formerly Brigham)"[3] (required by *The City of Winnipeg Charter*)
    - The report requested approval of proposed expropriation settlement to complete negotiations for a property required for the Project.
  - "Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Financial Status (Project No. 4230010514) Report No. 9 for the Period Ending December 31, 2016" [4] (required by *Administrative Standard FM-004: Asset Management*)
    - The report presents the financial position and significant project updates for the Project up to December 31, 2016.
- Our audit work included examination of reports in relation to the legislated, regulated or agreed-upon requirements to communicate such reports. Limited testing of the accuracy of information included in reports was also completed based on our risk assessment of whether such information could be misstated.

[1] Posted in the Transit Project site in November 2016.
[2] Submitted to Council in its December 13, 2016 meeting through the Executive Policy Committee.
[3] Submitted to Council in its November 16, 2016 meeting through the Executive Policy Committee.
[4] Submitted as information to the Standing Policy Committee on Finance in its March 13, 2017 meeting.

- The Fairness Monitor's Report concluded that the procurement process for the Project was undertaken in a fair, open and transparent manner. The report has been submitted to the Office of the Auditor General in accordance with *The Public-Private Partnerships Transparency and Accountability Act*. As the report is reviewed by the Auditor General, we have not tested the information that the Fairness Monitor relied on to form their opinion. The City has not received commentary back from the Auditor General relating to the Fairness Monitor's Report as of the date of this audit report.
- The 2017 Capital Project Detail Sheet presented a revised project cost of $467 million, which is about $120 million less than what was originally approved for the Project. The implications to the scope of the Project from this adjustment are discussed in the Scope Management Analysis section (section 3.2) of our report.
- For this quarterly report, we audited the actual costs reported in the financial status update submitted to the Standing Policy Committee on Finance (see **Appendix 5**). In our opinion, the actual costs reported were fairly presented, and were reported in accordance with generally accepted accounting principles issued by the Canadian Public Sector Accounting Board. We also observed that the land proposed for expropriation was required for the Project.

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

3.1 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 3**.
- 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 issue 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. 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.		

3.2 Scope Management Analysis

Issue

- Was the scope reduced when the capital budget for the Project was reduced from $590 million to $467 million?

Conclusions

- The scope of the Project has not been reduced. The lower cost resulted from the competitive bidding process and several proposed structural changes to the transitway that do not reduce the level of service that the transitway will provide.

Analysis

- Based on the accompanying business case for the Project, Council approved that $590 million be added to the City's capital budget for the design, construction (build), financing, operation, and maintenance of Stage 2 of the Southwest Rapid Transitway and Pembina Highway Underpass Project on June 25, 2014.
- The Project followed a competitive procurement process, and financial close for the Project occurred on June 24, 2016 with Plenary Roads Winnipeg receiving the contract.
- The estimated total costs for the Project were revised to $467 million (79% of the original estimate). A revised Capital Project Detail Sheet was added to the 2017 Preliminary Budget to communicate the cost reduction. Revised detail sheets are normally created for cost increases, but not always for cost decreases. The Public Service informed us that a new detail sheet was created to provide transparent public information about the costs of the Project, and to communicate the impact that the new cost had on financing from other levels of government.
- A 21% reduction in project costs could indicate a reduction of scope for a project. We reviewed the Project Agreement and public communications to determine whether the decreased budget also reduced the scope of the Project.
- The Public Service communicated in a public information session that Plenary Roads Winnipeg had proposed several innovative structural alterations to the transitway that would result in significant cost savings. These adjustments included:
    - Constructing an overpass over the Letellier subdivision and industrial spur rail lines, rather than a tunnel underneath them.
    - Keeping the CNR rail bridge over Bishop Grandin Boulevard, rather than demolishing it and constructing a new bridge.
    - Routing the active transportation pathway along the transit ramp at Jubilee Avenue, rather than digging a separate active transportation tunnel.
- We observed that these alterations were part of the Project Agreement signed with Plenary Roads Winnipeg.
- Structural elements of a transportation infrastructure project can significantly affect the project cost. We believe the lower cost estimate is reasonable, based on the alterations proposed for the Project. We also believe that these revised structural elements do not affect the level of service that was originally approved for the Project.

RECOMMENDATION			
No recommendation accompanies this analysis.			
RISK AREA	Business Process	**ASSESSMENT**	High
BASIS OF ASSESSMENT	Significant cost estimate differences in projects could indicate changes to project scope.		

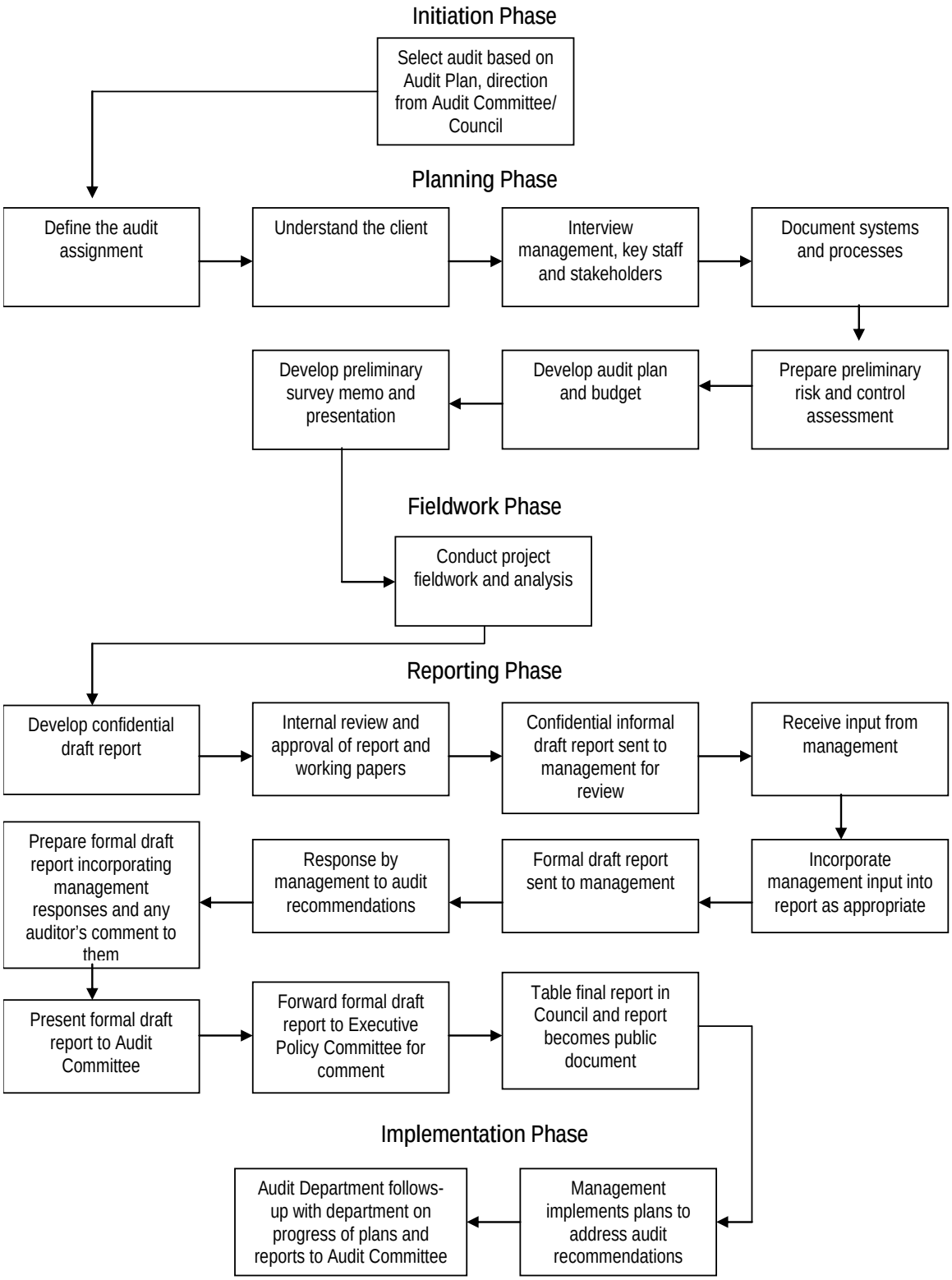
APPENDIX 1 – Risk Assessment Worksheet

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 2 – Audit Process



APPENDIX 3 – 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 3 – 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 4 – Project Scope



Source: winnipegtransit.com

APPENDIX 5 – Actual Costs Presented in Financial Status Reports

Appendix I

SOUTHWEST RAPID TRANSITWAY (STAGE 2) & PEMBINA HIGHWAY UNDERPASS
TRANSIT DEPARTMENT
As of December 31, 2016

Project Component	Capital Budget			Actual Costs	Capital Expenditure Forecast						Surplus (Deficit)	Variance Last Report	Change in Variance
					Forecast					Total			
	Original	Council Approved Changes	Revised	To Dec 31, 2016	2017	2018	2019	2020	2021 to End of Contract	Forecast	From Revised		
UPFRONT COSTS													
PROFESSIONAL SERVICES	$ 13,000,000	(1,693,634)	$ 11,306,366	$ 5,127,951	$ 2,309,168	$ 1,952,144	$ 1,917,103			$ 11,306,366	-	1,693,634	(1,693,634)
PROPERTY AND UTILITIES	23,000,000	10,000,000	$ 33,000,000	23,970,109	5,023,571	$ 4,006,320	$ -			$ 33,000,000	-	(10,000,000)	10,000,000
OTHER	5,550,000	1,693,634	$ 7,243,634	926,395	1,667,239	$ 1,650,000	$ 3,000,000			$ 7,243,634	-	(1,693,634)	1,693,634
TOTAL UPFRONT COSTS *	$ 41,550,000	$ 10,000,000	$ 51,550,000	$ 30,024,455	$ 8,999,978	$ 7,608,464	$ 4,917,103	$ -	$ -	$ 51,550,000	-	(10,000,000)	10,000,000
CONSTRUCTION COSTS	$476,750,000	(130,000,000)	$346,750,000				$346,750,000			$ 346,750,000	-	130,000,000	(130,000,000)
CONTINGENCY	$ 69,000,000		$ 69,000,000	$ 49,320			$ 68,950,680			$ 69,000,000	-	-	-
TOTAL PROJECT COSTS	$587,300,000	$ (120,000,000)	$467,300,000	$ 30,073,775	$ 8,999,978	$ 7,608,464	$420,817,783	$ -	$ -	$ 467,300,000	-	130,000,000	(120,000,000)
ANNUAL SERVICE PAYMENTS	719,547,000	(226,447,000)	$493,100,000		350,000	350,000	1,780,000	14,460,000	476,160,000	$ 493,100,000	-	226,447,000	(226,447,000)

Source: Southwest Rapid Transitway (Stage 2) and Pembina Highway Underpass – Financial Status (Project No. 4230010514) Report No. 9 for the Period Ending December 31, 2016.