## Asset Liability Management Report



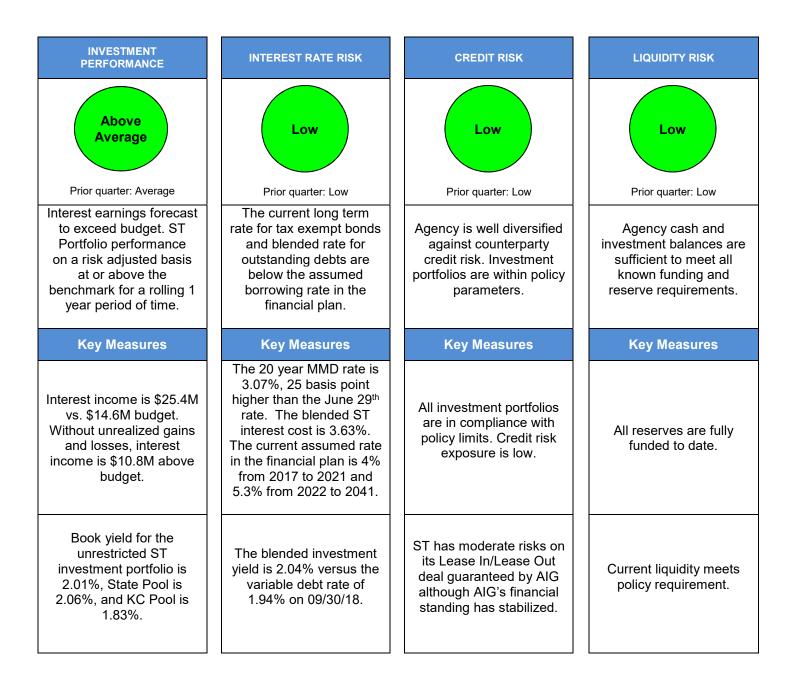
## 3 Q 2018

Performance Indicators and Key Measures

Cash, Investment and Debt Balances -	Book Value (\$M)
Restricted Cash and Investments	537.3
Unrestricted Cash and Investments	1,501.4
Total Cash and Investments	2,038.7

Total Outstanding Debt

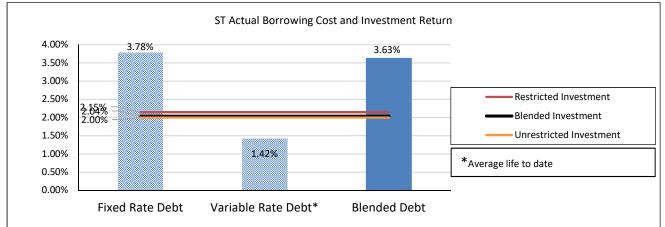
2,216.8



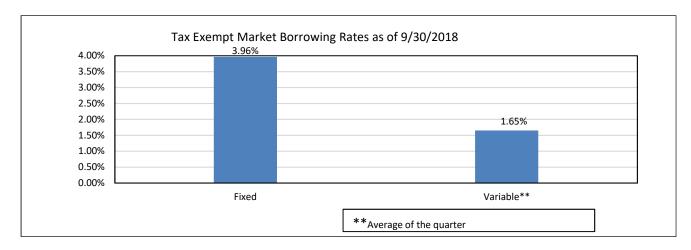
## 3 Q 2018 ALM Overview

## **Market Environment**

- The Federal Open Market Committee (FOMC) raised the federal funds rate up 25 bps to a range of 2.00% to 2.25% on September 26<sup>th</sup>, 2018. Fed Funds is on track for one more rate increase in 2018.
- National Unemployment Rate drops to 3.7% in September. The initial Jobless Claims reached a 50 year low confirming the exceptionally strong strength in employment.
- Current U.S Inflation rate is 2.3% for the 12 months ended September 2018, hitting the Feds preferred target rate 2%. Strong growth in employment could potentially lead to the possibility of higher incomes which will impact future inflation levels. Two-year treasury yields increased 28 basis points and 10-year notes increased 20 basis points. The two year note yield changed from 2.53 to 2.81, and the ten year note yield changed from 2.86 to 3.06.



#### Current Borrowing Rate versus Investment Rate



### Credit Watch

- ST is currently in "stand still" status on its Lease In/Lease Out agreement with AIG, awaiting further market and regulatory developments. AIG's financial standing has stabilized.
- Capital Replacement account holds \$8.5mm of the Minneapolis, Minnesota Taxable UTGO 3.25 12/1/18 which Fitch lowered their rating on the issuer effective 11/8/17 from AAA to AA+ with a stable outlook. The bonds remain rated Aa1 by Moody's and AAA by S&P.

## **Cash, Investment and Debt Balances**

### ALM Position (\$M)

Balance and Duration	Value (\$M)	Interest Rate	Duration/Avg. Life	Benchmark
Assets (Cash/Investments)				
Restricted	537.3	2.04%	1.6 years	2.78 years
Unrestricted	1,501.4	2.00%	0.86 years	0.91 years
Assets (Cash/Investments) total	2,038.7	2.01%		
Liabilities (Debt)				
Fixed-Rate	(2,123.4)	3.78%		
Variable-Rate	(150.0)	2.79% *		
Liabilities (Debt) total	(2,273.4)	3.72%	15.84	19.02
Net Position	(234.7)			

\*Blended rate of actual through quarter end and Assumed Variable Rate, 3.67% at time of issuance, for remaining life of the bonds. The Assumed Variable Rate is the highest 12 month rolling average of the SIFMA index over the preceding 10 years.

End 3Q 2018 (\$M)	End 4Q 2017 (\$M)	End 3Q 2017 (\$M)	Investment Yie (trend vs. last	
537.3	500.7	511.2	2.04%	Û
1,501.4	1,294.4	1,226.2	2.00%	Û
2,038.7	1,795.1	1,737.4	2.01%	Û
Current Debt	Undrawn TIFIA Loans*	Future Debt	Projected Next I Issue	Bond
2,273.4	3,263.7	13,878**	TBD	
	537.3 1,501.4 2,038.7 Current Debt	537.3 500.7   1,501.4 1,294.4   2,038.7 1,795.1   Current Debt Undrawn TIFIA Loans*	537.3 500.7 511.2   1,501.4 1,294.4 1,226.2   2,038.7 1,795.1 1,737.4   Current Debt Undrawn TIFIA Loans* Future Debt	End 3Q 2018 (\$M) End 4Q 2017 (\$M) End 3Q 2017 (\$M) (trend vs. last   537.3 500.7 511.2 2.04%   1,501.4 1,294.4 1,226.2 2.00%   2,038.7 1,795.1 1,737.4 2.01%   Current Debt Undrawn TIFIA Loans* Future Debt Projected Next I issue

\*Includes East Link TIFIA Loan and the TIFIA Master Credit Agreement Amounts. \*\*Balance reference to fall 2018 Financial Plan

Net Interest	2017 Budget (\$M)	2017 Actual (\$M)	2018 Budget (\$M)	2018 YTD Budget (\$M)	2018 YTD Actual (\$M)
Uncapitalized Debt Interest Exp	0.0	(15.6)	(14.3)	(81.5)	(79.8)
Capitalized Debt Interest Exp	(109.4)	(81.9)	(95.3)	(71.5)	(73.8)
Interest Earnings*	9.6	16.9	19.5	14.6	18.1
Net Interest Expense	(99.8)	(80.7)	(90.1)	(138.3)	(135.5)

Budget based on the annual Adopted Budget. \*Interest Earnng with adjusted unrealized gains and losses

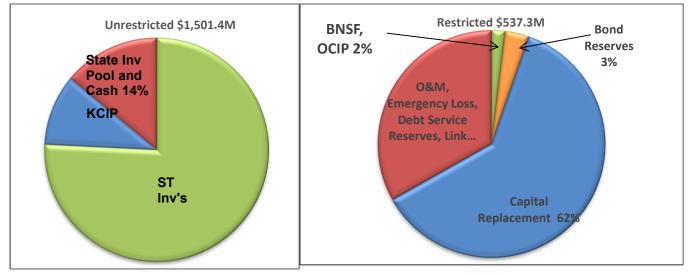
## 3 Q 2018 Investment Overview

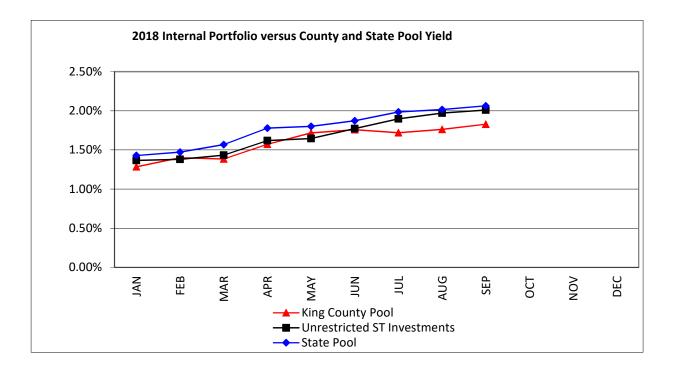
#### Strategy

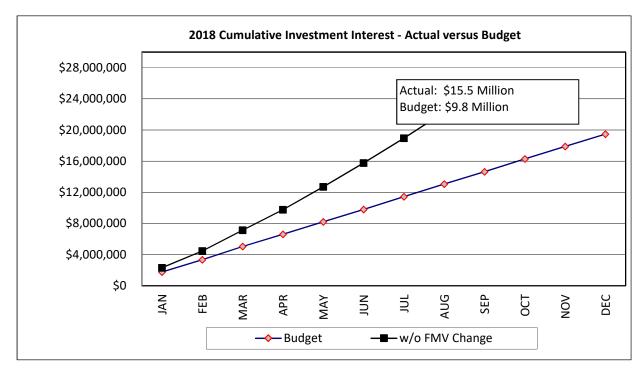
The portfolios were positioned shorter in duration due to the outlook for higher rates. This strategy has allowed the portfolio earnings yield on the investment portfolio to increase over the quarter as maturities were reinvested at higher rates. The earnings yield on the investments are lower than the LGIP due to the longer portfolio structures of the investments. The State LGIP has a 60-day average maturity and ½ of the portfolio turns over monthly which gives it the ability to reset upward as the Federal reserve increase short term rates. The investment funds will move up more slowly as the portfolio turnover is longer. The shorter duration strategy also somewhat protected the principal market price decline because the maturities were shorter and did not get price down as much as the longer investments. It is important to view the investments through interest rate cycles and the added earnings that are contributed from the investment strategy. We expect the portfolio investment yields to continue to increase into next year as excess cash is invested at rates between 2 and 3%.

Cash and Investments (\$M)	Book	Net	Average	Benchmark	Risk Adj	Benchmark	Current	<b>Qtrly Yield</b>
	Value	Change	Duration	Duration	Ratio (RAR)*	RAR	Yield	Change
Unrestricted								
State Investment Pool	212.0	60.0	0.05				2.06%	0.19
Operating account/Uncleared checks**	(1.8)	0.4	0.01				2.04%	0.16
King County Investment Pool	153.4	0.7	1.02				1.83%	0.11
ST Internal Investments	1,137.8	0.7	0.99				2.01%	0.24
Total Unrestricted	1,501.4	61.8	0.86	0.91	3.33	1.56	2.00%	0.22
Restricted								
Operating/Contingency (internal)	78.0	0.4	0.05				2.06%	0.18
Capital Replacement (internal)	330.5	1.8	2.27	2.48	(0.55)	(0.78)	2.07%	0.02
Emergency Loss Reserve (internal)	24.0	0.1	0.05				2.06%	0.18
Debt Service Accounts	75.6	13.5	0.05				2.06%	0.17
BNSF Escrow	8.0	0.0	0.01				0.05%	0.00
OCIP Collateral	2.3	0.0	4.17				3.68%	(0.00)
Link Risk Fund	0.5	(0.1)	1.02				1.83%	0.13
Prior Debt Service Reserve	18.3	0.1	5.05				5.09%	2.24
FTA Grant Recovery	0.2	0.0	0.05				2.06%	0.18
Total Restricted	537.3	15.8	1.60	N/A***			2.15%	0.14
Total	2,038.7	77.6	1.06				2.04%	0.20
*Risk Adjusted Ratio is the rolling 1 year Shar								
**Balance is not included in total RAR calculation sir	•		, ,		· · · · · ·			
***Restricted benchmarks are based upon pro-	ojected cash flo	w needs. Calcu	lating a "total" be	enchmark durati	on for restricted in	vestments is not	: applicable.	

#### **Investment Performance Portfolio Composition**







## **Asset Allocation Compliance**

Asset Class	\$ Par Value	Percentage Allocation	Policy Limit
U.S. Treasuries	654,035,000	32.15%	100%
U.S. Government Agencies	788,160,000	38.74%	75%
Certificates of Deposit	0	0.00%	10%
King County Investment Pool	153,897,817	7.56%	50%
State Investment Pool	394,126,144	19.37%	100%
Commerical Paper	0	0.00%	10%
Taxable Municipal/G.O. Bonds	44,210,000	2.17%	25%
	2,034,428,962	100.00%	

## 3Q 2018 Debt Overview

### Strategy

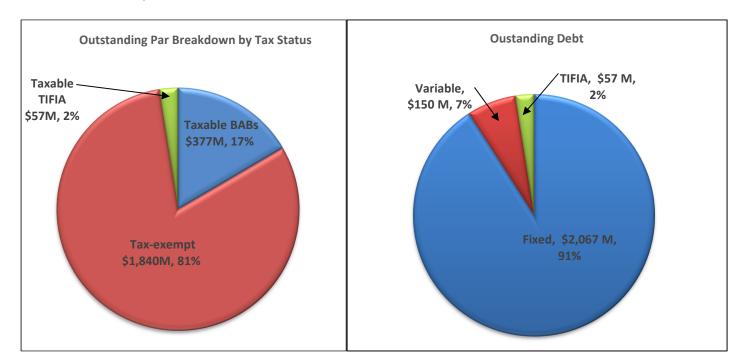
Sound Transit will consider the diversification of its long-term liabilities in the context of its future borrowing needs. With the agency's TIFIA loans, the strategy would be to utilize the lowest cost available loans first prior to issuance of other debt.

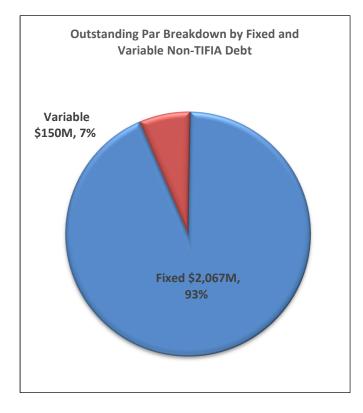
### **Debt Summary**

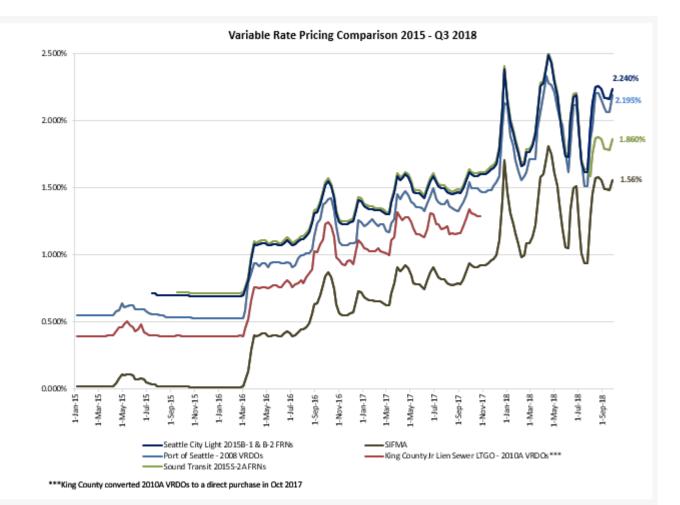
- On July 18, 2018, Sound Transit successfully closed the remarketing of \$75 million Series 2015S-2A and \$75 million Series 2015S-2B floating rate notes ("the FRNs" or "the Notes"). In doing so, Sound Transit accomplished several important goals including:
  - reduced the cost of the series 2015S-2A FRNs by 40 basis points and the Series 2015S-2B FRNS by 25 basis point versus the original offering of the notes,
  - diversified the remarketing term periods of the 2015S-2A and 2015S-2B notes to 3.28 years and 5.28 years respectively
  - increased Sound Transit's flexibility related to future remarketing of the notes with a 12 month optional redemption provision which is 6 months earlier than the original offering of the notes.
- The 20-year MMD ended the quarter at 3.07%, 25 basis point higher than the June 29<sup>th</sup> rate. During the quarter, the 20-year MMD was as high as 3.14% on 9/25/2018, and as low as 2.78% between 7/06/2018 and 7/09/2018.
- The spread between the 20-year AAA MMD and the 20-year A MMD was 49 basis points as of 9/28/2018, which is the same as the spread was on 6/29/2018.

			uget Sound Regional Tra ummary of Outstanding	-		
Prior Bonds Series	Issue Date	Final Maturity	Issue Size	Amount Outstanding	All-in Interest Cost	Financial Plan Assumption
1999	1/6/1999	2/1/2028	\$350,000,000	\$275,590,000	5.03%	5.00%
2009P-2T (BABs)	9/29/2009	2/1/2028	\$76,845,000	\$76,845,000	3.31%	5.00%
2012P-1	8/22/2012	2/1/2028	\$216,165,000	\$135,435,000	2.62%	5.75%
Total Prior Bonds			\$643,010,000	\$487,870,000	4.09%	
Parity Bonds				Amount	All-in	Financial Plan
Series	Issue Date	Final Maturity	Issue Size	Outstanding	Interest Cost	Assumption
2009S-2T (BABs)	9/29/2009	11/1/2039	\$300,000,000	\$300,000,000	3.62%	5.00%
2012S-1	8/22/2012	11/1/2030	\$97,545,000	\$86,065,000	2.73%	5.75%
2015S-1	9/10/2015	11/1/2050	\$792,840,000	\$792,840,000	3.89%	5.75%
2015S-2A*	9/10/2015	11/1/2045	\$75,000,000	\$75,000,000	3.23%	5.75%
2015S-2B*	9/10/2015	11/1/2045	\$75,000,000	\$75,000,000	3.23%	5.75%
2016S-1	12/19/2016	11/1/2046	\$400,000,000	\$400,000,000	3.60%	5.30%
Total Parity Bonds			\$1,740,385,000	\$1,728,905,000	3.66%	
Total Prior & Parity E			\$2,383,395,000	\$2,216,775,000	3.75%	
*2015S-2A and 2015	S-2B are variable rate l	bonds. The all-in Int	erest cost assumes inte	erest calculated using only the s	pread	
through 2018 and after	er the variable rate was	-		-MA over the past 10 years (3.67	7%)	
			uget Sound Regional Tra mary of Outstanding TIF	-		
				Amount		Financial Plan
TIFIA Loan	Execution Date	Final Maturity	Loan Amount	Drawn	Interest Rate	Assumption
EastLink	1/16/2015	11/1/2058	\$1,330,000,000	\$0	2.38%	5.75%
Northgate	12/22/2016	11/1/2056	\$615,267,000	\$56,605,824	3.13%	5.30%
O&M Facility East	6/22/2017	11/1/2055	\$87,663,515	\$0	2.73%	5.30%
Lynnwood Link	2018		\$657,863,164	\$0	N/A	
Federal Way	2019		\$629,472,431	\$0	N/A	
Total TIFIA Loans			\$3,320,266,110	\$0 <b>\$56,605,824</b>	3.13%	
TOTAL TIFIA LUAITS			93,320,200,110	<b>\$30,003,824</b>	3.13%	
Total Outstanding De	ebt			\$2,273,380,824		

### **Debt Portfolio Composition**







Variable Rates as of 9/30/18						
Spread to Bank Credit Liquidity Remarketing						
	SIFMA Index	SIFMA*	Spread**	Fee	Fee	<b>Total Cost</b>
Sound Transit 2015S-2A FRNs***	1.56%	0.30%	n/a	n/a	n/a	1.860%
Seattle City Light 2015B-1 & B-2 FRNs	1.56%	0.68%	n/a	n/a	n/a	2.240%
Port of Seattle - 2008 VRDOs	1.56%	n/a	0.12%	0.45%	0.065%	2.195%

\* Fixed spread, will not change.

\*\* Not fixed. Will vary with market conditions and changes in bank credit quality.

\*\*\* Average borrowing cost since issuance 1.42%

Bond Ratings as of 09/30/2018					
	Prior	TIFIA			
Moody's	Aaa	Aa1			
S&P	AAA	AAA	A+		
Fitch			AA+		

## Asset Liability Management Report 3 Q 2018 Key for Performance Summary

	Above Average	Average	Below Average
INVESTMENT PERFORMANCE	Interest earnings forecast to exceed budget. ST Portfolio performance on a risk adjusted basis at or above the benchmark for a rolling 1 year period of time.	Interest earnings forecast to meet budget. ST Portfolio performance on a risk adjusted basis near benchmark for a rolling 1 year period of time.	Interest earnings forecast to be below budget. ST Portfolio performance on a risk adjusted basis below benchmark or a rolling 1 year period of time.

	Low	Medium	High
INTEREST RATE RISK	Change in interest rates will	Change in interest rates will	Change in interest rates will
	have less than \$5M impact	have less than \$10M	have less than \$20M
	on ST financial plan over 5-	impact on ST financial plan	impact on ST financial plan
	year period.	over 5-year period.	over 5-year period.

LIQUIDITY RISK	All reserves and liquidity contingencies in place. Current liquidity contingency greater than policy minimum.	All reserves and liquidity contingencies in place. Current liquidity contingency equal to policy minimum.	Not all reserves and liquidity contingencies in place.
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No known credit risks that	Known credit risks could	Known credit risks are likely
could materially impact ST	potentially materially impact	to materially impact ST
balance sheet.	ST balance sheet.	balance sheet.

# **Glossary of Debt and Investment Terms**

**Basis Point** – The smallest measure used in quoting yields on bonds and notes. One basis point is 0.01% of yield. For example, a bond's yield that changed from 3.50% to 3.00% would be said to have moved 50 basis points.

**Benchmark** - A bond whose terms are used for comparison with other bonds of similar maturity. The global financial market typically looks to U.S Treasury securities as benchmarks.

BNSF Escrow - Collateral pursuant to the Sound Transit / Amtrak / BNSF lease-sub-lease dated September 2000.

**Book Value** – The amount at which an asset is carried on the books of the owner. The book value of an asset does not necessarily have a significant relationship to the market value of the security.

**Duration** - The weighted maturity of a fixed-income investment's cash flows, used in the estimation of the price sensitivity of fixed-income securities for a given change in interest rates.

**Federal Funds Rate** – The rate of interest at which Federal Funds are traded between banks. Federal Funds are excess reserves held by banks that desire to invest or lend them to banks needing reserves. The particular rate is heavily influenced through the open market operations of the Federal Reserve Board. Also referred to as the "Fed Funds rate."

**General Obligation Bond (GO)** - A municipal bond secured by the pledge of the issuer's full faith and credit, and backed by their taxing authority.

Link Risk Fund – Funded by Sound Transit to pay certain claims related to the operation of Central Link.

Liquidity – The ease and speed with which an asset can be converted into cash without a substantial loss in value.

**Local Government Investment Pool (LGIP)** – The aggregate of all funds from political subdivisions that are placed in the custody of the State Treasurer for investment.

**Market Price -** For securities traded through an exchange, the last reported price at which a security was sold; for 4securities traded "over-the-counter," the current price of the security in the market.

Par Value – The nominal or face value of a debt security; that is, the value at maturity.

**Performance -** An investment's return (usually total return), compared to a benchmark that is comparable to the risk level or investment objectives of the investment.

**Risk Adjusted Ratio (RAR):** The RAR also referred to as the Sharpe ratio is a measure for calculating risk-adjusted return. The Sharpe ratio is the average return earned in excess of the risk-free rate per unit of volatility (standard deviation) or total risk. The Sharpe ratio helps explain whether a portfolio's excess returns are due to smart investment decisions or the result of too much risk. The greater a portfolio's Sharpe ratio, the better its risk-adjusted performance has been. A negative Sharpe ratio indicates that a risk-less asset would perform better than the security being analyzed.

**SIFMA** - The Securities Industry and Financial Markets Association Municipal Swap Index is a 7-day high-grade market index comprised of tax-exempt Variable Rate Demand Obligations (VRDOs) with certain characteristics. The Index is calculated and published by Bloomberg.

**TIFIA Loan** – Transportation Infrastructure Finance and Innovation Act loan with the United States Department of Transportation, acting by and through the Federal Highway Administrator. TIFIA loans are used to complement other sources of debt, resulting in a lower cost of funding than would be available in the capital markets.

**Total Return** - Investment performance measure over a stated time period which includes coupon interest, interest on interest, and any realized and unrealized gains or losses.

**OCIP** Collateral – Pledged collateral for the Owner Controlled Insurance Program for University Link and Northgate Link.