

## Speaker's Notes – Ottawa LRT

## Value for Money Estimate. Design-Build-Finance.

## Comparison Model – Deloitte. \$700 MM Dollar of Financing Case

## Cost of Financing and VFM Analysis – Inputs Discussion Points

Key Cost Inputs	Deloitte Model (DB(f)M)	IO Model	Difference
<b>Interest Rate</b>	6.36%.  Made up of 85% debt at a rate of 5.01% (2.5% + 2.51% spread) and 15% equity at 14% IRR	6.0%.  Same, except 90/10 gearing and 11.25% IRR (from Halton bid)	Exact same assumptions as Deloitte, except uses less equity. We are unclear if equity is really needed. There are several projects in market as DBF's that do not have any equity.
<b>Fees</b>	-2% up front on total facility size -1% commitment fee on undrawn commitment	-2% up front on total facility size -1% commitment fee on undrawn commitment	N/A
<b>Payment Structure</b>	Monthly progress payments, with province, feds, city and private debt going in on a pro-rata funding basis. Private financing plugs the gap	Milestone Based – subject to a skin in the game constraint	Milestone payments will allow for more risk transfer, as payments are linked to concrete deliverables
<b>Risk Matrix</b>	City of Ottawa Rail Risk Matrix	Altus Group Risk Matrix – Design Build Finance - Rail	PD CIVIL TO DISCUSS DIFFERENCES (PF has a start below)
<b>Debt Draws</b>	2 draws every year. Leads to negative carry during the year.  Bank Financing Structure	Draw monthly to pay for construction and	We are unclear why the bank debt is not being drawn monthly in the deloitte model. This leads to negative carry, increasing financing costs
<b>Term</b>	30 years following SC. 6 years of construction	6 years of construction	Our VFM analysis does not include analysis of operations and maintenance risks. We do not believe that the risk transfer envisioned under the M is possible without some private financing.
<b>Loan Amount</b>	\$700 million. Full amount is drawn by substantial completion	\$730 million. The milestone approach is more efficient, in that it	\$30 MM, based on sculpting of debt

Key Cost Inputs	Deloitte Model (DB(f)M)	IO Model	Difference
		minimizes the amount of financing required at any point in time.	
<b>Holdback Constraint</b>	N/A – no binding constraint	Ensure that at least 15% of the debt balance remains, after making an interim payment (i.e. if \$500 MM drawn, pay max \$400 MM)	Deloitte uses an LC combined with debt to maintain skin in the game. There does not appear to be a binding constraint in the model for the debt at any point in time
<b>Letter of Credit</b>	\$40 MM cost	\$40 MM cost	To be conservative, we have not taken an opinion on the need, availability and costing of the LC. We do recommend that further work is completed to assess this cost and market sound its availability for this project.  Since this is VFM neutral between the two approaches, we have not included it for now.
<b>Warranty LC</b>	Not found	5% of construction cost, valid for 2 years to enforce construction risk transfer	We have a template approach on warranties, secured by liquid security. This adds to financing costs.

**Output Summary:**

Key Cost Inputs	Deloitte Model	IO Model	Difference
<b>Cost of Work - Construction</b>	\$2.28 Billion	\$2.28 Billion	None
<b>Cost of Financing - Construction</b>	\$149 MM	\$147 MM	IO model lower by \$2 MM, including provisioning for a warranty product post completion. If the warranty concept comes out, the IO approach reduced in cost by \$4.2 MM
<b>Lifecycle and FM Costs</b>	\$2.0 Billion	N/A – no operating term	Different project scope

Key Cost Inputs	Deloitte Model	IO Model	Difference
<b>Risk Retained</b>	PSC –\$1.66 Billion AFP – \$1.04 Billion	PSC - \$815 MM AFP - \$165.4 MM	Not comparable – risk matrices are different and term is different.
<b>Ancillary Costs</b>	\$12.5 million for AFP, \$9.3 MM for PSC	\$12.5 million for AFP, \$9.3 MM for PSC	None. We have not taken a view on the ancillary costs of the project. In any event, this is not significant for VFM
<b>Value for Money Result</b>	9.0%	13.10%	4.1%. This is a key argument. We believe the DBF model under a milestone payment regime will deliver higher VFM than the DB(f)M contemplated in the RFQ.

**NOTE – the cost of financing, for the Deloitte model is based off of their \$700 MM scenario. We are able to lower the cost of financing by paying significant milestone payments, where 85% of the debt is taken out on 5 separate occasions. The IO model has \$730 MM in debt drawn at the highest point, making the comparison meaningful.**

## Appendix – VFM analysis

<b>Ottawa LRT</b> <b>VFM Analysis (Mean)</b> <b>Summary Output at Substantial Performance</b>			
<b>Traditional Cost Components, MM \$'s</b>		<b>AFP Cost Components, MM \$'s</b>	
Base Costs (nominal)	\$2,165.4	Base Costs (nominal)	\$2,165.4
Risk Premium	N/A	Risk Premium	\$108.3
Private Sector Financing Costs	\$0.0	Private Sector Financing Costs	\$147.0
<b>PSC Bid</b>	<b>\$2,165.4</b>	<b>Shadow Bid</b>	<b>\$2,420.7</b>
Retained Risks - Traditional Delivery	\$815.5	Retained Risks - AFP Delivery (includes PCC)	\$165.4
Ancillary Costs		Ancillary Costs	
Traditional Transaction Costs	\$1.5	AFP Transaction Costs <sup>(1)</sup>	\$4.7
Owner Soft Costs <sup>(2)</sup>	\$7.9	Owner Soft Costs	\$7.9
<b>PSC</b>	<b>\$2,990.2</b>	<b>Adjusted Shadow Bid</b>	<b>\$2,598.6</b>
<b>Value for Money at Substantial Performance</b>		<b>\$391.6</b>	
<b>% Savings to PSC</b>		<b>13.10%</b>	

## Appendix – Comparison of Risks

### Differences Between ARL Risk Matrix and Deloitte Risk Matrix

Overall, the Deloitte Risk Matrix appears to be more granular than the ALR matrix. There are more sub-risks captured for each category of risk.

### ALR RISK MATRIX

The ALR Risk Matrix is broken down into the following categories:

*Policy / Strategic* – (Deloitte matrix goes into more detail capturing items such as “public resistance to an option” and “land use policies”)

*Design & Tender* - Deloitte matrix similar to ALR matrix

*Site Conditions/Environmental* – (Deloitte matrix includes site access and acquisition risks)

*Construction* – Deloitte matrix similar to ALR matrix

*Equipment Risk* – Deloitte matrix similar to ALR matrix

Permit and Approvals – Deloitte matrix similar to ALR matrix

Completion Commissioning – Deloitte matrix similar to ALR matrix

Project Agreement – Deloitte matrix similar to ALR matrix

## **DELOITTE MATRIX**

Categories not found in the ALR matrix:

Procurement Risk – Risk not captured with ARL matrix

Ownership and Concession Management – Risk not captured with ARL matrix

In general, the Deloitte matrix has higher % impacts of the risks identified, i.e., the %'s are higher for Deloitte than for ARL. This will impact the cost related to the risks transferred in the VFM model.

Specific significant risks reviewed:

“Geotechnical risk” – Deloitte probability appears reasonable and aligned with ARL.

“Acceleration to maintain schedule” - Deloitte probability appears reasonable and aligned with ARL.

“Resource availability” - Deloitte probability appears reasonable and aligned with ARL.