PMOC MONTHLY REPORT

Second Avenue Subway Phase 1 (MTACC-SAS) Project

Metropolitan Transportation Authority New York, New York

Report Period January 1 to January 31, 2017



PMOC Contract No. DTFT6014D00017 Project No. DC-27-5287, Task Order No. 0002, Work Order No. 04

Urban Engineers of New York, D. P.C., 2 Penn Plaza, Suite 1103, New York, New York 10121

PMOC Lead, E. Williamson, 212-736-9100; ejwilliamson@urbanengineers.com Length of time on Project: Five years on Project for Urban Engineers

1

TABLE OF CONTENTS

TABI	TABLE OF CONTENTS				
THIR	D PARTY DISCLAIMER				
REPO	DRT FORMAT AND FOCUS				
MON	ITORING REPORT4				
1.0	PROJECT STATUS4				
a.	Procurement				
b.	Construction				
c.	Quality Assurance and Quality Control (QA/QC)				
d.	Readiness for Revenue Operation				
2.0	SCHEDULE DATA7				
3.0	COST DATA9				
4.0	RISK MANAGEMENT				
5.0	ELPEP11				
6.0	SAFETY AND SECURITY				
7.0	ISSUES AND RECOMMENDATIONS12				

APPENDICES

APPENDIX A – ACRONYMS

APPENDIX B – TABLES

- Table 1 Summary of Schedule Dates
- Table 2 Project Budget/Cost
- Table 3 Estimate at Completion
- Table 4 Allocation of Current Working Budget to Standard Cost Categories
- Table 5 Core Accountability Items

THIRD PARTY DISCLAIMER

This report and all subsidiary reports are prepared solely for the Federal Transit Administration (FTA). This report should not be relied upon by any party, except the FTA or the project sponsor, in accordance with the purposes as described below:

For projects funded through the FTA's Full Funding Grant Agreement (FFGA) program, the FTA and its Project Management Oversight Contractor (PMOC) use a risk-based assessment process to review and validate a project sponsor's cost, budget, and schedule. This risk-based assessment process is a tool for analyzing project development and management. Moreover, the assessment process is iterative in nature; any results of an FTA or PMOC risk-based assessment represent a "snapshot in time" for a particular project under the conditions known at that same point in time. The status of any assessment may be altered at any time by new information, changes in circumstances, or further developments in the project, including any specific measures a sponsor may take to mitigate the risks to project costs, budget, and schedule, or the strategy a sponsor may develop for project execution.

Therefore, the information in the monthly reports may change from month to month, based on relevant factors for the current month and/or previous months.

REPORT FORMAT AND FOCUS

This monthly report is submitted in compliance with the terms of the Federal Transit Administration (FTA) Contract No. DTFT6014D00017, Task Order 0002. Its purpose is to provide information and data to assist the FTA as it continually monitors the Project Sponsor's technical capability and capacity to execute a project efficiently and effectively, and hence, whether the Project Sponsor continues to be ready to receive federal funds for further project development.

This report covers the project management activities on the Second Avenue Subway (SAS) Phase 1 Project managed by Metropolitan Transit Authority Capital Construction (MTACC) of New York City (NYC). MTA is the Project Sponsor, financed by the FTA FFGA.

MONITORING REPORT

1.0 PROJECT STATUS

On January 1, 2017 the Second Avenue Subway (SAS) Phase 1 Project began Revenue Service. The project however has not reached substantial completion. Corrections of open inspection observations and testing of various system elements are ongoing. Overall project completion is forecasted for November 30, 2017, and is being driven by the Systems contractor's schedule.

As of January 31, 2017, \$4.222 billion (94.85%) of MTACC's Current Working Budget of \$4.451 billion (exclusive of financing costs) has been expended. A revised cost Estimate at Completion (EAC) is being prepared by MTACC to determine if the remaining budget is adequate given the scope of the open inspection observations, the level of testing still required, and the probability of future claims.

a. Procurement

All ten of the construction contracts for SAS Phase 1 have been awarded.

b. Construction

As of January 31, 2017, there are eight (8) active contracts on the SAS Phase 1 Project of which two are in the closeout process. Overall construction is 99.0% complete. The status of each is as follows:

Contract C-26005 (C2A) 96th Street Site Work and Heavy Civil

The Contractor achieved Substantial Completion on November 5, 2013. Contract closeout has been delayed because of NYCDEP field inspections. The inspections are being performed to verify that the work is as reflected on the revised "As-Built-Drawings". Closeout of the contract did not occur as anticipated by the end of the 4Q2016. The CM's efforts are ongoing to confirm a closeout date.

Contract C-26010 (C2B) 96th Street Station Civil, Architectural, and MEP

Subsequent to issuance of a Temporary Code Compliance Certificate on December 31, 2016, the contractor continued closeout of open observations and testing of mechanical, electrical and plumbing systems. As of January 21, 2017, there are still 3,663 discrepancies that need to be addressed. Expenditures show the contractor at 98.9% complete. Substantial Completion and Project Completion are forecasted for June 1, 2017, and August 25, 2017, respectively.

Contract C-26006 (C3) 63rd Street Station Rehabilitation

Subsequent to issuance of a Temporary Code Compliance Certificate on December 31, 2016, the contractor continued closeout of open observations and testing of mechanical, electrical and plumbing systems. As of January 21, 2017, there are still 2,179 discrepancies that need to be addressed. Expenditures show the contractor at 99.8% complete. Substantial Completion and Project Completion are forecasted for March 31, 2017, and June 30, 2017, respectively.

• Contract C-26007 (C4B) 72nd Street Station Cavern Mining and Lining Substantial Completion was achieved on January 14, 2014. Submittal of contract closeout documentation and completion of punchlist items are ongoing.

 Contract C-26011 (C4C) 72nd Street Station – Station Finishes, MEP, Ancillary Buildings and Entrances

Subsequent to issuance of a Temporary Code Compliance Certificate on December 31, 2016, the contractor continued closeout of open observations and testing of mechanical, electrical and plumbing systems. As of January 21, 2017, there are still 6,804 discrepancies that need to be addressed. Expenditures show the contractor at 95.3% complete. Substantial Completion and Project Completion are forecasted for June 30, 2017, and September 26, 2017, respectively.

- Contract C-26008 (C5B) 86th Street Station Cavern Mining and Lining Substantial Completion of all contract work was achieved on December 16, 2014. Contract closeout is ongoing.
- Contract C-26012 (C5C) 86th Street Station Finishes, MEP Systems, Ancillary Buildings and Entrances

Subsequent to issuance of a Temporary Code Compliance Certificate on December 31, 2016, the contractor continued closeout of open observations and testing of mechanical, electrical and plumbing systems. As of January 21, 2017, there are still 3,903 discrepancies that need to be addressed. Expenditures show the contractor at 98.0% complete. Substantial Completion and Project Completion are forecasted for June 1, 2017, and August 25, 2017, respectively.

 Contract C-26009 (C6) Track, Power, Signals and Communication Systems Subsequent to Revenue Service the contractor continued closeout of discrepancies, installation of equipment and integration testing of communication systems. As of January 21, 2017, there are still 711 discrepancies that need to be addressed. Expenditures show the contractor at 98.4% complete. Substantial Completion and Project Completion are forecasted for August 31, 2017, and November 30, 2017, respectively.

Note: Forecast Substantial and Project Completion dates are from MTACC's January 24, 2017, Schedule Progress Meeting documentation.

c. Quality

Quality Assurance and Quality Control (QA/QC)

Status:

During January 2017 the Second Avenue Subway Quality Management Team's primary focus was on the resolution of open observations and Non-Conformance Reports.

Observations:

As of January 21, 2017, there are a total of 17,260 discrepancies on the "Observations Lists" that need to be addressed on the five contracts that have not achieved Substantial Completion.

Concerns and Recommendations:

The large number of discrepancies is a concern to the PMOC. Such a large number of discrepancies indicate a breakdown in the contractors' quality assurance program, the subcontractors' quality control program and that quality was compromised for schedule acceleration. MTACC's Project Procedure No. CO.10 (Beneficial Use, Substantial Completion and Final Completion) suggests that these items must be addressed before project completion can occur with subsequent turnover to the user group(s). The PMOC recommends that adequate QA/QC staffing be maintained to resolve all of the current and future open observations.

d. Readiness for Revenue Operation

On January 1, 2017, the Second Avenue Subway (SAS) Phase 1 Project began Revenue Service. The service began with a number of open items which are documented in NYCT's Certification for Temporary Certificate of Occupancy Memorandum dated December 29, 2016. The memorandum stipulates that the open items must be completed within 60 days of revenue service i.e. March 1, 2017.

2.0 SCHEDULE DATA

Status:

As of July 1, 2016, MTACC is no longer maintaining an Integrated Project Schedule (IPS). During January 2017, the SAS Project Team developed Post Revenue Service Netpoint Schedules for the remaining work associated with the Station and Systems contracts. Task completion dates for the work are presented in the tables below.

Post RSD Station Netpoint Schedule Completion Dates								
Description of Tasks63rd Street72nd Street86th Street96th Street								
Code RSD +60 day Observation List	3/2/2017	3/2/2017	3/2/2017	3/2/2017				
Contract Work & Observations Required for SC	3/31/2017	6/30/2017	6/1/2017	6/1/2017				
Submit O&M, Training Manuals, As Builts	3/31/2017	6/1/2017	6/1/2017	6/1/2017				
Roadway Restoration	NA	5/2/2017	5/17/2017	5/17/2017				
Testing Completion (excluding seasonal)	3/31/2017	4/30/2017	5/1/2017	5/1/2017				
Seasonal Testing (HVAC)	6/30/2017	6/30/2017	6/30/2017	6/30/2017				
AWOs (required for SC)	3/31/2017	6/30/2017	6/1/2017	4/14/2017				
Substantial Completion	3/31/2017	6/30/2017	6/1/2017	6/1/2017				
AWOs (required for Final Completion)	6/30/2017	8/24/2017	8/24/2017	8/25/2017				
Punchlist and remaining observation list items	6/30/2017	9/26/2017	8/25/2017	8/25/2017				
Project Completion	6/30/2017	9/26/2017	8/25/2017	8/25/2017				

Post RSD System Netpoint Schedule Completion Dates					
Description of Tasks	System Contractor				
Code RSD +60 day Observation List	3/2/2017				
Contract Work & Observations Required for SC 63rd St	8/31/2017				
Contract Work & Observations Required for SC 72nd St	8/31/2017				
Contract Work & Observations Required for SC 86th St	8/31/2017				
Contract Work & Observations Required for SC 96th St	8/31/2017				
Submit O&M, Training, Manuals, As-Builts	8/31/2017				
Testing Complete	8/31/2017				
AWOs (required for SC)	8/31/2017				
Fire Alarm Testing at 63rd St	3/31/2017				
Fire Alarm Testing at 72nd St	5/2/2017				
Fire Alarm Testing at 86th St	5/31/2017				
Fire Alarm Testing at 96th St	6/30/2017				

Substantial Completion	8/31/2017
AWOs (required for Final Completion)	11/30/2017
Punchlist and remaining observation list items	11/30/2017
Project Completion	11/30/2017

Observations:

Sequencing of the activities associated with completion dates on the Netpoint Schedules has not been developed. The activities need to be clearly defined, scheduled and monitored to prevent slippage of the Contractor's Substantial and Project Completion dates.

Concerns and Recommendation:

The PMOC recommends that SAS Project Control and the contractors develop Gantt Charts which identify the activities required to meet the noted completion dates. Updating of the test procedures should also be included. Progress meetings should be held on a regular basis to provide status updates.

3.0 COST DATA

Status:

Total project expenditure as of January 31, 2017, is \$4.222 billion. This is 94.9% of MTACC's \$4.451 billion Current Working Budget (exclusive of financing costs).

Construction expenditures as of January 31, 2017 are \$2.649 billion. This is 99.04% of the \$2.674 billion construction budget. The completion status of each individual construction contract is as follows:

- C26002 (C1 Tunnel Boring) 100.0%;
- C26005 (C2A 96th Street Station) 100.0%;
- C26010 (C2B 96th Street Station) 98.9%;
- C26013 (C5A 86th Street Station) 100%;
- C26008 (C5B 86th Street Station) 99.6%;
- C26012 (C5C 86th Street Station) 98.0%;
- C26006 (C3 63rd Street Station) 99.8%;
- C26007 (C4B 72nd Street Station) 100.0%;
- C26011 (C4C 72nd Street Station) 95.3%; and,
- C26009 (C6 Systems) 98.4%.

Soft Cost expenditures as of January 31, 2017, are \$1.252 billion and this is 90.9% of the \$1.377 billion budget.

Allocated contingency expenditures as of January 31, 2017 are \$321 million and this is 86.8% of the \$370 million budget. Total remaining contingency is \$79 million consisting of \$49 million allocated and \$30 million unallocated. The minimum available contingency required by ELPEP is approximately \$45 million at the Hold Point for 100.0% Construction Bid and 85.0% Construction Complete.

Observations:

A revised cost Estimate at Completion (EAC) is being prepared to determine if the remaining budget is adequate given the scope of the discrepancies on the "Observation List", the level of testing still required, probability of future claims, and ongoing need for project support personnel.

Concerns and Recommendation:

The PMOC is concerned that the remaining budget might not be sufficient to complete the project given the scope of the open inspection observations, the level of testing still required and the probability of future claims. The PMOC recommends expediting the completion of the revised EAC. If additional funds are required, the process to allocate the local funds identified in the amended FFGA should be initiated.

4.0 RISK MANAGEMENT

<u>Status</u>

At this stage of the project, risks are well understood by the SAS Project Team. Mitigations implemented to allow the start of revenue service are ongoing and continue to be monitored. See item 4 below.

Observation and Analysis:

Risks involving MTACC's schedule acceleration initiative can be classified as either management and organizational risk or technical and coordination risk. Major risks within each of these categories are summarized as follows:

	Management and Organizational Risks							
	Risk	Status						
1.	MTACC's ability to implement its schedule acceleration program through compression of construction schedules.	Revenue Service occurred on January 1, 2017. However, equipment installation and integration and acceptance testing is ongoing. Netpoint Schedules for the Station Contractors and System Contractor have been established. See Section 2 of this report.						
2.	Design and scope changes requested by NYCT during the late stages of construction. NYCT has agreed that changes not related to safe operation of the railroad and station facilities will be deferred until after the start of Revenue Service.	MTACC continues to manage and mitigate this risk. No design change AWOs were initiated during January 2017. Requested design changes that will be implemented should be included in the revised EAC.						
3.	Availability of NYCT staff to support testing, commissioning, and final acceptance of work performed by SAS contractors	Ongoing NYCT support is being provided subsequent to revenue service. This is being driven by approximately 17,000 discrepancies on the "Observation List". The Systems Contractor's Netpoint Schedule shows all punchlist and remaining "Observation List" discrepancies to be completed by November 30, 2017 i.e. Project Completion.						
4.	MTA code compliance reviews. Past experience suggests that risks involve delayed inspections, unrealistic code interpretation, and disregard for project operational goals.	Reverse Service commenced on January 1, 2017 with unresolved code compliance issues. Temporary Code Compliance Certificates were issued for the 63rd, 72nd, 86th, and 96th Street Stations with the terms that unresolved code compliance issues must be corrected within 60 days of revenue service, i.e. March 2, 2017.						

	Technical and Coordination Risks						
	Risk	Status					
1.	Critical communication systems: fire alarm system, police radio installation, installation, and startup at all stations.	Adequately testing of all the interfaces to the fire alarm system continues as a major risk. The Systems Contractor's Netpoint Schedule shows testing of the fire alarm system extending to June 30, 2017.					

5.0 ELPEP

The SAS Project Team has implemented the principles and requirements embodied in the ELPEP. The procedural changes triggered by the ELPEP have become an integral part of the management of the project and has given the FTA/PMOC greater insight into the risk, cost, and schedule elements of the project. It must be noted, however, that the contingency EAC has fallen below the \$45M specified in the ELPEP. Refer to Section 3.0 of this report for further discussion.

6.0 SAFETY AND SECURITY

Each construction contractor continued implementation of the Safety Requirements as specified in Section 01 11 50 of the General Requirements.

As of December 31, 2016, a total of 14,896,737 construction hours have been logged on the project with 105 lost time and 196 recordable incidents documented. The total hours and incidents equates to a Lost Time Rate (LTR) of 1.41 and a Recordable Rate (REC) of 4.04. The LTR is below and the REC is above the US Bureau of Labor Statistics (BLS) national rates (Heavy and Civil construction) of 1.8 and 3.2 respectively. Both the LTR and REC have been trending downward over the last twelve months.

<u>Safety and Security Certification</u>: Safety and Security Certification Requirements are specified in Section 01 77 12 of the General Requirements for each station and system contract. The certifiable elements of the SAS project have been identified and the Certifiable Items List (CIL) has been established and documented on checklists. The test reports that serve as the "Body of Evidences" for the verification of the certifiable items are not being issued in a timely manner. The delay in the issuance of the test reports caused the Systems Safety Certification Committee to deviate from the certification process. In December 2016, the SAS Systems Safety Certification Committee issued an Interim Acceptance Certificate of Conformance that allowed all SAS stations to open for revenue service on an interim basis until final system integration can be substantiated. Full certification for each station will be granted by the SAS Systems Safety Certification Committee upon evidentiary review of system integration provided by the Systems contractor's management team, C-26009.

7.0 ISSUES AND RECOMMENDATIONS

Schedule: MTACC's Netpoint Schedules for the stations and systems contracts do not reflect the scope of the work required to meet the milestone dates. The sequencing of activities associated with the completion dates has not been developed. The activities need to be clearly defined, scheduled and monitored to prevent slippage of the Contractor's Substantial and Project Completion dates. Utilization of Gantt charts would be beneficial.

Technical Issues: Design flaws have become apparent and have resulted in the need for mitigation actions. Errors and omissions in the design are being tracked by the project team and MTACC is considering seeking compensation from the designer.

Systems Testing: Delays in completing the installation of equipment have had a ripple effect on the overall integration and test program. Final testing of the fire alarm at each station will take place during the February 27, 2017, to June 30, 2017, time period.

Volume 2 of the Facilities System Test Program identifies the System Acceptance Phase (SAP) as the period after substantial completion (completion of FAT, FIAT, SIST and FSIT), when systems and subsystems will be operated to demonstrate that all interfaces and systems are functioning as designed and intended. The Netpoint schedules presented at the January 24, 2017 Schedule Progress Meeting do not reflect the SAP. MTACC has stated that an addendum to the Facilities System Test Program (FSTP) would be issued. However, to date, the PMOC has not observed that the FSTP addendum has been issued or implemented.

Compliance Inspections: MTACC's commitment to expedite this process is ongoing. As of January 21, 2017, there are still 17,260 open discrepancies on the "Observation List". Completion of work identified by these inspections will extend significantly beyond the January 1, 2017, revenue service date.

Safety Certification: The test reports that serve as the "Body of Evidence" for the verification of the certifiable items are not being issued in a timely manner and this has caused the Systems Safety Certification Committee to deviate from the certification process.

The SAS Safety Certification Committee agreed to the opening of the Second Avenue Subway stations for revenue service on an interim basis until final system integration can be substantiated. An Interim Acceptance Certificate of Conformance was issued. The PMOC notes that one committee member did not sign the Certificate of Conformance. The certification stated that "risk mitigation methods will be strictly enforced providing an equivalent efficacy of those final systems until full certification can be achieved. Full certification for each station will be granted by the SAS Certification Committee upon evidentiary review of system integration provided by the System, C-26009 construction management team".

The PMOC is concerned that the certification process has been circumvented. Objective evidence should have been presented as verification that the Certifiable Items List associated with each certifiable element at each station had been completed

Financial: As of January 31, 2017, \$4.222 billion, 94.85%, of the MTACC's Current Working Budget of \$4.451 billion (exclusive of financing costs) has been expended. A revised cost estimate at completion (EAC) should be completed to determine if the remaining budget is adequate given the scope of the open inspection observations, the level of testing still required and the probability of future claims. MTACC has stated that there are residuals funds in several soft cost categories that can be transferred to the contingency budget line item. If additional funds are required, the process to allocate the local funds identified in the amended FFGA should be initiated.

APPENDIX A – ACRONYMS

ARRA	American Recovery and Reinvestment Act		
AWO	Additional Work Order		
BLS	Bureau of Labor Statistics		
CBDS	Computer Based Dispatch System		
СВН	Circuit Breaker House		
ССМ	Consultant Construction Manager		
CCTV	Closed Circuit Television		
CD	Calendar Days		
CIL	Certifiable Items List		
СМР	Cost Management Plan		
CPRB	Capital Program Review Board		
CSSR	Contact Status Summary Report		
CWB	Current Working Budget		
CY	Cubic Yards		
DCB	Detailed Cost Breakdown		
EAC	Estimate at Completion		
EBCS	Emergency Booth Communication System		
ELPEP	Enterprise Level Project Execution Plan		
FAS	Fire Alarm System		
FIAT	Field Installation Acceptance Test		
FFGA	Full Funding Grant Agreement		
FSIT	Final Systems Integrated Testing		
FSTP	Facilities System Test Program		
FTA	Federal Transit Administration		
GO	General Outage		
IAC	Intrusion Access Control		
IPS	Integrated Project Schedule		
LAN	Local Area Network		
LTR	Lost Time Rate		
MO	Month		
MPT	Maintenance and Protection of Traffic		

MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
N/A	Not Applicable
NYCT	New York City Transit
NYSPTSB	New York State Public Transportation Safety Board
OSS	NYCT Office of System Safety
PACIS	Public Address Customer Information Screens
PEP	Project Execution Plan
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PQM	Project Quality Manual
QA	Quality Assurance
RAMP	Real Estate Acquisition Management Plan
REC	Recordable Rate
RMCP	Risk Mitigation Capacity Plan
RMP	Risk Management Plan
RMS	Remote Monitoring System
ROD	Revenue Operations Date
ROW	Right of Way
RSD	Revenue Service Date
SAS	Second Avenue Subway
SCC	Standard Cost Category
SIST	Simulated Integrated System Testing
SMP	Schedule Management Plan
SSCC	Safety and Security Certification Committee
SSOA	State Safety Oversight Agency
SSPP	System Safety Program Plan
TBD	To Be Determined
TCC	Technical Capacity and Capability
TPSS	Traction Power Substation
TSSM	Tunnel Station Smoke Management
TWG	Technical Working Group
WAN	Wide Area Network (WAN)

WBS	Work Breakdown Structure
WD	Work Days

APPENDIX B – TABLES

	FFGA	Forecast C	ompletion
	(March 2015)	Project Sponsor	РМОС
Begin Construction	January 1, 2007	March 20, 2007A	March 20, 2007A
Construction Complete	August, 2016	August 31, 2017*	October 2017
Revenue Service	February 28, 2018	January 1, 2016A	February 2018

Table 1 - Summary of Schedule Dates

* Substantial Completion revised to reflect the Systems Netpoint Schedule (January 24, 2017 presentation to FTA)

	FFGA		FFGA Amend	MTA Curr Working Bu (CWB)		Expenditu January 3		
	\$ Millions	% of Total	Obligated (\$ Millions)	3/17/2015	\$ Millions	% of Total	\$ Millions	% of Total
Grand Total Cost	4,866.614	100	4,572.942	5,574.614	5,267.614	100	4,221.858	80.14
Financing Cost	816.614	16.78		816.614	816.614	15.50	(N.A.)	(N.A.)
Total Project Cost	4,050.000	83.22	4,572.942	4,758.000	4,451.00	84.50	4,221.858	80.14
Total Federal	1,350.693	27.75	1,063.942	1,373.893*	1,350.693	24.60	1,218.947	23.14
Total FTA share	1,300.000	96.25	990.049	1,300.000	1,300.000	23.68	1,218.947	23.14
5309 New Starts share	1,300.000	100	990.049	1,300.000	1,300.000	23.68	1,145.054	21.74
Total FHWA share	50.693	3.75	73.893	73.893	50.693	0.96	73.893	1.40
CMAQ	48.233	95.15	71.433	71.433	48.233	0.88	71.433	1.35
Special Highway Appropriation	2.460	4.85	2.460	2.460	2.460	0.04	2.460	0.05
Total Local share	2,699.307	55.47	3,509.000**	3,384.107	3,509.000 **	63.92	3,003.000	57.00
State share	450.000	16.67	100.000		450.000	8.20		
Agency share	2,249.307	83.33	1,145.782		3,059.000	55.72		
City share	0	0			0	0		

Table 2 - Project Budget/Cost 🟶

* Obligated and expended amounts obtained from t the FTA's Transit Award Management System (TrAMS) and MTACC's Grant Management Department.

** Current MTA Board approved budget.

Category	Current Working Budget	EAC Forecast As of September 2016	
Total Construction	\$2,674,814,299	\$3,050,065,727	
Engineering Services Subtotal	\$622,862,000	\$690,022,317	
Third Party Expenses	\$554,086,273	\$556,586,000	
TA Expenses	\$131,160,085	\$141,514,683	
Contingency	\$468,077,343	\$0.00	
Total	\$4,451,000,000	\$4,438,188,727	

Table 3 - Estimate at Completion

EAC is being updated to reflect current project status

Table 4 - Allocation of Current Working Budget to Standard Cost Categories

Std. Cost Category (SCC)	Description	FFGA (January 2008)	FFGA Amended (March, 2015)	MTA's Current Working Budget (September, 2016)
10	Guideway & Track Elements	\$612,404,000	\$195,346,781	\$189,310,484
20	Stations, Stops, Terminals, Intermodal	\$1,092,836,000	\$1,666,605,679	\$1,659,830,395
30	Support Facilities	\$0	\$0	\$0
40	Site Work & Special Conditions	\$276,229,000	\$793,118,232	\$880,457,220
50	Systems	\$322,707,000	\$250,379,966	\$212,886,484
60	ROW, Land, Existing Improvements	\$240,960,000	\$281,500,000	\$281,500,000
70	Vehicles	\$152,999,000	\$0	\$0
80	Professional Services	\$796,311,000	\$1,026,608,168	\$1,198,669,050
90	Unallocated Contingency	\$555,554,000	\$544,441,174	\$28,346,367
Subtotal		\$4,050,000,000	\$4,758,000,000	\$4,451,000,000
Financing Cost		\$816,614,000	\$816,614,000	\$816,614,000
Total Project		\$4,866,614,000	\$5,574,614,000	\$5,267,614,000

Note: Table updated to reflect latest allocations by MTACC (3rd Quarter 2016)

Project Status: Or		Original at FFGA	Current*	ELPEP**		
Cost	Cost Estimate	\$4,050 million	\$4,451 million (exclusive of financing)	\$4,980 million		
Contingency	Unallocated Contingency	\$555.554 million	\$30 million (As of January 31, 2017)	\$45 million		
	Total Contingency (Allocated plus Unallocated)	\$555.554 million	\$79 million (As of January 31, 2017)	\$45 million		
Schedule	Revenue Service Date	June 30, 2014	January 1, 2017A	February 28, 2018		
Total Project Percent Complete	Based on Expenditures	94.85%				
	Based on Earned Value	N/A				
Major Issue			Comments			
Maj	or Issue	Status	Com	iments		
	Project Completion	Status	Sequencing of the with completion da Schedules for the contractors have r The activities ne defined, scheduled prevent slippage	activities associated ates on the Netpoint station and system not been developed. eds to be clearly , and monitored to of the Contractor's Project Completion		
Substantial and I	Project Completion les		Sequencing of the with completion da Schedules for the contractors have r The activities ne defined, scheduled prevent slippage Substantial and dates. 17,260 discrepa "Observations Liss deviated from estab and project proceed schedule acceleration concerned that the	activities associated ates on the Netpoint station and system not been developed. eds to be clearly , and monitored to of the Contractor's Project Completion ancies on the t''. MTACC has blished organizational dures as part of its on effort. PMOC is ese deviations may construction quality		

Table 5 - Core Accountability Items

* MTACC's Current Working Budget ** Enterprise Level Project Execution Plan (ELPEP), reflecting median level of risk mitigation Financial data based upon MTACC reporting through 01/31/2017