

# STAFF REPORT INFORMATION ONLY

# **Chief Executive Officer's Report – September 2016 Update**

Date:	September 28, 2016
To:	TTC Board
From:	Chief Executive Officer

# **Summary**

The Chief Executive Officer's Report is submitted each month to the TTC Board, for information. Copies of the report are also forwarded to each City of Toronto Councillor, the City Deputy Manager, and the City Chief Financial Officer, for information. The report is also available on the TTC's website.

# **Financial Summary**

There are no financial impacts associated with this report.

# **Accessibility/Equity Matters**

There are no accessibility or equity issues associated with this report.

# **Decision History**

The Chief Executive Officer's Report, which was created in 2012 to better reflect the Chief Executive Officer's goal to completely modernize the TTC from top to bottom, has been transformed to be more closely aligned with the TTC's seven strategic objectives – safety, customer, people, assets, growth, financial sustainability, and reputation.

# **Issue Background**

For each strategic objective, updates of current and emerging issues and performance are now provided, along with a refreshed performance dashboard that reports on the customer experience. This information is intended to keep the reader completely up-to-date on the various initiatives underway at the TTC that, taken together, will help the TTC achieve its vision of a transit system that makes Toronto proud.

### **Contact**

Vince Cosentino, Director – Statistics, vince.cosentino@ttc.ca, Tel. 416-393-3961

### **Attachments**

Chief Executive Officer's Report – September 2016 Update



### Introduction

The Chief Executive Officer's Report, which was created in 2012 to better reflect our work to completely modernize the TTC from top to bottom, has been transformed to be more closely aligned with the TTC's seven strategic objectives – safety, customer, people, assets, growth, financial sustainability, and reputation. For each of these objectives, updates of current and emerging issues and performance are now provided, along with a refreshed performance dashboard that reports on the customer experience. This information is intended to keep you completely up-to-date on the various initiatives underway at the TTC.

One of our seven strategic objectives, Reputation, involves creating an organization that is transparent and accountable, well-regarded by stakeholders and peers, and in which employees are proud to play a part. Through my monthly commentary, I will keep you up-to-date on the key activities that I and my management team are involved in as we work to transform the TTC.

**Andy Byford** 

Chief Executive Officer Toronto Transit Commission

Our Vision: A transit system that makes Toronto proud.

### **Table of Contents**

1.	TTC	Performance Scorecard	02
2.	CEO	80	
3.	Perf	formance Update	
	3.1	Safety & Security	14
	3.2	Customer	18
	3.3	People	36
	3.4	Assets	38
	3.5	Financials	45
4.	Critic	cal Projects	62

### About the cover:

Public consultation meetings on Wheel-Trans services. Meetings held July 5, 12, 14 and 21



# **TTC Performance Scorecard**

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Annual Trend	Page
Safety and Security							
Lost Time Injuries	Injuries per 100 Employees	Jul 2016	4.39	2.92	×	2/1/2	15
Customer Injury Incidents	Injury Incidents per 1M Boardings	Jul 2016	1.39	1.71	<b>②</b>	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	15
Offences against Customers	Offences per 1M Boardings	Jul 2016	0.68	0.67	8	المراجعة المراجعة	16
Offences against Staff	Offences per 100 Employees	Jul 2016	0.39	0.30	×	$\sim\sim$	16
Customer: Journeys	TTC Customer Trips	Aug 2016	38.0M	39.2M	×	Mury	19
	TTC Customer Trips	2016 y-t-d to Aug	349.4M	358.6M	8	NA	19
	PRESTO Customer Trips	Aug 2016	2.08M	0.93M		معمدمهمو	20
	Wheel-Trans Customer Trips	Jul 2016	305K	292	<b>②</b>	مسالهمو الممو	20
	Wheel-Trans Customer Trips	2016 y-t-d to Jul	2.26M	2.14M	<b>②</b>	NA	20
<b>Customer: Satisfaction</b>	Customer Satisfaction Score	Q2 2016	80%	75%		\ <u></u>	21
Customer: Environment							
Station Cleanliness	Audit Score	Q2 2016	75.7%	75%	<b>②</b>		24





Target at risk at current trend



Off Target

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Annual Trend	Page
Train Cleanliness	Audit Score		Γ	Data unavaila	ble		
Streetcar Cleanliness	Audit Score		[	Data unavaila	ble		
Bus Cleanliness	Audit Score		]	Data unavaila	ble		
Customer: Service Perform	nance						
Subway							
1 Yonge-University	Delay Incidents	Q2 2016	1,984	1,791	×	<b>\</b>	25
	Delay Minutes	Q2 2016	3,372	3,653	<b>②</b>		25
	Trains per Hour in AM Peak	Jul 2016	22.6	25.5	8	~~\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	26
2 Bloor-Danforth	Delay Incidents	Q2 2016	2,535	1,596	8	~	27
	Delay Minutes	Q2 2016	5,149	3,340	8	~/	27
	Trains per Hour in AM Peak	Jul 2016	23.1	23.8	8	~~~~.	28
3 Scarborough	Delay Incidents	Q2 2016	160	156	×	\	29
	Delay Minutes	Q2 2016	703	927	<b>②</b>	$\sim$	29
	Trains per Hour in AM Peak	Jul 2016	10.3	13.3	8	********	30







Target at risk at current trend



Off Target

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Annual Trend	Page
4 Sheppard	Delay Incidents	Q2 2016	184	129	×	$\sim$	31
	Delay Minutes	Q2 2016	290	311	<b>②</b>	~	31
	Trains per Hour in AM Peak	Jul 2016	11.0	10.9	<b>②</b>	~\\\	32
Streetcar	On-Time Departure	Jul 2016	44.1%	90%	×	~~\	33
	Short Turns	Jul 2016	2,461	50% less than 2015	×	man	33
Bus	On-Time Departure	Jul 2016	76.3%	90%	×	W.,	34
	Short Turns	Jul 2016	2,386	50% less than 2015	<b>②</b>	1	34
Wheel-Trans	% Within 10 Minutes of Schedule	Jul 2016	91.4%	90%	<b>②</b>	ومهتعمسه	35
People							
Employee Absence	Absenteeism Rate	Jul 2016	7.55%	6.50%	×	V\\	37
Assets: Vehicle Reliability							
Subway							
T1	Mean Distance Between Failures	Jul 2016	258,138 km	300,000 km	×		39
TR	Mean Distance Between Failures	Jul 2016	770,684 km	772,485 km	×	andrew .	39



On Target



Target at risk at current trend



Off Target

Key Performance Indicator	Description	Latest Measure	Current	Target	Current Status	Annual Trend	Page
<b>Streetcar</b>							
CLRV	Mean Distance Between Failures	Jul 2016	3,327 km	4,500 km	×	~\\	40
ALRV	Mean Distance Between Failures	Jul 2016	2,483 km	3,500 km	8	M	40
New Streetcar	Mean Distance Between Failures	Jul 2016	4,669 km	35,000 km	8	$\sim$	41
Bus	Mean Distance Between Failures	Jul 2016	10,330 km	8,100 km	<b>②</b>	مسعده المهر	42
<b>⚠</b> Wheel-Trans	Mean Distance Between Failures	Jul 2016	11,235 km	11,000 km	<b>②</b>	\sqrt{\sq}}\ext{\sqrt{\sq}}}}}}}}}} \sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}} \sqrt{\sq}}}}}}}}}} \sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}}} \sqititendendend{\sq}}}}} \eqsittinden{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \eqsittindendend{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \eqsititendend{\sqrt{\sqrt{\sqrt{\sq}}}}}}}} \eqsittin	42
Assets: Equipment Reliabi	lity						
Elevators	Percent Available	Jul 2016	99.0%	98%	<b>②</b>	7,	43
Escalators	Percent Available	Jul 2016	96.8%	97%	×	7~~~~	43
Financials							
TTC Revenue	Actual vs. Budget	2016 y-t-d to Jul	\$693M	\$718M	×	Section 3	.5
TTC Operating Expenditure	Actual vs. Budget	2016 y-t-d to Jul	\$988M	\$1,000M	<b>②</b>	Section 3.5	
Wheel-Trans Revenue	Actual vs. Budget	2016 y-t-d to Jul	\$4.1M	\$4.0M	<b>②</b>	Section 3	.5
W-T Operating Expenditure	Actual vs. Budget	2016 y-t-d to Jul	\$73.0M	\$71.4M	×	Section 3.5	



On Target



Target at risk at current trend



Off Target

		Latest			Current		
Key Performance Indicator	Description	Measure	Current	Target	Status	Annual Trend F	Page
Capital Expenditure – Base	Actual vs. Budget	2016 y-t-d to Jul	\$406M	\$614M	×	Section 3.5	
Capital Expenditure – TYSSE	Actual vs. Budget	2016 y-t-d to Jul	\$185M	\$511M	8	Section 3.5	
Capital Expenditure – SSE	Actual vs. Budget	2016 y-t-d to Jul	\$13M	\$62M	8	Section 3.5	
Operator Efficiency	Crewing Efficiency	Jul 2016	87.29%	87.15%		Surve	53







Target at risk at current trend



Off Target



### **CEO Commentary and Current Issues**

#### **General Overview**

This month's report includes data to the end of July 2016.

It has been an extremely busy summer. In addition to pushing ahead with our five megaprojects and delivery of day-to-day service, my team has been fully immersed in preparing the 2017 budget, a subject that has consumed my time given the magnitude of the challenge we face.

The summer has also been marked by ongoing challenges with air conditioning equipment on T1 cars (Line 2). The exceptionally hot summer, combined with the age of the equipment, has led to uncomfortable rides for our customers and adverse publicity for the TTC. This is unfortunate given how hard everyone is working to transform the TTC's reputation and to improve performance across the board. My rolling stock team has accelerated plans to completely overhaul this aging equipment, so as to avoid a repeat next year. In the meantime, a number of Toronto Rocket trains were deployed onto Line 2 to provide customers with a higher chance of a cool car.

On a more positive note, the Quarter 2 Customer Satisfaction Score of 80% continued the strong positive trend seen over the last year. This is extremely encouraging, as there is clear correlation with implementation of work streams and programs contained within our 5 year plan that are now bearing fruit, as will be demonstrated to Board members at the September Board.

Extensive work continues to modernize all aspects of the TTC's operation as we approach the final year of our inaugural 5-Year Corporate Plan. I am very pleased with the progress being made on the complete overhaul of business practices, systems and job roles, all of which is detailed within this CEO report. I am keen to ensure that customers, stakeholders and Board members alike are aware of the magnitude of the changes that are underway at the TTC.



### Safety & Security

We continue to work closely with law enforcement agencies to monitor the prevailing security situation.

Safety and security indicators were largely stable for the period, with no major incidents, although a Canada-wide security alert in August required close liaison with Toronto Police and Canadian security services.

### **Customer: System Performance**

Subway performance was generally stable during the period. Fire alerts were an issue, especially on Line 2 while the high temperatures had a negative impact on the SRT - a phenomenon that will become increasingly difficult to manage as the rolling stock and infrastructure age.

I am pleased to report that the long-awaited upgrade to speed control software will come onstream by the end of this year and this will deliver substantial improvement to the number of delay incidents.

Surface mode performance was affected by a very busy construction season and a decline in streetcar reliability. Here again, the aging nature of the fleet will present an ongoing challenge. Mean distance between failure on buses continued to improve, but I am concerned about pressure on the bus fleet, given the ongoing delay in the delivery of the new low floor vehicles.

### **Financials**

Year-to-date to the end of August, ridership was 0.6% above the 2015 comparable period but 2.6% below budget. The budget performance from May to August (-1.3%) was better than for January to May (-3.3%); however, overall, results continue to remain soft. As a result, the updated year-end ridership projection is approximately 543 million (10 million below budget) with a corresponding passenger revenue shortfall of about \$33 million.

Operating expenses to the end of July were under budget. Capital expenditures were below budget due in part to delays in contract work and vehicle deliveries.

I previously reported that strict controls have been implemented on all discretionary spend. These controls remain in place and are helping to offset the revenue gap caused by the softening in ridership and the relentless rise in Wheel Trans trips at a greater individual cost

### **Delivery of Major Projects**

### TYSSE

Overall projection completion is now approaching 90% and remains on target for the revised December 2017 opening. The revised budget also remains on track.

The team continues to focus on schedule monitoring and mitigation plans to manage schedule pressure and maintain the Revenue Service date as per our reset schedule. Testing and commissioning activities have begun on the earliest station and on the initial stages of radio and integrated control systems.

Senior Management discussions and issue resolutions continue with our General Contractors to progress commercial matters.

#### PRESTO

At the time of writing, approximately 1,200 buses or 62% of the fleet have been equipped with PRESTO readers. Work continues apace to equip stations with "paddle style" fare gates and we remain on target to have at least one station entrance with PRESTO readers by year end. Work is also progressing well on preparing Wheel Trans for PRESTO adoption.

#### Automatic Train Control

The project continues on schedule and on budget. Recent planned closures have enabled the team to make further progess in laying cable, track transponders and other equipment in readiness for Fall 2017 phase 1 go-live (Dupont to Wilson).





### New Streetcar Deployment

At the time of writing, 22 new vehicles are in service.

At my insistence, a revised delivery schedule has been submitted by Bombardier. While this still shows 30 cars in service by the end of 2016, 70 by the end of 2017 and all 204 vehicles by the end of 2019 (a date that I have said is immovable), I still want to see more vehicles delivered in 2017 and this continues to be discussed at CEO level.

# Culture Change

Work to enable our major change programs continues apace. Dedicated Change Team support is being provided to major change programs including SAP, One Person Train Operation and Stations Transformation/PRESTO

### · Accessibility Matters

Work continues to progress well on our current Easier Access projects. The TTC recently hosted its annual Accessibility Forum. Once again, this was very well attended and it was encouraging to receive positive suggestions from the floor on how we can further improve accessibility at the TTC.





Andy Byford

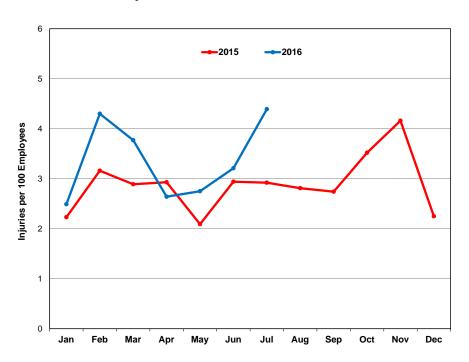
Chief Executive Officer, Toronto Transit Commission

Page intentionally left blank



# **Safety and Security**

# **Lost-Time Injuries**

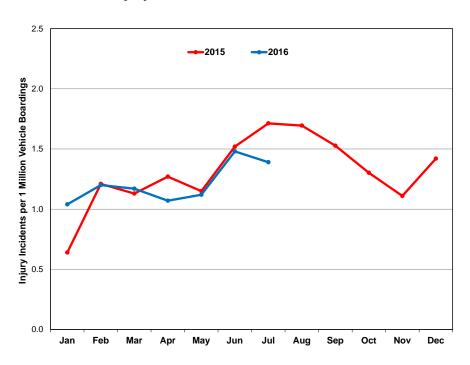


The lost-time injury rate (LTIR) increased in July. The rate of 4.39 injuries per 100 employees was 50% higher than the corresponding rate of 2.92 for July 2015. The increase in the LTIR over the last three months is mainly attributed to the higher number of acute emotional events compared to the same period last year.

The moving annual LTIR to the end of July 2016 was 3.25, which was 8% higher than the corresponding rate of 3.00 to the end of July 2015.

The observed changes in the trend are partly due to the inherent variability in the data from month to month.

### **Customer Injury Incidents**

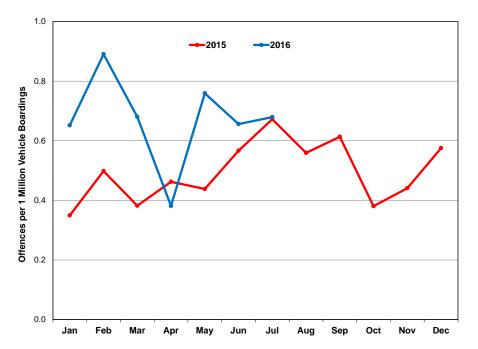


The customer injury incident rate decreased in July. The rate of 1.39 injury incidents per 1 million vehicle boardings was 19% lower than the corresponding rate of 1.71 for July 2015.

The moving annual customer injury incident rate to the end of July 2016 was 1.29, which was 7% higher than the corresponding moving annual rate of 1.21 to the end of July 2015.

The observed changes in the trend are partly due to the inherent variability in the data from month to month.

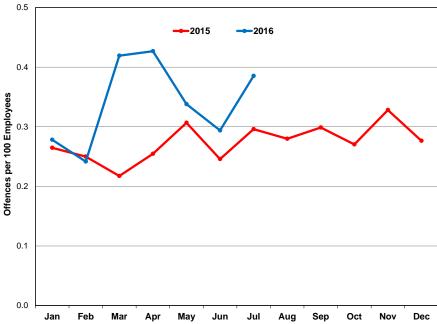
### **Offences Against Customers**



Total offences against customers increased slightly in July. The rate of 0.68 offences per 1 million vehicle boardings was 1% higher than the corresponding rate of 0.67 for July 2015.

The Transit Enforcement Unit has continued to conduct directed patrols in higher-crime areas at higher-crime times of day to deter violent offences against customers.

### **Offences Against Staff**



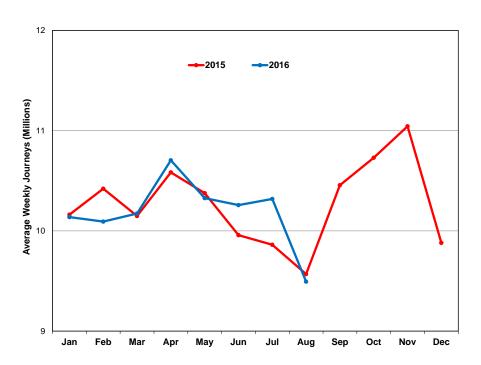
Total offences against staff increased in July. The rate of 0.39 offences per 100 employees was 30% higher than the corresponding rate of .30 for July 2015.

Page intentionally left blank



# **Customer: Journeys**

### TTC: 2016 Actual vs. 2015 Actual

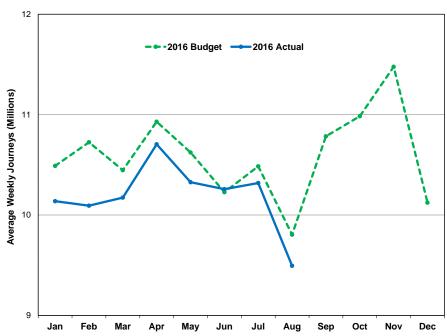


There were 38.0M customer journeys (ridership) taken during August, which was 0.30M (0.8%) less than the 38.3M journeys taken during August 2015.

The annual number of customer journeys taken to the end of August 2016 was 538.2M, which was 1.0M (0.2%) more than the 537.2M annual journeys taken to the end of August 2015.

Average weekly ridership in August 2016 was below the prior year comparable for the first time in the past three months.

# TTC: 2016 Actual vs. 2016 Budget



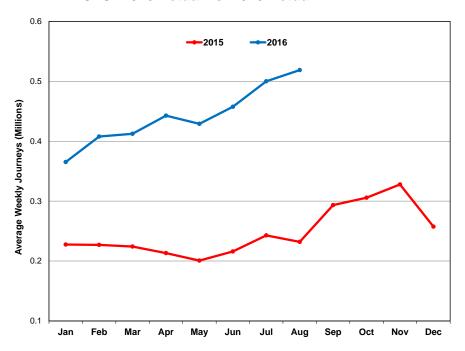
There were 38.0M customer journeys taken during August, which was 1.2M (3.1%) less than the budget of 39.2M journeys.

The number of customer journeys taken year-to-date to the end of August was 349.4M, which was 9.2M (2.6%) less than the budget of 358.6M journeys.

Average weekly ridership has been below budget for 17 of the past 18 months.

# **Customer: Journeys**

### PRESTO: 2016 Actual vs. 2015 Actual



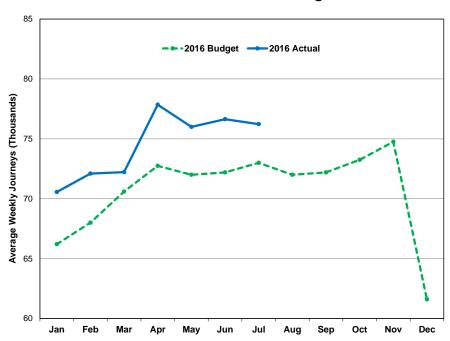
There were 2.08M customer journeys (ridership) taken using the PRESTO Farecard in August, which was 1.15M (124%) more than the 0.93M journeys taken during August 2015.

The annual number of customer journeys taken to the end of August 2016 was 20.40M, which was 9.14M (81%) more than the 11.26M annual journeys taken to the end of August 2015.

#### Note:

PRESTO ridership is included in TTC ridership totals.

# Wheel-Trans: 2016 Actual vs. 2016 Budget



There were 305K customer journeys taken during July, which was 13K (4%) more than the budget of 292K journeys.

The number of customer journeys taken year-to-date to the end of July was 2.256M, which was 115K (5%) more than the budget of 2.141M journeys.

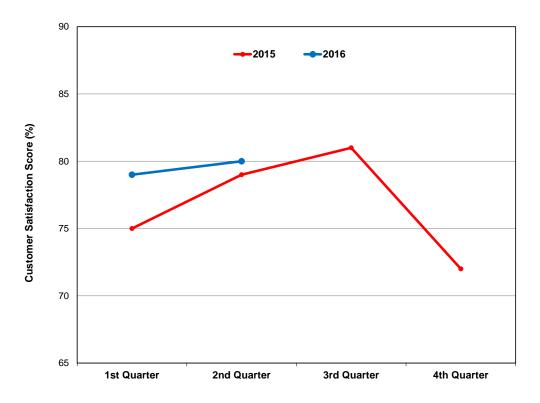
Average weekly ridership has been above budget for 23 consecutive months.

#### Note:

Wheel-Trans ridership is not included in TTC ridership totals.

### **Customer: Satisfaction**

### **Customer Satisfaction Score**



Overall customer satisfaction remained high in Q2 2016 (80%), and was consistent with results observed in the previous quarter (79%) and in the same time period last year (79%), demonstrating a strong positive trend, compared to an overall average of previous three years of 74%.

This quarter's high score is driven by the improved consistency in delivering a reliable service, which has led to more positive customer perceptions of: trip duration (all three modes), wait times on streetcars, and level of crowding on buses.

The areas of highest customer satisfaction (80%+) include: cleanliness of the subway station, helpfulness of maps and signs at station (subway), ease of getting to train platform (subway), ease of buying fare (subway, bus), length of trip (subway, bus), personal safety during trip (subway, bus, streetcar), maps and information inside the vehicle (subway), cleanliness inside the vehicle (subway), wait time (subway), quality of announcements (subway, bus), comfort of ride (subway, bus), ease of hearing announcements and helpfulness of announcements (bus, streetcar), and helpfulness and appearance of operator (bus, streetcar).

Pride in the TTC and what it means for Toronto also continues to improve. In Q2, 73% of customers agreed with this statement compared to 69% of customers a year ago, indicating significantly higher levels of pride compared to last year.

### **Commentary on Improvement in Customer Satisfaction**

Work continues toward meeting the goals of the 2016 Customer Charter, with 35 time-bound commitments that include improved service reliability, increased accessibility, cleaner stations, and continued transparency in reporting and explaining delays. The Charter has evolved in 2016, with promises tracked by quarter rather than by category and core actions have been developed into overall commitments. The results will be same – delivering a transit system that makes Toronto proud. The 2016 Customer Charter is the fourth released by the TTC, adding to the 110 promises we have already delivered since the Charter was first unveiled in 2013. The Customer Charter is designed to track promises and improvements that benefit customers, while holding TTC's management to account if they're not met. Progress against these commitments is reported to the TTC Board each quarter and is posted on ttc.ca.

In Q1 2016, all commitments were met. The 510 Spadina streetcar route is serviced by new, fully accessible streetcars; payment through Apple Pay at collector booths at all subway stations is now available; streetcar short turns are on track to be reduced by a further 20%; subway service on Sundays now begins approximately one hour earlier, at 8 a.m.; additional trains were added to Line 1 to decrease delays during off-peak hours; a "Local Working Group" was established to begin public consultations for a new second exit at Donlands Station; and five new express bus services were introduced.

In Q2 2016, three of five commitments were met. New fare gates were installed at Main Street, Wellesley, Bay, Sherbourne, and St. Clair stations; new bike racks to improve and increase storage capacity have been installed at six stations and upon receiving positive feedback from customers, additional bike repair stops were installed at 20 subway stations.

Wi-Fi was delivered to 19 out of 22 stations; North York, Eglinton, Downsview, Wilson, and Lawrence West stations were completed at the end of August. Dedicated boards were unable to be installed in Q2 at key locations in 12 stations to inform customers about planned/unplanned closures, as there was a delay with obtaining a supplier. At the end of July, the following stations received dedicated information boards: Bay, College, Dundas, King, Museum, Osgoode, Queen, Queen's Park, Spadina, St. Andrew, St. George, St. Patrick, Union, Wellesley, and Yonge-Bloor.

Meet the Managers sessions enable customers and managers to interact on a personal level. This allows managers to gain additional insight into the challenges and opportunities experienced by customers while travelling on the TTC. To date in 2016, sessions have been held at the following stations: Ossington, Bloor-Yonge, Main Street, Downsview, Kennedy, Scarborough RT, and St. Clair West. The schedule has been confirmed for the remainder of the year at the following stations: Finch, Eglinton, St. George, and Union.

The rollout of PRESTO on buses is underway with 50 percent of the installations completed by the end of August. A sign will be displayed on buses that have PRESTO readers so customers know if their bus is equipped with PRESTO. Thirty-two stations now have PRESTO, six of which also have new fare gates. By the end of 2016, all buses and at least one entrance at all subway stations will have PRESTO readers.

# **Customer: Environment**

### **Station Cleanliness**

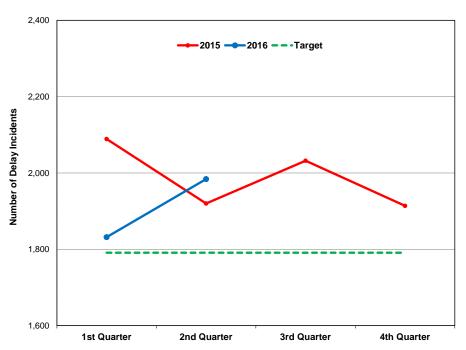


Performance in Q2 2016 was 75.7%, which was above target and an improvement over Q2 2015.

### **Customer: Service Performance**



### **Line 1: Delay Incidents**



The number of delay incidents increased in Q2 to 1,984 and was above target for the second consecutive quarter.

While speed control incidents increased slightly from Q1 to Q2, the year-over-year results for this incident type show that improvements have been made by almost 20%. The largest increase is in passenger-related security incidents, with year-over-year increases in disorderly person incidents (from 43 to 84), employee assaults (from 4 to 8) and sexual assaults (from 2 to 11).

#### Note:

The 2016 target is based on a 20% or more reduction in delay incidents from the 2014 quarterly average baseline.

**Line 1: Delay Minutes** 



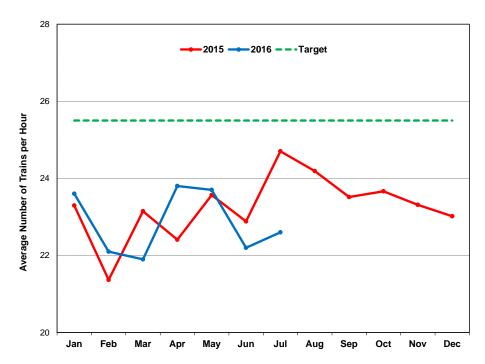
The number of delay minutes decreased in Q2 to 3,372. Performance in Q2 achieved target for the fifth consecutive quarter.

A number of factors continue to influence this KPI positively, including consistently high reliability with the Toronto Rocket fleet, increased station staffing leading to improved response time to incidents, and the TTC/EMS Medic program that positions Toronto Paramedics at key locations in the subway system to respond to ill customer incidents.

#### Note:

The 2016 target is based on a 20% or more reduction in delay minutes from the 2014 quarterly average baseline.

Line 1: Trains per Hour in Morning Peak



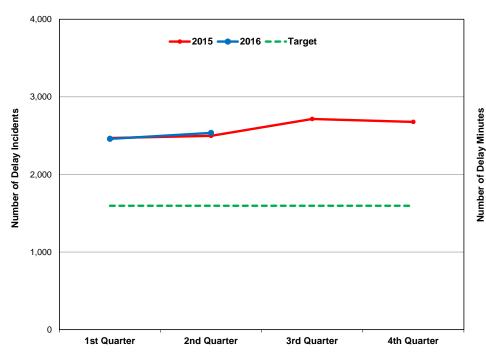
The daily average number of trains per hour (TPH) in the morning peak service period increased to 22.6, or 89% of what was scheduled. Overall monthly performance continued to remain below target.

Performance for two days in July was negatively impacted by signal system issues. Another factor influencing this measure is the trains being sent from Line 1 to Line 2 every day to help with the hot car issue in the T-1 fleet. This is not expected to end until September; therefore, this will also be reflected in performance for August.

### Note:

Data are based on weekday service from Monday to Friday.

# **Line 2: Delay Incidents**



The number of delay incidents increased in Q2 to 2,535 and performance continued to remain above target.

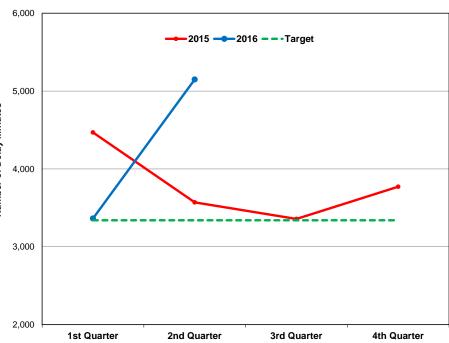
Despite a 10% improvement from Q2 2015, speed controlrelated incidents continue to dominate on Line 1, comprising over 44% of the total delay incidents in Q2. Maintenance and engineering teams continue to work on reducing these incidents and it should be noted that although the number of incidents is very high, each individual incident accounts for a minimal delay in terms of the number of delay minutes.

By the end of 2016, a new system software will be installed and it is expected to result in at least a 20% improvement in speed control-related incidents.

#### Note:

The 2016 target is based on a 20% or more reduction in delay incidents from the 2014 quarterly average baseline.

**Line 2: Delay Minutes** 



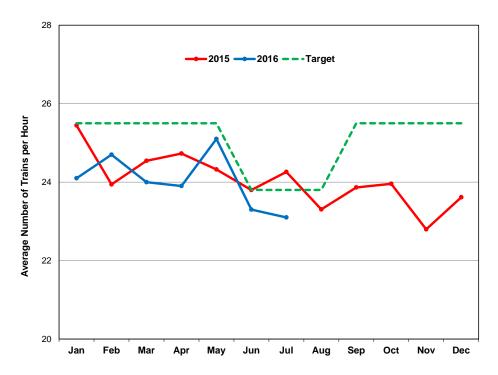
The number of delay minutes dramatically increased in Q2 to 5,149, the highest total in the last 10 quarters.

Fire/Smoke (Plan B) incident minutes increased sharply year-over-year (354 to 906) due in large part to several major incidents in May and June. There was also an increase in delay minutes attributed to passenger-related incidents, including ill customers on trains (625 total minutes), up from 329 minutes recorded in Q2 2015.

#### Note:

The 2016 target is based on a 20% or more reduction in delay minutes from the 2014 quarterly average baseline.

Line 2: Trains per Hour in Morning Peak

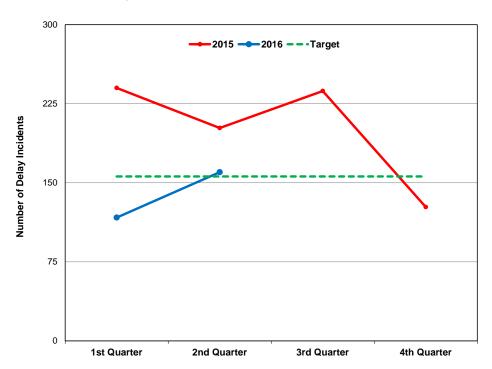


The daily average number of trains per hour (TPH) in the morning peak service decreased slightly in July to 23.1, which was 97% of what was scheduled. Performance continued to remain below target.

Of note is that the TPH target decreased from 25.5 to 23.8 as of June 19 due to the seasonal service reduction. The target will be re-established at 25.5 as of September 2016.

Hot cars in the T-1 fleet continued to dominate the issues on Line 2 in July. Each day, up to 6 TR trains from Wilson were used to offset cancellations due to hot cars. A comprehensive program to address the issues is in place; however, this situation is expected to continue until the issue is fully addressed through the work under way at Greenwood and Davisville carhouses.

**Line 3: Delay Incidents** 



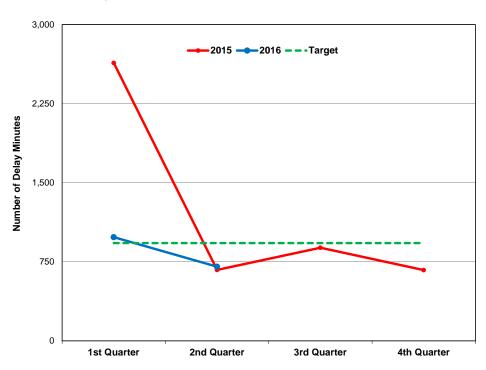
The number of delay incidents increased in Q2 to 160; resulting in being only marginally (four incidents) above target.

Rolling Stock and VOBC time-out incidents consistently comprise the largest proportion of incidents, accounting for 116 incidents in Q2. However, both of these categories improved year-over-year by over 37% and this improvement is what drove the near-target performance of this measure.

#### Note:

The 2016 target is based on a 20% or more reduction in delay incidents from the 2014 quarterly average baseline.

**Line 3: Delay Minutes** 



The number of delay minutes decreased in Q2 to 703, achieving target for the fourth time in the past five quarters.

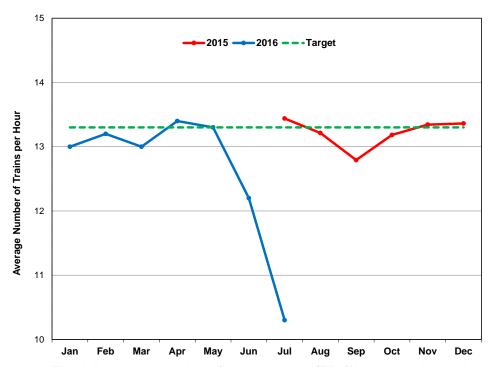
Of note is that the biggest improvement was in Rolling Stock delays, where total delay minutes decreased 30% (349 to 246).

Work continues on several different maintenance programs to improve fleet reliability and extend the useful life of the cars and as those programs are completed, it is anticipated that Rolling Stock delays will continue to decrease.

#### Note:

The 2016 target is based on a 20% or more reduction in delay minutes from the 2014 quarterly average baseline.

### **Line 3: Trains per Hour in Morning Peak**



The daily average number of trains per hour (TPH) in the morning peak service period decreased in July for the third consecutive month to 10.3.

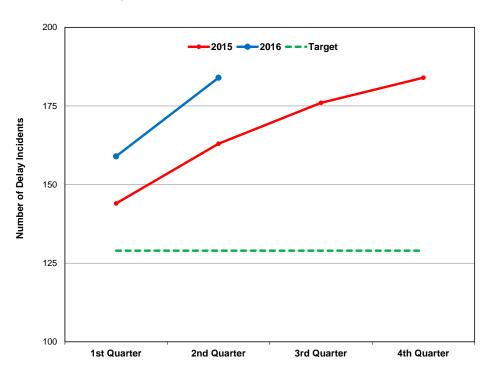
There was a significant drop in the TPH in July as the impact of the schedule change that went into effect on June 19 was in place for the entire month, decreasing the peak number of trains available from 6 to 5. In addition, speeds and braking profiles are being decreased in order to avoid damaging the rolling stock during periods of high ambient temperatures.

The summer months are traditionally challenging for fleet reliability on the SRT, and this year's hot summer is continuing to result in a sustained level of poorer than expected performance. The service schedule reverted back to a regular 6-car make-up in September and as the summer temperatures decrease in the fall, performance is expected to return to typical levels in September and October.

#### Note:

Data are based on weekday service from Monday to Friday.

# **Line 4: Delay Incidents**



The number of delay incidents increased in Q2 to 184. Performance continued to remain above target.

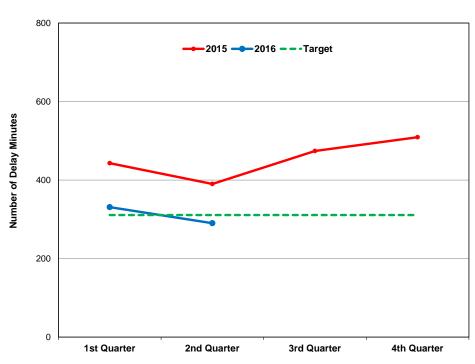
With 184 incidents in the quarter, Line 4 remains relatively low for delay incidents, and speed control is the greatest source of delays with 80, or 43%, of the total incidents. On a positive note, those incidents are typically very short and those 80 incidents only accounted for 22 minutes.

Similar to other lines, passenger-related incidents increased, including Customer and Emergency Alarm activations.

#### Note:

The 2016 target is based on a 20% or more reduction in delay incidents from the 2014 quarterly average baseline.

**Line 4: Delay Minutes** 



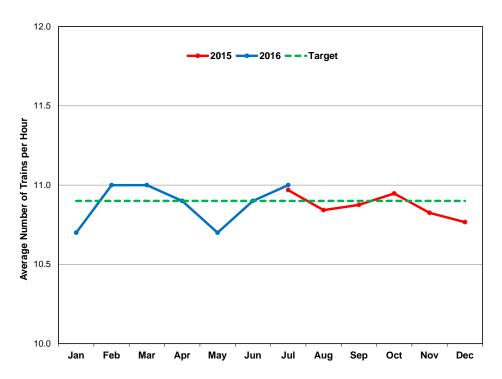
The number of delay minutes decreased in Q2 for the second consecutive quarter to 290 and performance achieved target for the first time in six quarters.

Delay minutes decreased 26% year-over-year and the greatest improvement was in equipment-related incidents, where 132 minutes of delay were reduced. Rolling stock-related delays decreased year-over-year from 72 to 32 and infrastructure-related delays were down by 23 minutes.

#### Note:

The 2016 target is based on a 20% or more reduction in delay minutes from the 2014 quarterly average baseline.

Line 4: Trains per Hour in Morning Peak



The daily average number of trains per hour (TPH) in the morning peak service period increased in July to 11.0, or 101% of what was scheduled; overall performance achieved target for the second consecutive month and fifth time in six months.

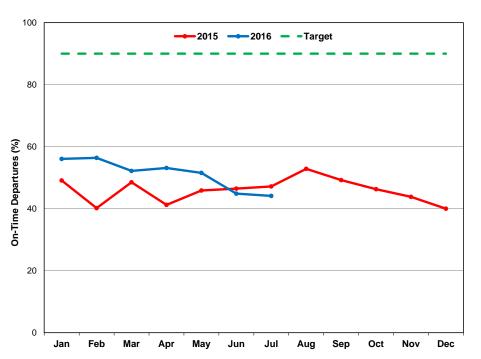
With a relatively low number of delay incidents, it is anticipated that morning peak TPH will remain relatively high. Along with consistently good headway adherence, overall service quality is very strong.

### Note:

Data are based on weekday service from Monday to Friday.

# **Streetcar**

### **On-Time Performance**

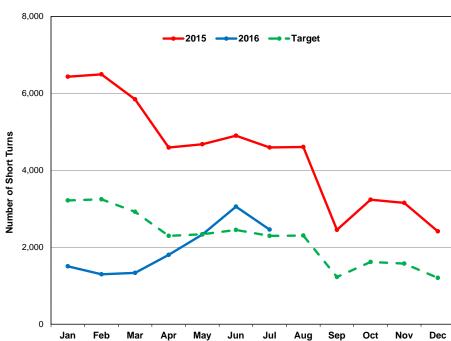


Performance in July decreased for the third consecutive month to 44.1% and continued to be below target.

### Note:

This KPI measures adherence to scheduled (-1 to +5 minutes) departure times from end terminals.

### **Short Turns**



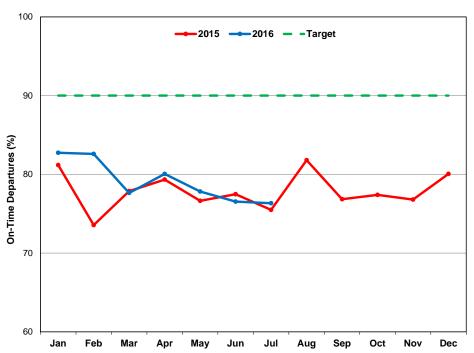
The number of short turns decreased in July to 2,461, which was slightly above target. The number of short turns throughout 2016 has been well below 2015 levels due to improvement initiatives implemented in 2016.

#### Note:

Data are based on all seven days of service from Sunday to Saturday.



### **On-Time Performance**

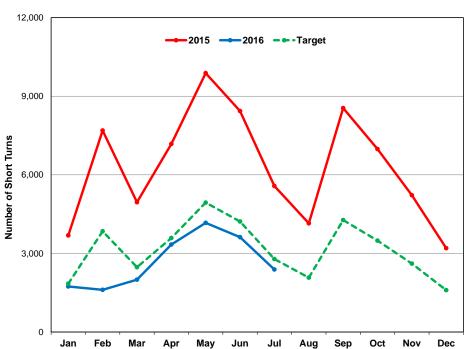


Performance in July decreased for the third consecutive month to 76.3% and continued to be below target.

### Note:

This KPI measures adherence to scheduled (-1 to +5 minutes) departure times from end terminals.

### **Short Turns**



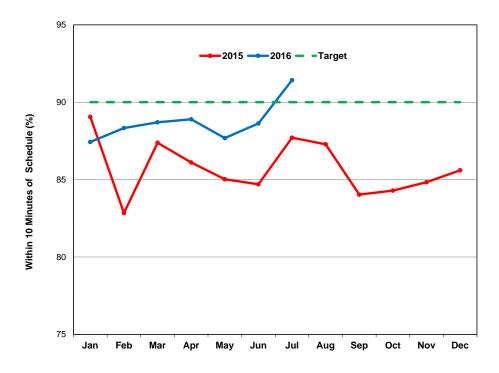
The number of short turns in July decreased for the second consecutive month to 2,386. Performance has been below target (favourable) for eight consecutive months.

### Note:

Data are based on all seven days of service from Sunday to Saturday.

# Wheel-Trans

## **Punctuality**



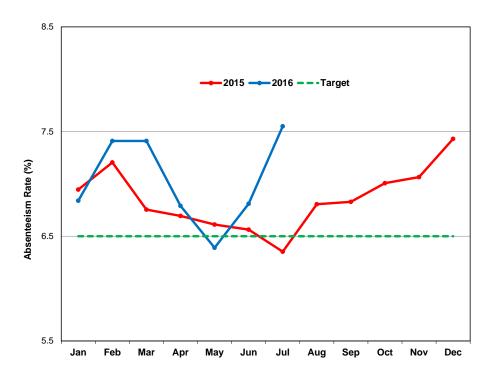
Performance in July increased for the second consecutive month to 91.4%, achieving target for the first time since this KPI was established in 2014.

The improved performance is attributable to continued efforts to enhance service delivery.



## **People**

## **Employee Absence**



The absenteeism rate in July increased for the second consecutive month to 7.55%. Overall performance has been above target (unfavourable) for 22 of the past 24 months.

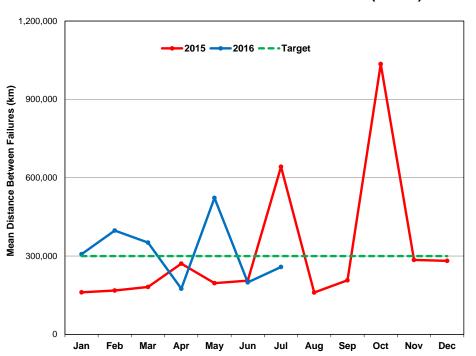
Focus continues to be placed on actively and systematically managing employees with problematic attendance records.



## **Asset: Vehicle Reliability**



## T1 Train: Mean Distance Between Failures (MDBF)

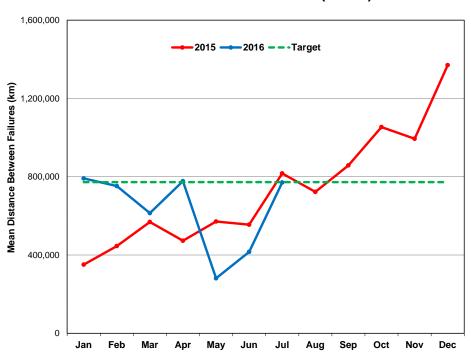


The MBDF increased in July to 258,138 kilometres but remained below target for the second consecutive month.

The T1 Accelerated Door Overhaul program was completed in 2015. Door pocket guides are being overhauled, with an estimated completion at the end of 2016. Master controller upgrades are estimated to be completed in Q3 2016. The T1 fleet is undergoing a refreshing of the HVAC system. Although this particular equipment issue does not directly cause delay incidents, it remains a substantial performance issue.

Maintenance and engineering staff are collaborating to ensure that the standard inspection and door set-up programs are robust. Long-term design solutions include a PLC Door Control System, a Door Interlock Rebuild Program, and a new cab seat prototype design.

## TR Train: Mean Distance Between Failures (MDBF)

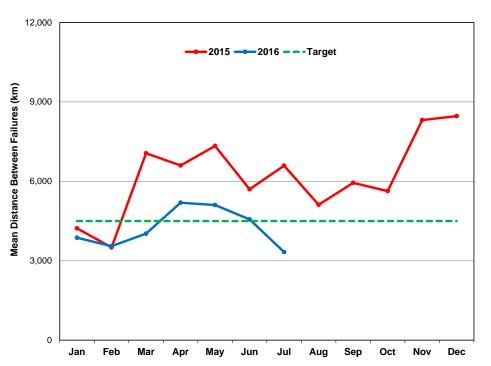


The MDBF increased in July to 770,684 kilometres and was very marginally below target.

The passenger door system has received numerous modifications and performance improved in July, which indicates that Operators benefited from refresher training on door recovery procedures. The cab door is undergoing Revision E cab door retrofit from Bombardier. The brake system continues to receive numerous improvements to associated software; fleet retrofits of the new modifications and validation testing of the proposed upgrades are in progress, with anticipated improvements in future months. There are also ongoing joint investigations with the car builder and maintenance staff focused on validating potential seasonal effects of higher ambient temperatures on the air (friction) braking system performance.



## **CLRV Streetcar: Mean Distance Between Failures (MDBF)**

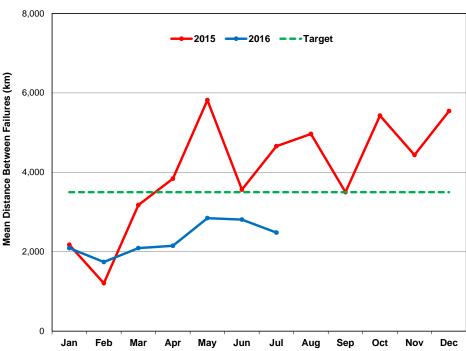


The MDBF decreased in July for the third consecutive month to 3,327 kilometres. Overall performance was below target for the first time in four months.

The decreased performance was due to continued deterioration of the 36-year old fleet. Reliability was impacted by a shortage of overhauled components. On the positive side, availability of vehicles has improved due to the winter readiness program that addressed the pneumatic and heating system problems.

It is anticipated that performance will improve in conjunction with the TTC Board's approval of a funding request to maintain the non-overhauled CLRVs in a state of good repair.

## **ALRV Streetcar: Mean Distance Between Failures (MDBF)**

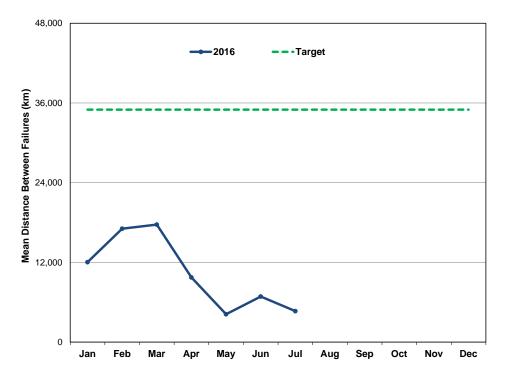


The MDBF decreased in July for the second consecutive month to 2,483 kilometres. Performance was below target for the seventh consecutive month.

The decreased performance was due to delays in long lead critical components for the overhaul program as well as gaps in maintenance and operating procedures and quality of manufactured components from some suppliers. A systems approach has been initiated to address gaps and reliability deficiencies.

It is anticipated that performance will improve in conjunction with the TTC Board's approval of a funding request to maintain the non-overhauled ALRVs in a state of good repair.

## **New Streetcar: Mean Distance Between Failures (MDBF)**



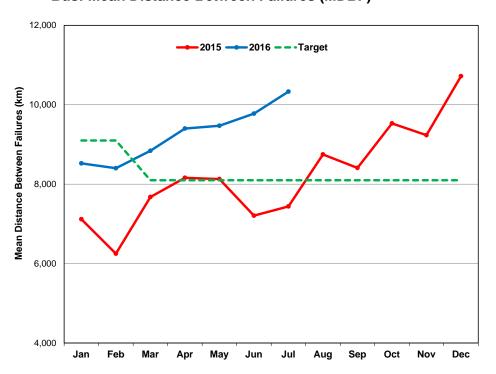
The MDBF decreased in July to 4,669 kilometres.

As the TTC awaits the delivery of more new low-floor streetcars from Bombardier, this key performance indicator will become increasingly relevant. With so few of the new streetcars in service today, the performance indicator does not yet truly reflect just how well the new streetcars are performing. With only 22 new streetcars available for service, even a low number of defects can have a significant impact on the mean distance between failures.

The target of 35,000 mean kilometres between failures is expected to be attained on a regular basis as the sixtieth new streetcar is received.



## **Bus: Mean Distance Between Failures (MDBF)**



The MDBF increased in July for the fifth consecutive month to 10,330 kilometres and also achieved target for the fifth month in a row.

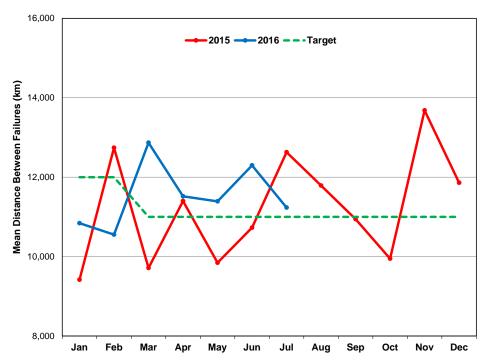
Garage technical staff continues to focus on quality repairs and analysis of repeaters as well as heating and cooling systems. Maintenance facilities staff will continue to focus efforts on the quality of repairs.

#### Note:

The original 2016 MDBF target of 9,100 kilometres was adjusted to 8,100 kilometres because a funding request for parts for a reliability-centred maintenance program was not approved.



## Wheel-Trans: Mean Distance Between Failures (MDBF)



The MDBF decreased in July to 11,235 kilometres but overall performance achieved target for the fifth consecutive month.

TTC staff is monitoring seven suspect vehicles and inputting mileage manually until the root-cause is identified. A meeting was held with Ford to discuss poor workmanship on rebuilt engines and TTC is awaiting a response. A Differential/Axle RCM program is ongoing to improve mileage between failures.

#### Note:

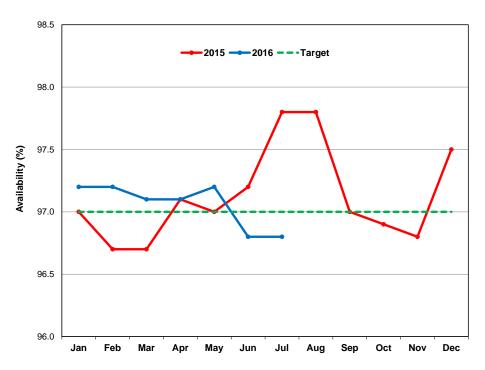
The original 2016 MDBF target of 12,000 kilometres was adjusted to 11,000 kilometres because a funding request for parts for a reliability-centred maintenance program was not approved.

## **Assets: Equipment Availability**

#### **Elevators**

## 100 2015 -- 2016 - - Target 99 Availability (%) 97 96 May Jan Feb Jul Aug Sep Oct Nov Dec Mar Apr Jun

## Escalators



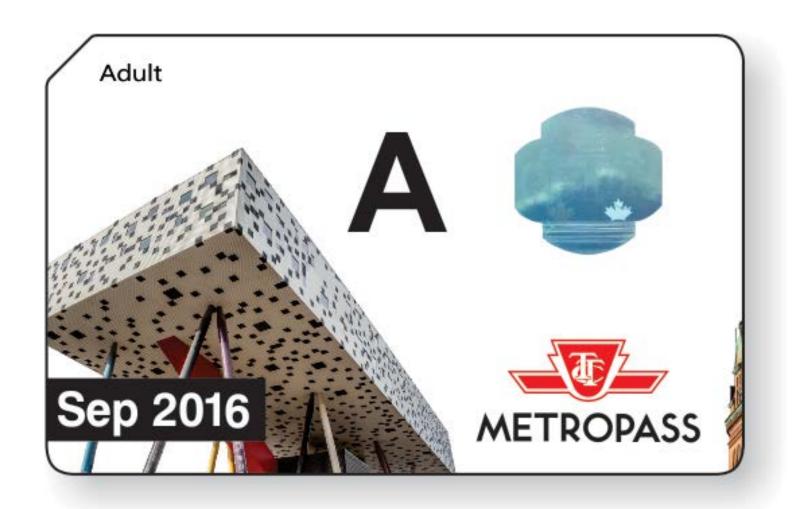
Performance in July remained virtually unchanged at 99.0% and continued to remain above target.

Elevator maintenance was completed as planned and scheduled.

Performance in July remained unchanged and was slightly below target.

The decreased performance was partially attributable to jams in equipment mechanisms. A detailed review of related work procedures is in progress.

Page intentionally left blank



## 3.5 Financials

## **Financials**

This section provides detailed information about the TTC and Wheel-Trans Operating Budgets. In addition, progress on the Commission's Capital Program and specific information about selected capital projects is also provided.

## **TTC Operating Budget**

## 2016 Year-to-Date Results

To the end of Period 7 (July 30), total revenues were \$24.8 million (3.5%) below budget primarily due to 8 million (2.5%) fewer customer journeys than planned and a lower average fare (3¢ or 1.4%) stemming from ongoing changes in the mix of fare media.

Over the same time period, expenses were under budget (\$12.4 million or 1.2%) largely due to workforce gapping savings and lower than anticipated expenditures for diesel and employee benefits partially offset by higher accident claim settlement costs to date.

## 2016 Year-End Projections

(millions)	Projection	Budget	Variance
2016 TTC Operating Budget			
Customer Journeys (Ridership)	543	553	(10)
Revenue	\$1,209.7	\$1,242.1	(\$32.4)
Expenses	\$1,714.4	\$1,736.7	(\$22.3)
Subsidy Required	\$504.7	\$494.6	\$10.1
Subsidy Available*	\$494.6	\$494.6	-
Surplus/(Shortfall)	(\$10.1)	-	(\$10.1)

<sup>\*</sup>Includes a \$1 million draw from the TTC Stabilization Reserve held by the City of Toronto

Currently, a \$10.1 million (or 2%) year-end subsidy shortfall is projected and a number of key budget variances account for this projection as follows.

## Passenger Revenues: \$33.0 million decrease

Further to the March 23 TTC Board Report regarding 2016 ridership, unfavourable ridership results so far this year have resulted in lower than anticipated passenger revenues. Current forecasts indicate that ridership could fall approximately 10 million rides below the target of 553 million (or 543 million) with a corresponding passenger revenue shortfall of about \$33 million. Staff will continue to closely monitor and scrutinize additional results and will provide ongoing updates on year-end projected ridership and passenger revenues.

## Employee Benefits: \$10.0 million decrease

The trend in healthcare expenses to date indicates that these expenses could fall below budget by year-end.

## Labour: \$8.3 million decrease

Workforce gapping is the key factor behind the projected lower labour expenses by year-end.

## Diesel: \$4.0 million decrease

A marginally more favourable fuel consumption rate than anticipated (due to the milder winter weather experienced earlier this year) accounts for this positive impact.

## Depreciation: \$3.5 million decrease

Based on lower than anticipated capital asset acquisitions in 2015, it is projected that the corresponding depreciation expense for 2016 will also be lower than originally expected.

## Hydro & Utilities: \$1.0 million decrease

Expenses to date have been less than anticipated primarily due to lower than forecasted consumption stemming from the milder winter weather experienced earlier this year.

## Accident Claim Settlements: \$6.5 million increase

The trend in these expenses to date, including the settlement of a large claim earlier in the year, indicates that these expenses will exceed budget by year-end.

## Other: \$2.6 million decrease

All other projected changes in other revenues and expenses add up to this slightly favourable variance.

# TORONTO TRANSIT COMMISSION 2016 OPERATING BUDGET - INCOME STATEMENT

		Period 7:	4 Weeks			Seven Pe	riods to					
		July 3 to Jul	ly 30, 2016			July 30,	, 2016			2016		
(\$000s)		(	Over/(Under)	Over/(Under)			Over/(Under)	Over/(Under)			Probable	Probable
(, ,	Actual	Budget	Budget	Budget %	Actual	Budget	Budget	Budget %	Probable	Budget	Variance	Variance %
TOTAL REVENUES	90,713	94,297	(3,584)	-3.8%	693,223	718,006	(24,783)	-3.5%	1,209,728	1,242,128	(32,400)	-2.6%
TOTAL EXPENSES	128,304	133,612	(5,308)	-4.0%	987,812	1,000,152	(12,340)	-1.2%	1,714,408	1,736,756	(22,349)	-1.3%
OPERATING SUBSIDY REQUIRED in 2016					294,589	282,146	12,443	4.4%	504,680	494,628	10,052	2.0%
CITY OPERATING SUBSIDY AVAILABLE							-	100.0%	493,627	493,627	-	0.0%
DRAW FROM STABILIZATION RESERVE							-		1,001	1,001	-	0.0%
SHORTFALL / (SURPLUS)					294,589	282,146	12,443	4.4%	10,052	-	10,052	
												1
<u>REVENUES:</u>												
Passenger Revenues	84,979	88,919	(3,940)	-4.4%	652,258	678,666	(26,408)	-3.9%	1,142,300	1,175,300	(33,000)	-2.8%
Outside City & Charters	1,398	1,192	206	17.3%	10,608	9,823	785	8.0%	17,019	16,319	700	4.3%
Advertising	2,331	2,331	-	0.0%	16,317	16,317	-	0.0%	27,975	27,975	-	0.0%
Rent Revenue	879	925	(46)	-5.0%	6,145	6,474	(329)	-5.1%	10,395	11,095	(700)	-6.3%
Commuter Parking	821	723	98	13.6%	6,012	5,494	518	9.4%	9,574	9,274	300	3.2%
Other Income	305	207	98	47.3%	1,883	1,232	651	52.8%	2,465	2,165	300	13.9%
TOTAL REVENUES	90,713	94,297	(3,584)	-3.8%	693,223	718,006	(24,783)	-3.5%	1,209,728	1,242,128	(32,400)	-2.6%
EXPENSES (LABOUR & NON-LABOUR)												
CEO's Office	2,884	3,059	(175)	-5.7%	20.663	22,139	(1,476)	-6.7%	37,728	38,709	(981)	-2.5%
Engineering, Construction & Expansion Group	245	369	(124)	-33.6%	1,791	2,456	(665)	-27.1%	4,382	4,382	-	0.0%
Corporate Services Group	5,182	5,479	(297)	-5.4%	36,193	38,319	(2,126)	-5.5%	66,895	69,639	(2,744)	-3.9%
Strategy and Customer Experience Group	1,713	1,574	139	8.8%	10,639	11,906	(1,267)	-10.6%	20,995	20,868	127	0.6%
Operations Group	37,704	38,424	(720)	-1.9%	298,779	298,790	(1,201)	0.0%	521.892	525,626	(3,735)	-0.7%
Service Delivery Group	37,064	38,163	(1,099)	-2.9%	282,106	284,220	(2,114)	-0.7%	504,873	506,389	(1,516)	-0.3%
Employee Benefits	24,607	25,700	(1,093)	-4.3%	187,983	192,300	(4,317)	-2.2%	291,600	301,600	(10,000)	-3.3%
Vehicle Fuel	6,461	6,599	(138)	-2.1%	45,815	48,909	(3,094)	-6.3%	80,556	84,556	(4,000)	-4.7%
Traction Power	4,578	4,533	45	1.0%	30,841	31,539	(698)	-2.2%	53,371	54,371	(1,000)	-1.8%
Utilities (Hydro, Natural Gas, Water)	1,801	1,655	146	8.8%	15,391	15,364	27	0.2%	25,938	25,938	(1,000)	0.0%
Taxes and Licences	255	258	(3)	-1.2%	1,891	1,901	(10)	-0.5%	3,261	3,261		0.0%
Depreciation	2,578	2,578	(5)	0.0%	19,466	19,466	(10)	0.0%	29,948	33,448	(3,500)	-10.5%
Accident Claims & Insurance	1,629	2,367	(738)	-31.2%	21,750	18.035	3,715	20.6%	37,884	31,384	6,500	20.7%
Non-Departmental Costs	1,603	2,854	(1,251)	-43.8%	14,504	14,808	(304)	-2.1%	35,085	36,585	(1,500)	-4.1%
TOTAL EXPENSES	128,304	133,612	(5,308)	-4.0%	987,812	1,000,152	(12,340)	-2.1 % -1.2%	1,714,408	1,736,756	(22,349)	-1.3%
OPERATING SUBSIDY REQUIRED in 2016	0,004	.00,012	(3,000)	7.0/0	294,589	282.146	12,443	4.4%	504,680	494,628	10,052	2.0%
CITY OPERATING SUBSIDY AVAILABLE							,.40	100.0%	493,627	493,627		2.070
DRAW FROM STABILIZATION RESERVE								100.0 /6	1,001	1,001		
							12,443	4.4%	10.052	1,001	10,052	
OHORH ALL / (GORF LOO)					234,303	282,146	12,443	4.4%	10,032	-	10,032	

## **Wheel-Trans Operating Budget**

## 2016 Year-to-Date Results

To the end of Period 7 (July 30), total revenues were slightly above target (\$60K or 1.5%). This reflects slightly higher revenues from 116 (5.4%) more customer journeys partially offset by a lower average fare (\$0.07 or 3.2%).

Over the same period, expenses were \$1.6 million (2.2%) over budget primarily due to the additional customer journeys.

## **2016 Year-End Projections**

(millions)	Projection	Budget	Variance
2016 Wheel-Trans Operating Budget			
Customer Journeys (Ridership)	3.951	3.690	0.261
Revenue	\$7.1	\$7.0	\$0.1
Expenses	\$127.7	\$123.7	\$4.0
Subsidy Required	\$120.6	\$116.7	\$3.9
Subsidy Available	\$116.7	\$116.7	-
Surplus/(Shortfall)	(\$3.9)	-	(\$3.9)

Currently, a \$3.9 million (or 3.3%) year-end subsidy shortfall is projected and is largely attributable to the ever-increasing demand for service as explained below.

2016 ridership results to date are consistent with the trend identified in 2015 where ridership demand continues to outpace expectations. To date, demand for service is almost 6% higher than anticipated and 12% above the comparable 2015 results. Preliminary staff estimates of 2016 projected ridership suggest that an additional 261,000 trips (7%) over the 3.7 million trips budgeted could be carried in 2016. The continuing increased demand is attributable to improvements in on-time performance, reduced call abandonment rates (now at 25%), and the fact that new customers (who are joining at the rate of about 800 – 900 per month) are utilizing the Wheel-Trans service at a higher rate than existing customers.

These additional trips will increase contracted taxi service expenses by \$6.6 million and are expected to be mitigated by projected under-expenditures in diesel fuel (\$0.8 million) and lower bus and garage maintenance costs (\$0.6 million), lower employee benefits utilization (\$0.9 million) and workforce gapping (\$0.4 million), for the same reasons already noted for the TTC Operating Budget.

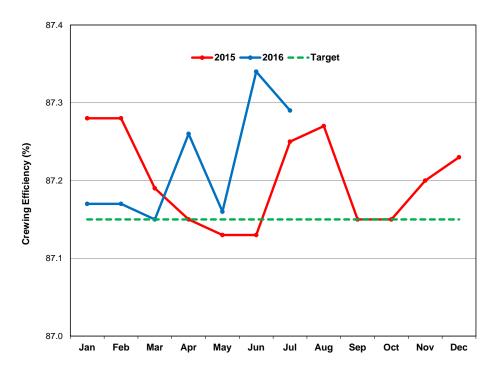
## **WHEEL-TRANS**

## **OPERATING BUDGET - INCOME STATEMENT**

PERIOD 7		Period 7: Four Weeks Seven Periods to July 3 to July 30, 2016 July 30, 2016						Full Year 2016		
(\$000s)	Actual	O Budget	ver/(Under) Budget	Actual	Over/(Under) tual Budget Budget		Projected Actual	Budget	Projected Variance	
REVENUES: Passenger Fares	565	556	9	4,099	4,039	60	7,119	6,953	166	
EXPENSES:										
CONTRACTED TAXI SERVICE	4,165	3,791	374	31,276	27,718	3,558	54,418	47,808	6,610	
WHEEL-TRANS BUS SERVICE	3,465	3,494	(29)	26,802	27,584	(782)	47,133	48,622	(1,488)	
OTHER WHEEL-TRANS EXPENSES	1,930	2,103	(173)	14,933	16,124	(1,191)	26,599	27,236	(637)	
TOTAL EXPENSES	9,560	9,389	172	73,011	71,425	1,586	128,151	123,666	4,485	
OPERATING SUBSIDY REQUIRED IN 2016							121,032	116,713	4,319	
OPERATING SUBSIDY AVAILABLE IN 2016							116,713	116,713	0	
SHORTFALL/(SURPLUS)							4,319	-	4,319	

PASSENGER TRIPS (000s)	305	292	13	2,256	2,140	116	3,951	3,690	261
UNACCOMMODATED RATE (%)	0.3	0.5	(0.2)	0.4	0.5	(0.1)	0.5	0.5	0.0
SUBSIDY PER TRIP (\$)	29.50	30.29	(0.79)	30.55	31.49	(0.94)	31.14	32.13	(0.99)

## **Operator Crewing Efficiency**



Operator crewing efficiency decreased slightly in July to 87.29%. This measure has achieved target for 13 consecutive months.

## Note:

Crewing efficiency is defined as the ratio of scheduled hours to pay hours.

## **TTC Capital Budget**

## 2016 Year-to-Date Results

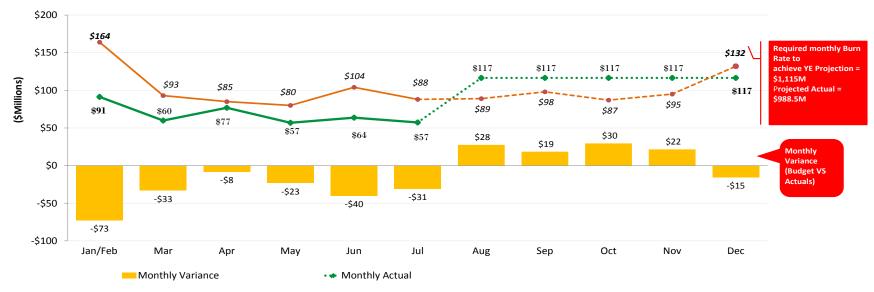
Capital expenditures to the end of Period 7 (July 30, 2016) reflect lower than expected project activity and include continued progress on vehicle and construction contracts already in place. Significant variances in the current period stem from under-spending on delayed contract work and vehicle deliveries.

## **2016 Year-End Projections**

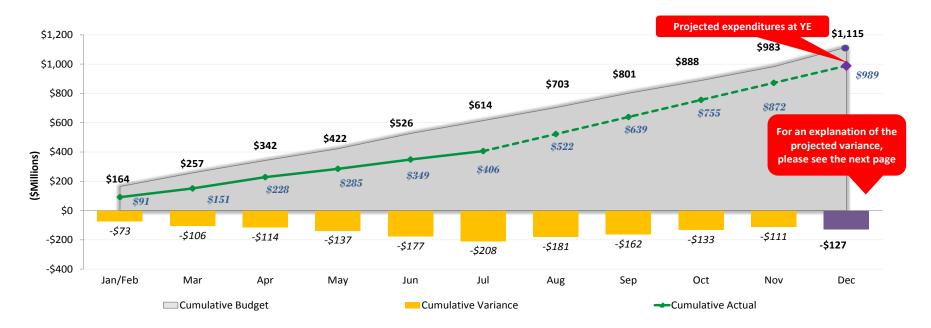
(millions)	Projection	Budget*	Variance
2016 TTC Capital Budget			
Base Program	\$988.5	\$1,115.0	(\$126.5)
Toronto-York Spadina Subway Extension (TYSSE)	\$428.1	\$719.6	(\$291.5)
Scarborough Subway Extension (SSE)	\$40.5	\$133.0	(\$92.5)

<sup>\*</sup>Excludes additional carry forward spending on Base Program (\$101.7M), TYSSE (\$69.6M), and SSE (\$22.5M)

## 2016 Base Program: Month-to-Month Budget Tracking



## 2016 Base Program: Cumulative Budget Tracking



## Base Program – 2016 Year-End Projected Variance: \$126.5 million under

The 2016 Council Approved Budget of \$1,115.0 million excludes an additional carry forward of \$101.7 million that was approved by Council on May 3, 2016. Significant projected yearend base program variances are outlined below:

## Subway Track: \$1.9 million under

The variance is due to procurement deferrals from 2015 to 2016 for the Optical Inspection Equipment (Rail Base Inspection) and consulting services for the Davisville Area Rehabilitation. Also work slipped for Victoria Park Expansion and a portion of Subway/ SRT Turnout work to 2016; offset by revaluation of cost estimates in Subway Track and Subway Turnout 'on-going' capital programs.

## Surface Track: \$1.2 million under

The variance is due to procurement deferrals (to 2018) of the Harvey Shop Tracks Beneath Transfer Table which is awaiting EC&E space utilization study; Roncesvalles Pit Track deferral (to 2017) to coordinate with Carhouse Modification project and Roncesvalles Carhouse to 2019 to align with the Queensway Modification project offset by extra expenses for Russell Yard South End Track Improvement still in Progress.

## Communications: \$5.7 million under

The variance is due to: Train Door Monitoring project has deferred schedule based on TR availability and overall system rollout plans; Public Address and Passenger Assist Intercom projects deferred as potential integration with Station Transformation initiatives; Radio Replacement project delays due to procurement process and ITS VISION project integration; CCTV project deferred for 2 locations and delay in Video Management System (VMS) procurement due to resource constraints and deferral of DVR equipment upgrades due to changes in work sequence related to VMS implementation.

## Signal Systems: \$3.4 million under

The variance is mainly due to Cable Replacement & Yard Interchange Signal Upgrades: slippage due to engineering resources allocated to Eglinton Ancillary Room Relocation, Speed Control System: slippage as a result of ATC project changes and stop order issued by ATC to Thales; Workcar Advanced Warning: slippage due to Track Level Safety Committee not finalizing decision; SRT Loop Cable Axle Counter Improvement: work slipped to be consistent with the 10 years SRT life extension scope; Wilson Yard Resignalling: Revised phasing due to new interface to mainline CBTC; Signalling of Davisville Yard: Revised

schedule due to updated ATC Project staging, moving off South Yonge to Spadina section and Rail Amalgamation Study.

## Finishes: \$1.4 million over

The variance is primarily due to Roofing Rehabilitation - prior year slippage of Hillcrest Subway Operation Building. Advanced work for Finch station roof, and advanced funds to cover the increase at Hillcrest Subway Operation Building.

## Equipment: \$3.1 million under

The variance is due to Subway Escalator Overhaul project work deferred to future year due to workforce unavailability.

## Streetcar Network Upgrades and Bus Rapid Transit (BRT): \$1.9 million over

The variance is mainly due to Streetcar Network Upgrades (\$0.9M) – Advanced construction on St. Clair and Bus Rapid Transit (BRT) - Spadina Subway to York University/Steeles Avenue (\$1.0M) - Funds advanced from future years to complete artwork/landscaping and public realm improvements.

## On Grade Paving Rehabilitation Program: \$4.5 million under

Variance is due to increase in estimated expenditures in 2015 – work progressed faster than anticipated at Davisville Lower Roadway, Malvern Garage, St. Clair Station & Eglinton Bus Roadway.

## Bridges and Tunnels: \$10.5 million under

Variance is due to Precast Tunnel Liner Rehabilitation: work progressed faster than anticipated in 2015 and project savings; Tunnel and Station Leak Remediation: reduced due to revised cost estimate; Structure Rehabilitation Program: reduced due to revised cost estimate offset by Maintenance of Joint/TTC Toronto Transportation Bridges – probable was reduced due to submitted revised schedule by the City; and Structure Paving Rehabilitation/Maintenance Programs - advanced work to 2016 for the following projects: Islington Bus Transfer Shorting to meet MiWay commitment; St. Clair Streetcar Loop Platform to coincide with planned Streetcar Service interruption; Union Station Platform close out and revised scope at CNE Loop Retaining Wall.

## Leslie Barns Project: \$34.5 million over

The variance is due to prior year slippage which includes delay of substantial performance for Leslie Street Connection Track and delays in commissioning which impacted the value of progress payments for Leslie Barns.

## Toronto Rocket/T1 Rail Yard Accommodation: \$8.6 million over

Variance is due to advanced construction work for Keele Yard Retrofit & Wilson Yard Tie Tracks 33 to 43 and Wilson Yard System works, Site Services Stage I and Rail Amalgamation Study.

## Purchase of Buses: \$6.5 million under

Variance is due to the accelerated delivery of buses in 2015.

## Purchase of Subway Cars: \$26.9 million over

Variance is due to slippage of vehicle deliveries from 2015 to 2016 due to Unifor Strike, additional scopes (4-car conversion and Train Door Monitoring prototyping on Sheppard Line).

## Streetcar Overhaul: \$6.2 million over

Variance is due to: 30 CLRV overhaul - 2016 new project as approved by the Board based on recoverables from Bombardier due to delayed deliveries of the new LFLRVs (\$4.4M); slippage of 3 ALRVs from 2015 (\$0.8M); advancement of work from future years for the AODA project (\$1.0M) to complete the vehicle installations (the exact number of vehicle installations is under review).

## Bus Overhaul: \$9.0 million under

Variance is mainly due to slippage of bus overhauls to 2017 resulting from delayed deliveries of various bus components.

## Subway Car Overhaul: \$22.3 million under

Variance is mainly due to slippages and scope changes for the Train Door Monitoring (TDM) project due to scope change in the Sheppard line from T1 train to TR train, T1 scope was cancelled and the increased scope on TR has deferred the completion date to 2019. The installation of Friction Brake Electronic Control Unit (FBECU) component has also been

deferred from 2016 to 2017 due to longer prototyping period under T1 15 year overhaul. The TR AODA was delayed due to the late approval of the Board Report and material supply issues from Bombardier. The TR 7 year overhaul is under due to the delay in equipment purchases and hiring of workforce in 2016. The T1 CCTV project is also under because priority was given to the T1 AODA project considering the car availability for revenue service. New scope of T1 HVAC overhaul was added to T1 20 year overhaul program.

## Purchase of Streetcars: \$108.3 million under

Staff are working with Bombardier to address the issues and delays surrounding the LRV order. It is difficult to determine with high level of confidence the projected cash flows for 2016 due to the lack of a detailed production schedule from Bombardier at this time. Nevertheless, the cash flows and projections for this project have been adjusted to reflect what is currently known based on Bombardier's revised, unsubstantiated delivery schedule and other projected expenditures.

## Purchase of Rail Non-Revenue Vehicles: \$5.1 million under

Variance is mainly due to deferral of Vacuum Excavator project to future year as priority was given to workcar (Automatic Train Protection) ATP prototyping project.

## SAP – ERP Implementation System: \$4.4 million under

Variance is due to a late start by IBM due to prolonged contract negotiations and award timeline. The other contributing factor is an anticipated later start of Wave 2.

## Vision Program (CADD/AVL System): \$13.5 million under

Variance is due to a delay in vendor approval by the Board which has moved a \$13.5M milestone payment into 2017.

## Other Service Planning: \$1.7 million under

The variance is mainly due to two projects: Platform Modification to Accommodate Artic buses – TTC and City are working together on the scope and delivery of the Platform Modification program at various locations, required to meet TTC objectives; Transit Priorities project – Considerable amount of work slipped from 2015 to 2016 because of external approvals (City Transportation Services, Toronto Hydro, etc.) that are required for this project to proceed.

## Toronto York Spadina Subway Extension (TYSSE): \$291.5 million under

The variance is primarily due to deferral of facilities and systems construction work and timing of commercial settlements including holdback releases.

## Scarborough Subway Extension: \$92.5 million under

Scarborough Subway Project (-\$82.1M): Variance is due to delays in the Environmental Assessment (EA) process and the rebaselining of the project scope.

SRT Life Extension (-\$10.4M): The variance is due to slippage from 2015 and three cancelled closures requested by the City which impacted Subway Infrastructure work. The preliminary result of SRT structural assessment showed that SRT would need extensive structural repairs; therefore, TTC is waiting for a recommendation from Bombardier/CAD Rail Industries while maintaining existing work and structural repairs to keep the SRT service in a state of good repair (note: there are only 28 SRT cars in revenue service).

Page intentionally left blank



The dashboard below provides a quarterly snapshot in time of the health status for major programs and projects that comprise the TTC project portfolio. The programs and projects, referred to hereafter as 'projects', have been included in the dashboard due to their magnitude and/or strategic significance. Collectively, the dashboard comprises 52% of the base capital program and 100% of the fully funded expansion projects.

Dashboard data will be refreshed quarterly. The CEO Reports for March, May, August, and November will include a dashboard update as well as one-page project performance updates for each of the projects listed in the dashboard. Major changes necessitating an immediate update will be discussed in Section 2 – CEO Commentary.

			Cost	(million	s)			Schedule		Oı	ıtlook to	Completic	n
Project	Strategic Objective	Budget	Actu		Projec	1	Start Date		Date	Schedule	Cost	scope	Risk
	<b>,</b>	Buuget	LTD	%	Cost	%	Otart Bate	Approved	Revised	schi	Ç	SCO	812
Bus Fleet & Facilities													
Vehicles: Purchase of Buses *	Assets	\$977	\$564	58%	\$977	100%	Ongoing	Q4 2019		G	G	G	G
Facilities: McNicoll Bus Garage	Growth	\$181	\$8	5%	\$181	100%	Q4 2012	Q4 2019	Q2 2020	G	G	G	G
Management Systems: VISION (CAD/AVL)	Customer	\$115	\$3	3%	\$115	100%	Q1 2014	Q4 2020	Q1 2020	G	G	G	G
Streetcar Fleet & Facilities													
Vehicles: Purchase of New Streetcars	Assets	\$1,187	\$527	44%	\$1,187	100%	Q2 2009	Q4 2019		G	G	G	Υ
Facilities: Leslie Barns	Growth	\$517	\$474	92%	\$517	100%	2008	Q4 2015	Q4 2016	G	G	G	G
Track: Surface Track *	Assets	\$419	\$283	68%	\$419	100%	Ongoing	Q4 2018	Q4 2019	G	G	G	G
Subway Fleet & Infrastructure													
Vehicles: Purchase of Subway Cars	Assets	\$1,167	\$1,108	95%	\$1,167	100%	Q2 2011	Q4 2016		G	G	G	G
Stations: Easier Access III	Assets	\$655	\$241	37%	\$773	118%	2006	Q4 2025		Υ	Υ	G	Y
Facilities: TR / T1 Rail Yard Accomodation **	Assets	\$985	\$137	14%	\$986	100%	2010	Post 2025		G	G	G	G
Track & Tunnels: Subway Track *	Assets	\$505	\$133	26%	\$496	98%	Ongoing	Q2 2018	Q1 2017	Υ	G	G	G
Signals: Automatic Train Control (ATC Line 1-YUS)	Assets	\$563	\$266	47%	\$563	100%	Q2 2009	Q4 2019		G	G	G	G
Expansion													
Toronto-York Spadina Subway Extension (TYSSE)	Growth	\$3,184	\$2,392	75%	\$3,184	100%	Q2 2008	Q4 2017		G	Υ	G	Y
Scarborough Subway Extension	Growth	\$3,305	\$20	1%	\$3,305	100%	Q4 2013	Q4 2023	Q4 2025	R	G	R	R
Management Systems													
PRESTO	Customer	\$47	\$25	54%	\$47	100%	Q4 2012	Q4 2017		R	G	G	Υ
SAP	Financial	\$63	\$11	17%	\$63	100%	Q1 2014	Q3 2019		Y	G	G	Υ

<sup>\*</sup>These projects are ongoing in nature. The performance data presented reflects the 10-year funding envelope only.

<sup>\*\*</sup>A portion of required scope for this project is currently not in the approved budget. The projected cost and the end date reflect the total scope.

\*\*A portion of required scope for this project is currently not in the approved budget. The projected cost and the end date reflect the total scope.

\*\*CEO's Report – September 2016 Update



	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	G	G	G	G

#### **Accomplishments**

-59 Buses delivered from the total order of 98 buses -56 buses have been commissioned as of July 02/16

## **Key Issues and Risks**

1.No risk is anticipated. Continue to receive and commission buses being delivered in 2016

#### **Management Action Plan**

## Budget Update (as of July 02, 2016) (millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$46.1	\$78.6	\$574.9	\$976.8
Actual:	\$28.8		\$563.9	
Projected:		\$72.1		\$976.6
Actual Variance:	-\$17.3		-\$11.0	
Projected Variance:		-\$6.5		-\$0.2

#### 2016 Variance: \$6.5 million under

(10.5M) for delivery of buses accelerated into 2015(WO6750) +3.6M for outstanding payments to WO6274, from 2015 deliveries +0.4M for outstanding payments to WO6572, from 2015 deliveries

EFC Variance: \$0.2 million under Variance is due to cost estimate changes.

#### **Schedule Status**

No.	Phase / Milestone / Target	Milestone	2012	2012	2014	2015		20:	16			20	17		2010	2010	2020	2021	2022	2022	2024
NO.	Phase / Millestone / Target	Date	Date 2012 2013 2014 2	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024		
1	Replacement 40ft LF Clean Diesel Buses- 95 buses	Q4 2012	<b>√</b>																		
2	Replacement 60ft LF Clean Articulated Diesel Buses- 11 buses	Q4 2013		✓																	
3	Replacement 60ft LF Clean Articulated Diesel Buses- 141 buses	Q4 2014			✓				Z 10	day											
4	Replacement 60ft LF Clean Articulated Diesel Buses- 1 bus	Q1 2015				<b>√</b>															
5	Replacement + CSI 40 ft. LF Clean Diesel Buses- 55 + 24 buses (+26 buses)	Q4 2015				✓															
6	Replacement + CSI 40 ft. LF Clean Diesel Buses- 98	Q4 2016																			
7	Replacement + CSI 40 ft. LF Clean Diesel Buses- 107 + 4 buses	Q4 2017																			
8	Replacement + CSI 40 ft. LF Clean Diesel Buses-85 + 25 buses	Q4 2018																			
9	Replacement + CSI 40 ft. LF Clean Diesel Buses- 90 + 25 buses	Q4 2019																			

Legend







Completed w/Impact on Critical Path



Poses Risk to Critical Path

Unless stated otherwise, data is current as of: July 02,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	Υ	Υ	G	G
Outlook to Completion	G	G	G	G

### Accomplishments

-Start of Design

-Completion of Bus and Streetcar surveys by Clever

**Devices** 

### **Key Issues and Risks**

1.Schedule for construction of centralized control centre to be established, alternative interim planning for deployment may be required.

-Completion of Bus and Streetcar Division Surveys

-Project Binder received

#### **Management Action Plan**

Resource being assigned for the development of the centralized control centre, design with firm cost and schedule to be developed.

# Budget Update (as of May 31, 2016) (millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$1.0	\$22.5	\$2.9	\$115.4
Actual:	\$1.0		\$3.4	
Projected:		\$9.0		\$115.4
Actual Variance:	\$0.0		\$0.5	
Projected Variance:		-\$13.5		\$0.0

#### 2016 Variance: \$13.5 million under

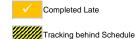
Variance is due to delay in awarding the contract for the CAD/AVL system payment milestones moved from 2016 to 2017

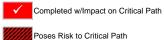
**EFC Variance: \$0 Million** 

#### **Schedule Status**

No.	Dhase / Milestone / Torrest	Milestone	2015		20	16		2017		2010	2019	2020	2021	2022	2023	2024	2025	2026	2027	2020		
NO.	Phase / Milestone / Target	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
1	RFI Issued	Q1 2015	✓																			
2	RFI Vendor Presentations	Q1 2015	✓																			
3	RFP Issued	Q2 2015	✓			То	day															
4	Technical Evaluation Completed	Q4 2015	✓																			
5	Contract Award	Q1 2016																				
6	Design Initiated	Q1 2016																				
7	Preliminary design received	Q2 2016			<b>√</b>																	
8	Design Complete	Q4 2016																				
9	Factory Acceptance Testing Complete	Q2 2017																				
10	Proof of Concept Complete	Q3 2017																				
11	Bus Installs Complete	Q4 2018																				
12	Streetcar Installs Complete	Q1 2020																				







Unless stated otherwise, data is current as of: June 30,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	G	G	G	G

### **Accomplishments**

-Second round design presentations held May 31 to June 07,2016

## **Key Issues and Risks**

- 1.One of three design-build proponents withdrew from the RFP process.
- 2.Several scope items remain unfunded, including motions passed by TTC Board and City Council.

## **Management Action Plan**

- 1.Keep remaining proponents engaged by considering feedback and incorporating reasonable suggestions.
- 2.BTL(Below the Line) project created to capture unfunded scope items. RFP seeks optional pricing for some unfunded items, which Board could accept at time of award(price dependent).

## Budget Update (as of June 30, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$1.5	\$2.3	\$7.7	\$181.0
Actual:	\$1.4		\$8.4	
Projected:		\$2.1		\$181.0
Actual Variance:	-\$0.1		\$0.7	
Projected Variance:		-\$0.2		\$0.0

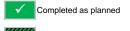
**2016 Variance: \$0.2 million under**Delayed release of Design-Build RFP

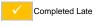
EFC Variance: \$0 million

#### **Schedule Status**

••••	daio Giaiao																							
No.	Phase / Milestone / Target	Milestone				2015		20	16			20	17		2018	2010	2020	2021	2022	2023	2024	2025	2026	2027
INO.	Pilase / Willestone / Target	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2010	2019	2020	2021	2022	2023	2024	2025	2020	2027			
1	RFPQ Completed	Q3 2015	✓																					
2	RFP Issued	Q1 2016		✓		_ То	day																	
3	Contract Award	Q1 2017																						
4	Commence Construction	Q3 2017																						
5	Construction substantially complete (SP)	Q2 2020																						

Legend





Tracking behind Schedule

Completed w/Impact on Critical Path



Unless stated otherwise, data is current as of: June 30,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	Υ	G	G	Υ
Outlook to Completion	G	G	G	Υ

#### **Accomplishments**

-21 cars are now available for service, maintenance, spares and training

-22nd Car(4423)is expected to be accepted by TTC by mid August 2016

#### **Key Issues and Risks**

- 1.Union labour strike action in Bombardier's Thunder Bay plant from Jul-Sept 2014 impacted the vehicle delivery schedule.
- 2.Poor Manufacturing quality in Bombardier's Sahagun Mexico plant, as well as production and supply chain issues in Thunder Bay continues to affect vehicle quality and delivery schedule.
- 3. Bombardier provided an updated 2016 delivery schedule on June 10, 2016 which indicates16 LFLRVs, for a total of 30, will be available for passenger service by year end, and all 204 vehicles are to be delivered by 2019. Whereas the previous February 2016 schedule indicated 40 vehicles planned for 2016, for a total of 54 cars by year end.

#### **Management Action Plan**

- 1. Work with Bombardier on engineering and production process control improvements.
- 2.Closely monitor production quality check gates, offer engineering and program support, as well as on-site modification program support.
- 3. Overhaul legacy streetcars to maintain safe and reliable streetcar service.
- 4.Pursue liquidated damages and cost recovery provided for in the contract as a result of delays to vehicle delivery.

## Budget Update (as of July 02, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$84.9	\$174.9	\$594.2	\$1,186.5
Actual:	\$17.9		\$527.2	
Projected:		\$66.6		\$1,186.5
Actual Variance:	-\$67.0		-\$67.0	
Projected Variance:		-\$108.3		\$0.0

#### 2016 Variance: \$108.3 million under

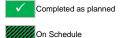
Variance is primarily due to delays in the delivery of streetcars. The number of cars for 2016 were reduced from budgeted 50 cars to 16 cars.

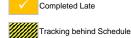
EFC Variance: \$0 million

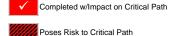
#### **Schedule Status**

No.	Phase / Milestone / Target	Milestone	2014/		20:	16			20	017		2010	2019	2020	2021	2022	2022	2024	2025	2026	2027
NO.	Phase / Willestone / Target	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2010	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	Interim Solution Available	Q3 2014	✓																		
2	PRESTO Interim solution available for Streetcar Launch	Q3 2014	✓																		
3	First New Streetcar Launched on Spadina	Q3 2014	✓																		
4	Leslie Carhouse Storage Required	Q4 2015	✓				Today														
	Substantial Completion 75% of Cars deployed (Car #163- based on Draft June 10, 2016 delivery schedule)	Q1 2019																			
6	204 Cars deployed (based on draft June 10, 2016 delivery schedule)	Q4 2019																			

Legend







Unless stated otherwise, data is current as of: July 28,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	G	Υ	G	G
Outlook to Completion	G	G	G	G

## **Accomplishments**

- Began work on frieze wall panels

## **Key Issues and Risks**

1.Construction Claim

## **Management Action Plan**

 Arbitration process in place. Additional funds may be required and will be included in future budget submissions.

## Budget Update (as of June 30, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$17.0	\$33.8	\$470.6	\$516.7
Actual:	\$44.4		\$474.0	
Projected:		\$68.3		\$516.7
Actual Variance:	\$27.4		\$3.4	
Projected Variance:		\$34.5		\$0.0

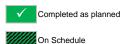
#### 2016 Variance: \$34.5 million over

Prior year slippage. Includes delay of Substantial Performance for Leslie Street Connection Track and delays in commissioning which impacted the value of progress payments for Leslie Barns.

EFC Variance: \$0 million

#### **Schedule Status**

••••																					
No.	Phase / Milestone / Target	Milestone	2015	2016		2017					2019	2020	2021	2022	2022	2024	2025	2026	2027		
NO.	riiase / Willestolle / Taiget	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2010	2019	2020	2021	2022	2023	2024	2023	2020	2027
1	Leslie Street open to general traffic	Q3 2015	✓																		
2	Leslie Barns partial handover to Operations	Q4 2015	<b>√</b>			<b>—</b> T	oday														
3	Leslie barns full handover to Operations	Q1 2016																			
4	Leslie Street landscaping complete	Q4 2016																			





Tracking behind Schedule



Poses Risk to Critical Path

Unless stated otherwise, data is current as of: June 30,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	G	G	G	G

#### Accomplishments

-Russell Yard South End Special Track Work Substantial Performance achieved on October 30, 2015 and Track/OCS commissioning was completed on March 24, 2016

#### Key Issues and Risks

- 1. The delay in the completion of Leslie Barns has resulted in the deferral of planned rehabilitation work for Roncesvalles and Russell yards in order to maintain the requisite storage capacity for the existing fleets, as well as the anticipated new streetcar deliveries.
- 2. The barrier wall construction and track rehabilitation at the CNE between the Metrolinx and TTC tracks has been deferred to 2016 to allow for streetcar storage and deployment out of the CNE.
- The delivery delay of the new low floor streetcars (LFLRV) and the resulting extension of legacy fleet required for passenger service has prolonged storage demands at Roncesvalles and Russell yards which has lead to the deferral of the track rehabilitation work at these yards.

-The recent procurement of a concrete milling machine has expedited the replacement of worn rails at car stop locations. As of Q2 2016, rails at 6 car stops have been replaced versus 3 car stops in Q2 2015.

#### Management Action Plan

- 1. Due to the delay in the completion of Leslie Barns and the delay in the LFLRV delivery schedule, the following projects will be deferred:
- Russell Yard Tracks 08-22 deferred to 2018
- Roncesvalles Pit Track deferred to 2017
- Roncesvalles Carhouse S curve tracks 1-28 deferred to 2019
- Russell Yard north ladder deferred to 2018
- Harvey Shops transfer table tracks deferred to 2018 pending results of EC&E facility utilization study.

## Budget Update (as of July 27, 2016) (millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$7.5	\$32.9	\$274.2	\$418.6
Actual:	\$9.2		\$282.8	
Projected:		\$28.4		\$418.6
Actual Variance:	\$1.7		\$8.6	
Projected Variance:		-\$4.5		\$0.0

#### 2016 Variance: \$4.5 million under

Variance is due to the deferral of several projects to future years. Refer to Management Action Plan for further details.

EFC Variance: \$0 million

#### **Schedule Status**

No.	Phase / Milestone / Target	Milestone	2015		20	16			20	17		2018	2010	2020	2021	2022	2022	2024	2025	2026	2027
NO.	Phase / Millestone / Target	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	C.N.E. Loop (Design)	Q4 2015	✓																		
2	Russell Yard - South End (Track)	Q4 2015	✓																		
3	Roncesvalles Southwest - Design and Layout	Q3 2015	✓																		
4	College and Spadina	Q2 2015	✓																		
5	Bloor Loop and Spadina	Q2 2015	✓																		
6	Bay Street	Q2 2016			<b>√</b>																
7	King/Adelaide & Charlotte	Q2 2016			✓																
8	Roncesvalles Southwest Corner - Construction	Q3 2016																			
9	Russell Yard - South End Modification Improvements	Q3 2016																			
10	The Queensway - Modifications (Design Only)	Q3 2016																			
11	College and Bathurst	Q3 2016				$\checkmark$															
12	College and Lansdowne	Q3 2016																			
13	Richmond StEast of Yonge St. to York St.	Q4 2016																			
14	Car Stops-Ongoing State of Good Repair(SOGR)program	Q4 2016																			
15	Neville Loop	Q4 2016																			
16	St. Clair Ave. W-Bathurst to Tweedsmuir	Q4 2016																			
17	CNE Loop-Construction	Q4 2016																			
18	Roncesvalles Pit Track	Q4 2017																			
19	Russel Yard Tracks 8-22	Q4 2018																			
20	Harvey Shop Tracks Beneath Transfer Table	Q4 2018																			
21	Russell Yard North Ladder	Q4 2018																			
22	Roncesvalles Carhouse S-Curve Tracks 1-28	Q4 2019																			
Lege	end Completed as planned Comp	leted Late			<b>√</b>	Completed w/Impact on Critical Path						Unless	stated o	otherwis	e, data	s curre	nt as of:	July 27	2016		

On Schedule

Tracking behind Schedule

Poses Risk to Critical Path

	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	G	G	G	G

#### **Accomplishments**

-Completed Base and Specified Options 1A and 1B orders reliability goal of 480,000 miles Mean Distance between failures

-Completed shipping of last ATC Hardware-Ready Trainset for Option 1A

#### **Key Issues and Risks**

1.Production quality and design change requirements to improve on vehicle manufacturability, functionality, reliability and maintainability continue to present challenges to the delivery schedule.

- -Final Acceptance and availability of 76 Train Sets for operational service
- -Updated Operator Manual, completed Pilot training,approved Qualification Test Report and progress for update of Maintenance Manuals for "4-Car Consist Train Set"
- -Start of Last Car of Train #81"4-Car Consist Train Set"

#### **Management Action Plan**

- 1. Continue to monitor production quality.
- 2.The Carbuilder has provided an updated delivery schedule on October 15, 2015 that the TTC accepted on November 30,2015 for accelerated "4-Car consist Train Set delivery". Therefore, the schedule and cashflow presented in this report are updated.
- 3.The Board approved on July 11,2016 the Commercial offer for Train Door Monitoring System-Phase 2 and Yard Maintenance Support System (YMSS) Phase 1 for full system integration and testing.

## **Purchase of Subway Cars**

August 2016

#### Budget Update (as of July 02, 2016)

#### (millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$19.0	\$24.2	\$1,148.6	\$1,166.9
Actual:	\$17.6		\$1,108.4	
Projected:		\$51.1		\$1,166.9
Actual Variance:	-\$1.4		-\$40.2	
Projected Variance:		\$26.9		\$0.0

#### 2016 Variance: \$26.9 million over

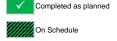
Variance is primarily due to the transfer of the escalation and contingency allowance along with the Milestones related to delivery and installation of De-icing system and 4-Car Consist rescheduled to 2016.

#### EFC Variance: \$0 million

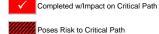
#### **Schedule Status**

No.	Phase / Milestone / Target	Milestone Date	2012	2014	2015		20	16		2017			2018	2019	2020	2021	2022	2022		
NO.	Filase / Willestolle / Target	Willestone Date	2013	3 2014 201	2014	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023
1	Train #1 to #39 ready for service	Q3 2013	$\checkmark$																	
2	Train #40 to #60 (Option 1B) ready for service	Q1 2015			✓			Т	oday											
3	Train #61 to #70 (Option 1A) ready for service	Q4 2015			✓															
4	Train #72 to #75(advancement of 4-Car consist) ready for service on Line 4	Q2 2016					✓													
5	Train #71, TS#76 to #80 (Option 1C) ready for service	Q4 2016																		
6	Train # 81 to #82(remaining 4- Car consist) ready for service	Q4 2016																		

Legend







Unless stated otherwise, data is current as of: July 02,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	Υ	Υ	G	Υ

#### **Accomplishments**

-Awarded design services contracts

#### **Key Issues and Risks**

- 1.Preliminary design at King Station highlighted major interferences with existing utilities.
   2.Property acquisition for Elevator F1 at St. Clair.
- 2. Property acquisition for Elevator E1 at St. Clair West Station has been resolved.
- 3.Higher than expected estimated costs due to increased complexities/staging, property requirements, scope changes, power upgrades, utilities, escalation.
- 4.Concept designs at Lawrence Station indicated significant difficulties in obtaining a design that meets all codes and stakeholder requirements.

## **Management Action Plan**

- 1.Additional utility investigation were completed prior to proceeding with Construction Review design.
- 2.Construction of elevator E1 is proceeding.
- 3. Budget request was submitted.
- 4.Concept report outlines possible options and investigations continue.

## Budget Update (as of June 30, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$15.0	\$35.0	\$241.2	\$655.2
Actual:	\$14.8		\$241.2	
Projected:		\$35.0		\$772.8
Actual Variance:	-\$0.2		\$0.0	
Projected Variance:		\$0.0		\$117.6

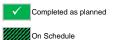
2016 Variance: \$0 million

**EFC Variance: \$117.6 million over**Cost estimate change at various locations.

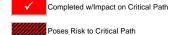
#### Schedule Status

No.	Phase / Milestone / Target	Milestone Date	2015		201	L6			20	017		2018	2019	2020	2021	2022	2022	2024	2025	2026	2027
NO.	Phase / Willestone / Target	Milestone Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	St. Clair West- subway to bus/ streetcar only(E2&E3)	Q4 2016																			
2	Ossington	Q3 2016																			
3	Woodbine	Q2 2017																			
4	Coxwell	Q4 2017																			
5	Dupont & St. Patrick	Q4 2018																			
6	Royal York, Wilson, Yorkdale, King, Runnymede & Wellesley	Q4 2019																			
7	Sherbourne,Bay,Chester & College	Q4 2020																			
8	Keele,Spadina,Lawrence,Lansdowne & Donlands	Q4 2021																			
9	Greenwood	Q4 2022				_ 1	oday														
10	Castle Frank, Christie, High Park & Summerhill	Q4 2023																			
11	Rosedale, Museum & Old Mill	Q4 2024																			
12	Glencairn, Warden and Islington	Q4 2025																			

Legend







Unless stated otherwise, data is current as of: June 30,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	G	G	G	G

#### Accomplishments

-Achieved Substantial Performance of Contract A18-20 "Wilson Yard Site Services Stage II"on May 30,2016 -Awarded Contract GR1-51"Greenwood T&S Building Renovation & Carhouse Pendent Retrofit "on June 01,2016 -Awarded Contract AW1-3"Wilson T&S Building Renovation" on July 08,2016

#### **Key Issues and Risks**

None

#### **Management Action Plan**

N/A

## Budget Update (as of June 30, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$17.2	\$38.2	\$129.0	\$985.2
Actual:	\$21.9		\$137.3	
Projected:		\$46.4		\$985.6
Actual Variance:	\$4.7		\$8.4	
Projected Variance:		\$8.2		\$0.3

#### 2016 Variance: \$8.2 million over

Increase in estimated expenditures for Keele Yard Retrofit & Wilson Yard Tie in Tracks 33 to 43,Site services Stage I,Rail Amalgamation study and Wilson Yard System Works

#### EFC Variance: \$0.3 million over

Wilson Complex TR Training Centre and EDD Enclosure Alterations transferred from project 584X

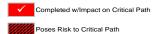
#### **Schedule Status**

Dhase / Bailestone / Touget	Milestone	2015		20	16			20	17		2010	2010	2020	2021	2022	2022	2024	2025	2026	2027	2020
Phase / Milestone / Target	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Greenwood Yard-Track Conversion and South Fence Replacement(GR1-46),(GR65-10 & GR1-41 Combined)	Q1 2016		✓																		
Wilson Yard Site Services Stage I(A18-15)	Q2 2016			✓																	
Wilson Yard Site Services Stage II(A18-20)	Q2 2016			✓																	
Wilson Carhouse North Expansion(C1-38)	Q3 2016																				
Keele Yard Retrofit (B4-36)	Q1 2017																				
Wilson Yard Tie in Tracks 33-43(AW1-5)	Q2 2017																				
Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)	Q2 2017																				
Wilson Carhouse-Access Stairwell at Tracks 9/10(C1-46)	Q3 2017																				
Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) /AW1-4	Q4 2017				То	day															
Wilson Yard CCTV for Yard Control(A80-24)	Q4 2018																				
Wilson Yard T&S Building Renovation(AW1-3)	Q4 2018																				
Wilson and Davisville Yards-Friction Bumping Posts(G60-266)	Q4 2018																				
Wilson Yard Conversion of ATC Track	Q4 2018																				
Davisville Carhouse Expansion East Side(S5-59)	Q4 2018																				
Kipling Station Track Expansion(F65-10)	Q4 2019																				
Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined)	Q4 2019																				
Davisville T&S Building Renovation(S5-60)	Q4 2020																				
Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)	Q4 2020																				
Greenwood Carhouse Tandem Wheel Lathe with Wireless Shunter(GR1-53)	Q4 2021																				
Wilson Yard Signalling and System works	Q4 2021																				
Future Works	Post 2025																				
	Replacement(GR1-46),(GR65-10 & GR1-41 Combined) Wilson Yard Site Services Stage I(A18-15) Wilson Yard Site Services Stage II(A18-20) Wilson Carhouse North Expansion(C1-38) Keele Yard Retrofit (B4-36) Wilson Yard Tie in Tracks 33-43(AW1-5) Wilson Yard-Consolidated Rail Amalgamation Study(G85-329) Wilson Yard-Consolidated Rail Amalgamation Study(G85-329) Wilson Carhouse-Access Stairwell at Tracks 9/10(C1-46) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) /AW1-4 Wilson Yard Tor Yard Control(A80-24) Wilson Yard T&S Building Renovation(AW1-3) Wilson Yard T&S Building Renovation(AW1-3) Wilson Yard Conversion of ATC Track Davisville Carhouse Expansion East Side(S5-59) Kipling Station Track Expansion(F65-10) Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined) Davisville T&S Building Renovation(S5-60) Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42) Greenwood Carhouse Tandem Wheel Lathe with Wireless Shunter(GR1-53)	Greenwood Yard-Track Conversion and South Fence Replacement(GR1-46),(GR65-10 & GR1-41 Combined)  Wilson Yard Site Services Stage II(A18-20)  Wilson Yard Site Services Stage III(A18-20)  Wilson Carhouse North Expansion(C1-38)  Keele Yard Retrofit (B4-36)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard Tie in Carhouse North Ladder Tracks (Tracks 2-15)  //AW1-4  Wilson Yard Tie in Carhouse North Ladder Tracks (Tracks 2-15)  //AW1-4  Wilson Yard CCTV for Yard Control(A80-24)  Wilson Yard T&S Building Renovation(AW1-3)  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Davisville Carhouse Expansion East Side(S5-59)  Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined)  Davisville T&S Building Renovation (S5-60)  Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Wilson Yard Signalling and System works  Q4 2021  Wilson Yard Signalling and System works	## Phase / Milestone / Target  ## Date  ## 2015    Greenwood Yard-Track Conversion and South Fence	Greenwood Yard-Track Conversion and South Fence Replacement(GR1-46),(GR65-10 & GR1-41 Combined)  Wilson Yard Site Services Stage II(A18-20)  Wilson Yard Site Services Stage II(A18-20)  Wilson Carhouse North Expansion(C1-38)  Keele Yard Retrofit (B4-36)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard Tie in Carhouse North Ladder Tracks (Y10(C1-46)  Wilson Yard Tie in Carhouse North Ladder Tracks (Tracks 2-15)  //AW1-4  Wilson Yard CCTV for Yard Control(A80-24)  Wilson Yard T&S Building Renovation(AW1-3)  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Davisville Carhouse Expansion East Side(S5-59)  Q4 2018  Wilson Station Track Expansion(F65-10)  Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined)  Davisville Tasks Building Renovation (S5-60)  Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Wilson Yard Signalling and System works  Q4 2021  Wilson Yard Signalling and System works	Phase / Milestone / Target Date Date Date Q1 Q2  Greenwood Yard-Track Conversion and South Fence Replacement(GR1-46),(GR65-10 & GR1-41 Combined) Wilson Yard Site Services Stage I(A18-15) Q2 2016 Wilson Yard Site Services Stage II(A18-20) Wilson Carhouse North Expansion(C1-38) Wilson Carhouse North Expansion Study(G85-329) Wilson Yard Tie in Tracks 33-43(AW1-5) Q2 2017 Wilson Yard-Consolidated Rail Amalgamation Study(G85-329) Wilson Yard Tie in Carhouse North Ladder Tracks 9/10(C1-46) Wilson Yard Tie in Carhouse North Ladder Tracks (Tracks 2-15) AW1-4 Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15) Wilson Yard Tie in Carhouse Expansion ATC Track Q4 2018 Wilson Yard Conversion of ATC Track Q4 2018 Wilson Yard Conversion of ATC Track Q4 2019 Greenwood Tie Suilding Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined) Davisville Tie Suilding Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined) Davisville Tie Suilding Renovation Sunda Alterations(C1-42) Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42) Wilson Yard Signalling and System works Q4 2021 Wilson Yard Signalling and System works	Greenwood Yard-Track Conversion and South Fence Replacement(GR1-46),(GR65-10 & GR1-41 Combined)  Wilson Yard Site Services Stage II(A18-20)  Wilson Yard Site Services Stage II(A18-20)  Wilson Yard Site Services Stage II(A18-20)  Wilson Carhouse North Expansion(C1-38)  Keele Yard Retrofit (B4-36)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard Tie in Carhouse North Ladder Tracks 9/10(C1-46)  Wilson Yard Tie in Carhouse North Ladder Tracks (Tracks 2-15)  //AW1-4  Wilson Yard CCTV for Yard Control(A80-24)  Wilson Yard T&S Building Renovation(AW1-3)  Wilson Yard Conversion of ATC Track  Davisville Carhouse Expansion East Side(S5-59)  Kipling Station Track Expansion(F65-10)  Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined)  Davisville T&S Building Renovation(S5-60)  Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Wilson Yard Signalling and System works  Q4 2021  Wilson Yard Signalling and System works	Phase / Milestone / Target  Date  Date  Q1 Q2 Q3 Q4  Greenwood Yard-Track Conversion and South Fence Replacement(GR1-46),(GR65-10 & GR1-41 Combined)  Wilson Yard Site Services Stage I(A18-15)  Q2 2016  Wilson Yard Site Services Stage II(A18-20)  Wilson Carhouse North Expansion(C1-38)  Wilson Carhouse North Expansion(C1-38)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard Tie in Carhouse North Ladder Tracks 9/10(C1-46)  Wilson Yard Tie in Carhouse North Ladder Tracks (Tracks 2-15)  //AW1-4  Wilson Yard Te in Carhouse North Ladder Tracks (Tracks 2-15)  Wilson Yard T&S Building Renovation(AW1-3)  Wilson Yard Toure Synolidated Rail Amalgamation Study(G80-266)  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Davisville Carhouse Expansion East Side(S5-59)  Q4 2019  Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined)  Davisville T&S Building Renovation(S5-60)  Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracke Tandem Wheel Lathe with Wireless  Shunter(GR1-53)  Wilson Yard Signalling and System works	Phase / Milestone / Target  Date  Date  Q1 Q2 Q3 Q4 Q1  Greenwood Yard-Track Conversion and South Fence Replacement(GR1-46),(GR65-10 & GR1-41 Combined)  Wilson Yard Site Services Stage II(A18-15)  Q2 2016  Wilson Yard Site Services Stage II(A18-20)  Wilson Carhouse North Expansion(C1-38)  Wilson Carhouse North Expansion(C1-38)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Yard Tie in Carhouse North Ladder Tracks 9/10(C1-46)  Wilson Yard Tie in Carhouse North Ladder Tracks (Tracks 2-15)  AW1-4  Wilson Yard Te in Carhouse North Ladder Tracks (Tracks 2-15)  Wilson Yard T&S Building Renovation(AW1-3)  Wilson Yard T&S Building Renovation AV1-3)  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Q4 2018  Wilson Yard Conversion of ATC Track  Davisville Carhouse Expansion East Side(S5-59)  Q4 2019  Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined)  Davisville T&S Building Renovation(S5-60)  Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracke Tandem Wheel Lathe with Wireless  Shunter(GR1-53)  Wilson Yard Signalling and System works	Phase / Milestone / Target	Greenwood Yard-Track Conversion and South Fence Replacement(IGR1-46),(GR65-10 & GR1-41 Combined)  Wilson Yard Site Services Stage II(A18-15)  Q1 2016  Wilson Yard Site Services Stage II(A18-20)  Wilson Carhouse North Expansion(C1-38)  Q2 2016  Wilson Yard Retrofit (B4-36)  Wilson Yard Tie in Tracks 33-43(AW1-5)  Wilson Yard-Consolidated Rail Amalgamation Study(G85-329)  Wilson Carhouse-Access Stairwell at Tracks 9/10(C1-46)  Wilson Yard Tie in Carhouse North Ladder Tracks(Tracks 2-15)  AW1-AW1-4  Wilson Yard COTV for Yard Control(A80-24)  Wilson Yard T&S Building Renovation(AW1-3)  Wilson Yard Conversion of ATC Track  Davisville Carhouse Expansion East Side(S5-59)  Q4 2018  Wilson Yard Oversion of ATC Track  Q4 2018  Davisville Carhouse Expansion (F65-10)  Greenwood T&S Building Renovation & Carhouse Pendent Retrofit (GR1-51),(GR1-40 & GR60-25 combined)  Davisville T&S Building Renovation (S5-60)  Wilson Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Greenwood Carhouse Tracks 15 and 16 Expansion and Alterations(C1-42)  Wilson Yard Signalling and System works	Phase   Milestone   Target   Date   Date	Phase   Milestone   Target   Date   Date	Phase   Milestone   Target   Date   Date	Date   Date	Phase / Milestone / Target Date Date Date Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q2020 2021 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4 Q1 Q2 Q2020 Q2020 Q1 Q1 Q2 Q3 Q4 Q1 Q4 Q3 Q4	## Phase / Milestone / Target   Date   Date	## Phase / Milestone / Target	Phase / Milestone / Target  Date  Oli Q2 Q3 Q4 Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q1 Q2 Q3 Q4  Q2 Q3 Q4  Q2 Q3 Q4  Q3 Q4  Q4 Q1 Q2 Q3 Q4  Q4 Q1 Q4 Q3 Q4  Q4 Q1 Q4 Q1 Q4  Wilson Carbouse North Expansion Attracts Q4 Q3 Q3  Wilson Yard Conversion of ATC Track  Q4 Q2 Q3 Q4  Wilson Yard Conversion of ATC Track  Q4 Q2 Q3 Q4  Q4 Q1 Q4 Q3 Q4  Wilson Yard Conversion of ATC Track Q4 Q2 Q3  Wilson Carbouse Repansion East Side(S5-59)  Q4 Q1 Q4 Q1 Q4  Wilson Again Renovation & Carbouse Pendent Retrofit (GR1-S3), (GR1-Q4) Q4 Q20  Q4 Q1 Q4 Q2 Q4  Wilson Carbouse Repansion East Side(S5-59)  Q4 Q2 Q3 Q4 Q4 Q4 Q4  Wilson Carbouse Repansion G5-60)  Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion Attrack Pendent Retrofit (GR1-S3), (GR1-Q4) Q4 Q20  Q4 Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4 Q4 Q4 Q4  Q4 Q4 Q4 Q4 Q4 Q4  Q4 Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion Attrack Expansion (G8-S-10)  Q4 Q4 Q4 Q4 Q4 Q4  Q4 Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4 Q4  Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)  Q4 Q4 Q4 Q4  Wilson Carbouse Track Expansion (G8-S-10)	Phase / Milestone / Target	Phase / Milestone / Target  Date  Q1 Q2 Q3 Q4 Q1 Q2 Q3 Q4  Q3 Q4 Q1 Q2 Q3 Q4  Q4 Q1 Q2 Q3 Q4  Q5 Q	Phase / Milestone / Target

Legend







Unless stated otherwise, data is current as of: June 30,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	Υ	G	G	G

#### **Accomplishments**

-YUS Line 1-Russel Hill NB,C-122 High Rail Replacement

-YUS Line 1-St. Clair NB,C-123,High Rail Replacement -YUS Line 1-Ava NB,C-130,High Rail and Low Rail replacement

-BD Line 2 - Chestnet EB, C-151, LR Replacement

-BD Line 2 - St. Clair rev.WB, C-65, HR Replacement

-BD Line 2 - Pengelly WB, C-150, LR Replacement

-BD Line 2 - St. Clair rev.EB, C-65, HR,LR,Ties Replacement

-BD Line 2-Albany EB,C-35,HR replacement -BD Line 2-High Park to Keele BWs-Panguard installation

#### **Key Issues and Risks**

- 1.Reduction in available labour resources due to decrease in the exception of Employment Standard Act(ESA) restrictions.
- Some locations along YUS were not ground due to lack of time, and conflicts with other work and priorities.
   Rail Grinding- Corrugation is occurring at higher rate
- than current grinding can correct.

  4. More funds and workforce needed because of insufficient time and capacity to support grinding activity to get ahead of the rate of rail corrugation and RCF.

- -YUS Line 1-Glenayr NB,C-126,Low Rail and RR Replacement
- -YUS Line 1-Ava SB,C-130 High Rail and Low Rail Replacement.BD Line 2-Kennedy WB,C-154 Low Rail Replacement
- -60449 ft. production rail grinding
- -BD Line 2-Clendenan EB,C-68,HR,LR and Ties replacement
- -BD Line 2-C23 WB-LR replacement
- -BD Line 2-S56 WB-Major Maintenance
- -BD Line 2-S57 EB-Major Maintenance
- -Rail grinding contract award in progress

#### **Management Action Plan**

1.None- compliance to New Standard required. 2-4. Requesting additional budget for grinding in 2017 and onwards.

## Budget Update (as of July 02, 2016) (millions of dollars)

Year to Lifetime to Estimated 2016 **Final Cost** Date Date Budget: \$13.3 \$28.6 \$151.3 \$504.8 \$9.4 \$133.4 Actual: Projected: \$25.4 \$495.6 **Actual Variance:** -\$3.9 -\$17.9 **Projected Variance:** -\$3.2 -\$9.2

#### 2016 Variance: \$3.2 million under

Rescheduling of contract work to begin in 2015 for a Rail Vehicle Based Inspection System due to revised timelines for system design, supply and installation, along with slippage of work from 2015 for Track Rehabilitation and Turnout Replacement.

#### EFC Variance: \$9.2 million under

Decreased revised estimates for WO6622 and WO6628

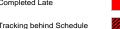
#### **Schedule Status**

No.	Phase / Milestone	Milestone	2015		20	16			20	17		2018	2019	2020	2021	2022	2022	2024	2025	2026	2027
NO.	Filase / Willestone	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2020	2027
1	Subway / SRT Track Replacement Program(Ongoing)	Q4 2016																			
2	Subway/ SRT Turnout Rehabilitation Program(Ongoing)	Q4 2016		Tod	lay																
3	MOWIS Upgrade	Q4 2016																			
4	Rail Vehicle Based Inspection System(Finite)	Q1 2017																			
5	Subway Rail Grinding	Q4 2016																			

Legend







Completed w/Impact on Critical Path



Unless stated otherwise, data is current as of: July 02,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	Υ	Υ	Υ	Y
Outlook to Completion	G	Υ	G	Υ

#### Accomplishments

- Energized York U and VMC substations; as of end June five out of six stations have permanent elec.
- Downsview Park-Replaced all defective PA speakers, commissioning 12 panel boards
- Finch West-Commenced substation stud wall framing.
- York University-Smartcard Room completed
- Pioneer Village-Completed installation of exterior weathering steel panels at the SE entrance building

#### **Key Issues and Risks**

- 1. Project Schedule not following the reset schedule.
- 2. Station Commissioning-Late commissioning plans submittal, Contractors do not recognize the requirements.
- 3. Commercial-Commercial resolutions extended.
- 4. Design Issue Responsiveness-Backlog of late design changes.
- 5. Station and Systems Interfaces-Station readiness for follow-on Systems contractors.6. Resolution of Third Party issues-Obtain Site plan
- Resolution of Third Party issues-Obtain Site plan approval which is required for Final Building permit.

- HWY 407 Commenced installation of permanent light fixtures
- VMC-Achieved completion milestone for Signal room. All Station Signal Rooms are now ready for Signalling construction

#### **Management Action Plan**

- 1. Close monitoring, meetings, workshops, accelerations measures.
- 2. Close cooperation and coaching, additional support.
- Working w/contractors(claims design backlog), claims resolution plan.
- 4. Expedited design issues resolution, contain change requests.
- Weekly coordination meetings, handover milestones, expedite work on deficiencies.
- 6. Expediting authority approval processes.

#### Budget Update (as of May 28, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$244.7	\$700.3	\$2,502.9	\$3,184.2
Actual:	\$133.6		\$2,391.8	
Projected:		\$545.2		\$3,184.2
Actual Variance:	-\$111.1		-\$111.1	
Projected Variance:		-\$155.10		\$0.0

#### 2016 Variance: \$155.1 million under

Amounts presented include holdbacks and other project applicable cost. Actual data based on end of May 2016 costs. Variances include contingency amounts which have not been applied.

#### EFC Variance: \$0 million

Project final cost tracking on budget

#### **Schedule Status**

No.	Phase / Milestone	Milestone	2015		20	16			20	17		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
140.	Filase / Willestoffe	Date	2013	Q1		Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2023	2020	2027	
1	Downsview Park(Sheppard West Station (SP) )	Q4 2016																			
2	Finch West Station (SP)	Q2 2017																			
3	York University (SP)	Q2 2017																			
4	Pioneer Village(Steeles West Station (SP))	Q2 2017																			
5	Highway 407 ( SOP)	Q2 2017																			
6	Vaughan Metropolitan Centre Station (SP)	Q4 2016																			
Runnin	g Structures																				
7	North and South Tunnel	2015	✓																		
8	Trackwork	Q1 2016		✓																	
9	Special Trackwork	Q1 2016		✓																	
10	Tunnel Drop Shaft Closures	Q4 2016																			
11	Tunnel Outfitting and Finishing	Q1 2017																			
12	Traction Power	Q1 2017																			
13	Train Control (signals)	Q3 2017																			
14	Communications and Integrated Controls	Q3 2017																			
15	Commissioning	Q4 2017																			

Legend





Completed w/Impact on Critical Path

Unless stated otherwise, data is current as of: July 01,2016





	Schedule	Cost	Scope	Overall Risk
Current Status	G	G	G	G
Outlook to Completion	G	G	G	G

#### **Accomplishments**

- -Dynamic testing of 2 TR trains
- -Successful completion of 1 closure for ATC installation
- -Held work car workshop with international experts
- -Commissioned Lawrence West Change over cubicle

#### **Key Issues and Risks**

- 1. Having all work cars equipped for first ATC commissioning.
- 2. Maintaining delivery of TR's for service as WY is upgraded.
- 3. Schedule constraints prevent TYSSE opening.
- 4. Culture and training.
- 5. Loss of key staff.
- 6. 2017 closures required for testing not available

- -1 Session of ETTF(Engineering Test & Training Facility) system testing of POC software
- Successfully completed Intermediate design review

#### **Management Action Plan**

- 1. Clear strategy, dedicated expert team and "plan B".
- 2. Simplify design, integrated work stream. Alternative migration strategy.
- 3. Ensure schedule focuses on TYSSE opening.Maximize lessons from Phase 1 Plan B if required.
- 4. Stakeholder management and robust training.
- 5. Staff retention plan.
- 6. Secure closures early and don't change

#### Budget Update (as of July 02, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$28.3	\$56.3	\$291.4	\$562.8
Actual:	\$27.5		\$266.3	
Projected:		\$56.3		\$562.8
Actual Variance:	-\$0.8		-\$25.1	
Projected Variance:		\$0.0		\$0.0

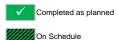
2016 Variance: \$0 million

EFC Variance: \$ 0 million

#### **Schedule Status**

No.	Dhose / Milestone	Milestone	2015		20	16			20	17		2018	2010	2020	2021	2022	2022	2024	2025	2026	2027
NO.	Phase / Milestone Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
1	ETF Proof of Concept (Track#42 Wilson Yard)	Q4 2015	✓																		
2	ATC Phase #1 Commissioning (CX) (Yorkdale- Dupont)	Q3 2017																			
3	ATC Phase #2 CX (Vaughan Metro Centre- Sheppard West)	Q4 2017				Тс	oday														
4	ATC Phase #2A CX (Wilson Yard - Sheppard West)	Q4 2017																			
5	ATC Phase #2B CX (Vaughan Yard- Remainder)	Q3 2018																			
6	ATC Phase #2C CX (Shep W. incl. W. yard S. Hostler- Yorkdale)	Q3 2018																			
7	ATC Phase #3 CX (Dupont- Bloor)	Q1 2019																			
8	ATC Phase #4 CX (Bloor- Eglinton)	Q3 2019																			
9	ATC Phase #5 CX (Lawrence- Finch)	Q4 2019																			

Legend



Completed Late

Tracking behind Schedule

Completed w/Impact on Critical Path

Poses Risk to Critical Path

Unless stated otherwise, data is current as of: July 02,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	R	G	R	R
Outlook to Completion	R	G	R	R

#### Accomplishments

-Project team is in position to move forward, as soon as the new scope is established for a Kennedy to Scarborough Centre alignment

#### **Key Issues and Risks**

1.As approved at the July 13/16 City Council meeting, City Planning's Scarborough Transit Plan results in rebaselining the SSE project scope from a three station Kennedy to Sheppard expansion, to a one station extension from Kennedy to Scarborough Centre.TTC is working with the City to determine the preferred alignment.

2. Geotechnical and survey fieldwork, as well as many design activities, have been halted until the preferred alignment is confirmed.

3. Project budget and schedule will be confirmed as design is developed to the 30% stage.

#### **Management Action Plan**

1. Mitigating delays where possible.

# Budget Update (as of June 30, 2016)

(millions of dollars)

Date		Date	Final Cost
\$40.8	\$110.8	\$66.3	\$3,305.0
\$8.8		\$19.9	
	\$32.7		\$3,305.0
-\$32.0		-\$46.4	
	-\$78.1		\$0.0
	\$8.8	\$8.8 \$32.7 -\$32.0	\$8.8 \$19.9 \$32.7 -\$32.0 -\$46.4

2016 Variance: \$78.1 million under

Variance is due to delay in the Environmental Assessment(EA) process and the rebaselining of the project scope.

EFC Variance: \$0 million

#### Schedule Status

	edule Status	Milestone	2014/		20	16			20	17											
No.	Phase / Milestone	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	EA Consultant Contract Award	Q3 2014	✓																		
2	Tunnel Design Contract Award	Q4 2014	✓																		
3	Project Management Consultant Award	Q1 2015	✓			То	day														
4	Station Design Consultant Award	Q2 2015	✓																		
5	System Design Consultant Award	Q2 2015	✓																		
6	Geotechnical Consultant Award	Q2 2015	✓																		
7	Environmental Assessment(EA)	Q2 2017																			
8	1st Public Consultation Held	Q1 2015	✓																		
9	2nd Public Consultation Held	Q2 2015	✓																		
10	3rd Public Consultation Held	Q1 2016		✓																	
11	4th Public Consultation Held	Q2 2016			✓																
12	TTC Board/P&GM/Council	Q4 2016																			
13	Transit Project Assessment Process(TPAP)	Q2 2017																			
14	Scarborough Subway Extension Begin Service	Q4 2025																			

#### Legend



Completed Late



Completed w/Impact on Critical Path Poses Risk to Critical Path

Unless stated otherwise, data is current as of: June 30,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	R	G	Υ	Υ
Outlook to Completion	R	G	G	Υ

#### Accomplishments

-32 Subway Stations PRESTO Enabled -Faregates installed at 6 Subway Stations-Main, Wellesley,Bay,Sherbourne,St. Clair and Lansdowne Stations -Commenced Bus Roll-out(774 Buses completed)
-Completed PRESTO rollout for Legacy Streetcars

#### **Key Issues and Risks**

Faregate procurement and delivery
 Labour Strategy for PRESTO Installation work activity
 PRESTO channel distribution/support strategy
 Strategy for Limited-Use-Media
 Development of Full Service Vending Machines

#### **Management Action Plan**

1.Design based on initial 60 gates acquired through Metrolinx. Two phases of procurement based on Lessons Learned from 2012-2014 installations.
 2.Identify negotiation options.TTC to retain First Line Maintenance. Operational changes in subway.
 3.Developed conceptual scope in 2015. Incremental roll-out in 2016.
 4.Develop short list of options.TTC policy review regarding cash paying customers. PRESTO technical/financial review.
 5.Maintain some level of station sales until

production machine available. Commenced development in Q3 2015. Leverage existing vendor

device.

#### Budget Update (as of June 30, 2016)

(millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$6.4	\$12.7	\$26.9	\$46.9
Actual:	\$4.9		\$25.4	
Projected:		\$12.7		\$47.0
Actual Variance:	-\$1.5		-\$1.5	
Projected Variance:		\$0.0		\$0.1

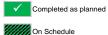
2016 Variance: \$0 million

**EFC Variance: \$0.1 million over** Variance is due to Calenderization

#### **Schedule Status**

N.a	Dhasa / Milashara	Milestone	2014/		20	16			20	17		2010	2010	2020	2021	2022	2022	2024	2025	2026	2027
No.	Phase / Milestone	Date	2015	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	Start PRESTO Rollout on Spadina	Q4 2014	✓																		
2	Interim Solution Available	Q3 2014	✓				Today														
3	Interim Solution for Streetcar Launch	Q4 2014	✓																		
4	PRESTO Subway Stations for 2015 Pan AM Games- Wave 1	Q2 2015	✓																		
5	PRESTO Implementation on Legacy Streetcar	Q4 2015	✓																		
6	PRESTO Implementation on buses	Q4 2016																			
7	PRESTO Implementation on Wheel Trans(TTC Buses/Contracted Vans)	Q4 2016																			
8	PRESTO Implementation on New Streetcars	Q4 2019																			
9	PRESTO Payment functionality at all Subway Stations	Q4 2016																			
10	PRESTO Full Deployment	Q4 2017																			

Legend



Completed Late

Tracking behind Schedule

Completed w/Impact on Critical Path

Poses Risk to Critical Path

Unless stated otherwise, data is current as of: August 05,2016



	Schedule	Cost	Scope	Overall Risk
Current Status	Υ	G	G	Y
Outlook to Completion	Υ	G	G	Υ

#### **Accomplishments**

-Wave 1 Blueprinting activities continues.68 workshops are now completed which represents 54% of all scheduled in the plan

-Wave 1 R2 & R3 Blueprinting phase started

#### **Key Issues and Risks**

- Resource availability due to competing priorities.
   Overall schedule does not meet planned milestone dates for R2 and R3.
- Quality of data required for the new system supported processes.
- 4. Wave 2(Workforce Management) Start date.

-Both Process design documents and technical build documents are being created and reviewed by owners and key stakeholders as part of the deliverables that will set out requirements and solution design

#### **Management Action Plan**

- Share the workshop schedule and the deliverable review and approval schedule with all parties involved. Help resources to plan their next 8-10 weeks.
- Sign-off the final release strategy for Wave 1.
   Define Data clean-up and migration activities in parallel to requirements gathering during the blueprint phase.
- 4.Assess ways in which the schedule pressure & estimated delays can be minimized.

## Budget Update (as of June 30, 2016) (millions of dollars)

	Year to Date	2016	Lifetime to Date	Estimated Final Cost
Budget:	\$10.9	\$21.2	\$14.9	\$63.4
Actual:	\$4.5		\$10.6	
Projected:		\$16.8		\$63.4
Actual Variance:	-\$6.4		-\$4.3	
Projected Variance:		-\$4.4		\$0.0

2016 Variance: \$4.4 million under

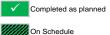
Variance is due to late start of IBM contract.

EFC Variance: \$ 0 million

## **Schedule Status**

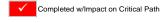
No.	Phase / Milestone	Milestone Date	2015	2016			2017			2010	2010	2020	2024	2022	2022	2024	2025	2026	2027		
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
1	Award Program Management Contract	Q2 2015	✓																		
2	Wave 1/Release1 team in place	Q3 2015	<b>√</b>				Today	1													
3	Program Management team in place®	Q4 2015	$\checkmark$				Touay														
4	Award System Integrator (SI) Contract	Q1 2016																			
5	Wave 1 - Core HR / Payroll / Finance (Release 1)	Q4 2015	✓																		
6	Wave 1 - Core HR / Payroll / Finance (Release 2)	Q4 2016																			
7	Wave 1 - Core HR / Payroll / Finance (Release 3&4)	Q2 2017																			
8	Wave 1 - Core HR / Payroll / Finance (Release 5)	Q4 2017																			
9	Wave 2-Workforce Management	Q4 2017																			
10	Wave 3-Budgeting,AP/AR, Procurement	Q4 2017																			
11	Wave 4-Integration-Facilities Management	Q3 2018																			
12	Wave 5-Integration-Bus Maintenance	Q1 2019																			
13	Wave 6-Integration-Rail Maintenance	Q3 2019																			

Legend



Completed Late

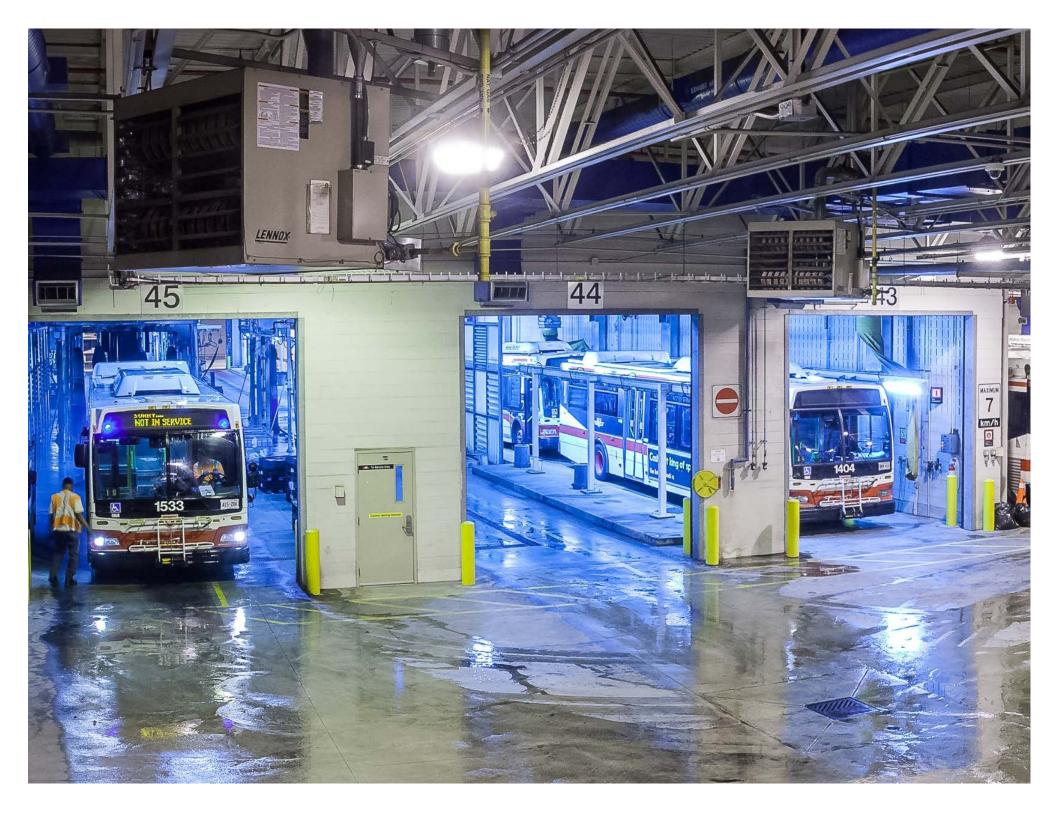
Tracking behind Schedule



Poses Risk to Critical Path

Unless stated otherwise, data is current as of: July 29,2016

Page intentionally left blank



For further information on TTC performance, projects, and service, please see www.ttc.ca

Andy Byford Chief Executive Officer **Toronto Transit Commission**