

PMOC MONTHLY REPORT

Second Avenue Subway Phase 1 (MTACC-SAS) Project

Metropolitan Transportation Authority
New York, New York

November 1 to November 30, 2011



PMOC Contract No. DTFT60-09-D-00007

Task Order No. 2, Project No. DC-27-5115, Work Order No. 03

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Length of time on project: Two years on project for Urban Engineers

TABLE OF CONTENTS

COVER1

TABLE OF CONTENTS2

THIRD PARTY DISCLAIMER.....3

REPORT FORMAT AND FOCUS.....3

MONITORING REPORT3

1.0 PROJECT STATUS.....3

 a. Design 3

 b. Procurement 4

 c. Construction..... 4

 d. Quality Assurance and Quality Control (QA/QC)..... 6

2.0 SCHEDULE DATA.....7

3.0 COST DATA.....10

4.0 RISK MANAGEMENT12

5.0 ELPEP13

6.0 SAFETY AND SECURITY14

7.0 ISSUES AND RECOMMENDATIONS.....14

APPENDICES

APPENDIX A – ACRONYMS

APPENDIX B – TABLES

Table 1 - Summary of Schedule Dates

Table 2 - Schedule Contingency

Table 3 – 4th Quarter Schedule Milestone Comparison

Table 4 - Project Budget/Cost

Table 5 - Contingency Drawdown

Table 6 - Estimate @ Completion

Table 7 - Allocation of Current Working Budget to Standard Cost Categories

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 FTA or the project sponsor, in accordance with the purposes as described below.

For projects funded through FTA Full Funding Grant Agreements (FFGA) program, FTA and its Project Management Oversight Contractor (PMOC) use a risk-based assessment process to review and validate a project sponsor's 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 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. DTFT60-09-D-00007, Task Order No. 002. Its purpose is to provide information and data to assist the FTA as it continually monitors the grantee's technical capability and capacity to execute a project efficiently and effectively, and hence, whether the grantee continues to be ready to receive federal funds for further project development.

This report covers the project management activities on the MTACC (Capital Construction) Second Avenue Subway (SAS) Mega-Project managed by MTACC and MTA as the grantee and financed by the FTA FFGA.

MONITORING REPORT

The contents of this report are cumulative in nature, and may reference or build upon topics discussed in previous reports. All comments received pertaining to previous reports have been incorporated in this report.

1.0 PROJECT STATUS

a. Design

MTACC has reported the final design phase of the SAS Project as 100% complete in late November 2010. Follow-up design-related activities are limited to updating station finish packages with "as-built" data from prior construction packages, construction and bid phase technical support. During November 2011, the process of updating the C2B construction documents with as-built information and any design revisions was completed, allowing the advertisement of this package to proceed.

These functions are generally proceeding in accordance with the Integrated Project Schedule (IPS), Current Working Budget (CWB) and applicable management plans.

b. Procurement

Updates to Construction Procurement, which occurred during November 2011 include:

- **C-26010 (C2B): 96th Street Station Civil, Architectural, MEP** – NYCT has started the advertisement process and construction documents will be available for interested bidders on December 5, 2011. The Pre-Bid Meeting and site tour are scheduled for December 20, 2011. [REDACTED]
- **C-26009 (C6): Transit & Rail Systems – Best and Final Offers (BAFO)** were presented to MTACC by the contractors in mid-November 2011. As of the writing of this report, no selection decision has been made public. MTA Board approval is scheduled for December 21, 2011. [REDACTED]
- **Future Procurements:** Remaining construction procurements include C26011 (C4C) 72nd Street Station Finishes & MEP and C26012 (C5C) 86th Street Station Finishes & MEP. [REDACTED]

Comment [S1]: FOIA Exemption 5
U S C § 552 (b) (4)

Comment [S2]: FOIA Exemption 5
U S C § 552 (b) (4)

Comment [S3]: FOIA Exemption 5
U S C § 552 (b) (4)

Comment [S4]: FOIA Exemption 5
U S C § 552 (b) (4)

c. Construction

As of November 30, 2011, there are six (6) active construction contracts on the SAS project. Significant construction progress during this period includes:

- **Contract C-26002(C1) –TBM tunnels from 92nd Street to 63rd Street**
 - **East Tunnel Operations**
 - Removal of the utilities and cleaning of the invert from 78th Street to the launch box is ongoing (scheduled completion has slipped to 12/16/11).
 - Drilling and blasting completed for the pump room (trimming is still ongoing).
 - **West Tunnel Operations**
 - Waterproofing of the arch is continuing 78th to 83rd St. (expected to be completed by 12/20/11).
 - Arch pour from 73rd St. to 78th St. is ongoing and is expected to be completed by 12/14/11. The arch pour from 78th St. to 83rd St. is expected to start on 12/15/11.
 - Disassembly and removal of the TBM from the launch box was completed. Removal of the vertical conveyor system is expected to be completed by mid-December 2011.

It is the PMOC's opinion that good coordination is taking place among the C1, C2A and C4B contractors as it relates to MPTs, early turnover of work zones and blasting operations.

▪ **Contract C-26005 (C2A) 96th Street Station Heavy Civil, Structural and Utility Relocation**

- Slurry wall installation on the Westside of 2nd Ave. was completed with all 51 panels installed.
- Removal of the Westside guide wall between 97th and 99th Streets was initiated.
- Deck beam and precast decking installation started between 97th and 99th St. on the Westside of 2nd Ave.
- North gas main crossing to facilitate slurry wall construction at 96th St. and 2nd Ave. is ongoing.
- Jet grouting (below ground strut and below secant piles) at Ancillary 2 is ongoing.
- Entrance 1 utility relocation work (breakout and support of ECS ducts, installation of a 42" sewer line and 12" water line and gas main) is ongoing.
- Entrance 2 work is pending resolution of ECS lines.
- Phase II Stabilization work at 1802 2nd Avenue was completed and work commenced with installation of the new basement floor slab and support columns.

[REDACTED]

Comment [S5]: FOIA Exemption 5
U S C § 552 (b) (4)

▪ **Contract C-26006 (C3) 63rd Street Station Upgrade**

- The CM office continued working on getting approval from NYDOT for 2 weekend shutdowns of 63rd St. traffic. The street waiver request from NYDOT during the holiday moratorium has been approved.
- Began temporary and permanent steel installation in Area 5.
- Completed installation of Gantry Crane runway beams.
- Completed upper and lower level platform demolition.
- General Outage (GO) coordination with NYCT continued successfully through November 2011. NYCT granted 2 additional GOs to the project in November 2011 and these are the last in 2011.

[REDACTED]

Comment [S6]: FOIA Exemption 5
U S C § 552 (b) (4)

▪ **Contract C-26007 (C4B) 72nd Street Station Mining and Lining**

- Main Station Cavern Excavation between 69th and 72nd St. – Center Drift is complete, West slash is complete, East slash is ongoing
- North Crossover West slash excavation is ongoing.
- Horseshoe Tunnel – Excavation between 65th and 64th Street on West side of 2nd Ave. – Ongoing
- Total rock excavated is approximately 71,025 BCY (41.7 % of project).
- Mapping, shotcrete, rock bolt installation ongoing.
- Ancillary 2 (72nd St.) –Demolition still on hold.
- Ancillary 1 (69th St.) – Demolition ongoing (third floor completed) expected to be completed by 12/16/11.
- Building remediation – ongoing (239 E 73rd St., 1343 2nd Ave, 259 E 71st St, 1390 1/2 2nd Ave, 1405 2nd Ave, 1409 2nd Ave, 220 E 65th St, 241 E 73rd St, and 257 E 71st St, and 307 E 70th St.)

Various complaints have been received concerning the dust created during the blasting operation, and as a result the blasting operation was halted on November 23, 2011. The dust control plan was subsequently revised and verified to be effective in reducing the dust. Blasting is anticipated to begin on December 5, 2011. In the PMOC's opinion, controlling the amount of the dust created during the blasting operation is critical in maintaining good relations with the community.

▪ **Contract C-26013 (C5A) 86th Street Station Excavation, Utility Relocation and Road Decking**

Construction is complete. The contractor is in the process of completing as-built surveys and turning over contractual required paper work to the Utility Companies as part of achieving substantial completion. The North and South Shaft areas were turned over for beneficial use to the C5B (C-26008) 86th St. Station Mining and Lining Contractor.

▪ **Contract C-26008 (C5B) 86th Street Station Cavern & Heavy Civil**

- Contractor mobilization is continuing.
- Completed installation of approximately 85% of the building inspections condition survey.
- Began installation of instrumentation on the buildings facades.

The coordination and transferring of the various permits from the C5A contractor to the C5B contractor continues to go smoothly with no noted issues.

d. Quality Assurance and Quality Control (QA/QC)

No major quality concerns were noted during this reporting period. Ongoing Quality Oversight Audits performed by MTACC continue to verify that the construction contractors are implementing their Quality Management Systems as specified in the General Requirements (Section 01 43 00). The contractors' overall ratings remain acceptable. Contractors Quality Work Plans, Test and Inspection Plans, control of non-conforming hardware, action item closure, supplier auditing systems, and preparatory phase meetings were monitored.

2.0 SCHEDULE DATA

Integrated Project Schedule (IPS) Update #64 was received on December 7, 2011 and is based on a Data Date of November 01, 2011.

[REDACTED]

Comment [S7]: FOIA Exemption 5
U S C § 552 (b) (4)

Significant schedule-related accomplishments during November 2011 include:

- The draft planning and execution schedule for NYCT Pre-Revenue Operation Activities was incorporated into the IPS. Final logic adjustments are expected to be incorporated in the December 2011 and January 2012 updates as the final results are shared and reviewed by all parties.
- All real estate property acquisitions for Phase I have been completed with the last taking occurring on October 25, 2011. The “Cost to Cure” work remains the only Real Estate activity which could pose a potential risk to construction progress.
- MTACC has reported receipt of NYCDEP conditional approval of the 60 inch water-main on 95th Street. MTACC considers this achievement to be the completion of the “dustoff” period for the C2B design.

Project Critical Path: The project critical path is unchanged from the October 2011 Monthly Report. The majority of the project critical path spans the schedules of individual construction packages that are not yet active and; therefore, not updated each month.

[REDACTED]

Comment [S8]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Comment [S14]: FOIA Exemption 5
U.S.C. § 552 (b) (4)

3.0 COST DATA

Based upon financial expenditures reported by the MTACC during November 2011, SAS Phase 1 is approximately 33.8 % complete.

[REDACTED]

Comment [S15]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S16]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S17]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S18]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

[REDACTED]

Comment [S19]: FOIA Exemption 5
U S C § 552 (b) (5)

Estimate-At-Completion: Using data provided by the SAS project team, the PMOC has developed and will maintain its independent Estimate at Completion (EAC) until this function is fully undertaken by the project team, in accordance with the Cost Management Plan. During November 2011, no significant cost events were reported that suggest a change to the previously calculated EAC of \$4,263,538,288.

Cost Growth: For the period ending November 2011, total Additional Work Order (AWO) exposure was reported to be \$70,915,352, an increase of \$5,758,417 over the \$65,156,935 exposure reported for period ending October 2011. This increase was primarily driven by the updated exposure value of C-26002 (C1) AWO #115. This exposure value was increased from \$0 to \$5,083,418. AWO #115 represents impact costs resulting from AWO #107 – Aggregate Launch Box Delays. Negotiation of AWO #107 was concluded on or about August 25, 2010 and resolved a total 122 days of delay, 60 of which were impactable. This event causes concern over the reliability of the AWO Exposure values, resulting EAC and contingency balance calculations.

ELPEP/CMP Compliance: Based on the current conditional approval of the CMP, the PMOC has identified several areas where supplemental efforts may be required in order for the MTACC and the SAS Project Team to be considered fully compliant:

- **AWO Processing:** The CMP references and incorporates MTACC’s Procedure AD.11, Construction Contract Modification Approval, and thereby NYCT’s Project Management Procedure PMP207, Processing Construction Additional Work Orders, by reference. In accordance with PMP207, maximum AWO processing duration should not exceed 90 calendar days. MTACC/NYCT staffing changes and process improvements incorporated in 2011 have not had a material effect on improving AWO processing duration.
- **Financial Reporting (EAC):** Contract and project level EAC Reporting (CMP Sections 5.4 and 5.5 respectively) has not been adopted by SAS to date.
- **Tracking Scope Moves:** SAS has elected to identify and detail contract and project level cost changes resulting from scope revisions and transfers via Quality Implementation Procedure (QIP) 8.2, Configuration Management, and Technical Advisory Committee

(TAC) approval. The evaluation of the effectiveness of this approach will be per FTA direction.

- **Retained Risk Updates:** Updating the status of retained risks and incorporation of this information into project and contract level EAC reporting, generally discussed in CMP Section 6.1 (Risk Management), has not been adopted by SAS to date.

Cost Contingency: During November 2011, no significant changes in the SAS construction program have been reported that materially affected the forecast cost contingency baseline against which the current contingency balance is measured. Changes this period were limited to routine incorporation of AWOs into the individual project and overall program reporting systems.

The PMOC has updated its contingency drawdown and utilization model to reflect these changes. Available contingency is calculated using the forecast "AWO Exposure". The current contingency balance is less than the Planned Balance and exceeds ELPEP Required Balance.

Required Balance (ELPEP):	\$ 220,000,000
Planned Balance:	\$ 420,376,728
Actual Balance (using AWO Exposure):	\$ 493,136,546

4.0 RISK MANAGEMENT

On November 17th and 18th, 2011, MTACC conducted a risk assessment workshop for C2B, 96th Street Station Finishes and Systems package, which is scheduled to be advertised for construction bids in early December 2011. The Risk Workshop Facilitator was Dr. Eduardo Gamez from AECOM. He was supported by Dr. Herbert Einstein of MIT as an independent peer reviewer. The project has already gone through a risk review this year and has an active risk register that is being managed. During this session, several of the existing risk items were eliminated and new ones added from the workshop, indicating that SAS has actively worked to mitigate or eliminate known risks and is alert to the identification of new risks as the work progresses.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Comment [S20]: FOIA Exemption 5
U S C § 552 (b) (4)

Comment [S21]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S22]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S23]: FOIA Exemption 5
U S C § 552 (b) (4)

Based upon the information gathered and updated during this workshop, the risk register and risk analysis will be updated and evaluated. This update was not available as of the writing of this report.

Risk Management: Delays to the review and approval of shop drawings was identified at Risk Mitigation Meeting No. 10, which was held on September 15, 2011. This risk is significant for Systems and Finishes contracts (C3, C6, C4C, C5C) due to the increased stakeholder (NYCT) participation in the review process. Review and approval of contractor submittals is a contract requirement for which the owner (MTACC/NYCT) retains specific performance obligations with respect to the timeliness of the review process. Risk Communiqué No: 007 was issued on November 23, 2011 to address the manner by which this risk would be managed by the SAS Project Team.

Risk Communiqué No: 007 defines the roles and responsibilities of each party involved in the review process and defines specific procedures to be followed for the different types of submittals that will be generated by the contractors. The PMOC considers this effort to be an effective means of managing this particular risk. The PMOC will follow up to verify the effectiveness of this effort.

Risk Management and Mitigation Capacity (RMMC): Retained risks continue to be reviewed on a monthly basis. These reviews have contributed to development and implementation of specific mitigation strategies such as the one discussed above. In the PMOC's opinion, the SAS Project Team is actively working to avoid and contain the effect of retained risks and controlling the overall growth of the total project cost.

5.0 ELPEP

The current status of each of the main ELPEP components discussed at the November 3, 2011 ELPEP meeting is summarized as follows:

- **Technical Capacity and Capability (TCC):** The TCC for SAS Phase 1 was submitted on 3/11/10 and approved by the FTA on 4/6/10. The PMOC completed its review of the Revision 8 SAS PMP and is monitoring and verifying implementation and compliance with this plan.
- **Schedule Management Plan (SMP):** On November 3, 2011, the FTA confirmed that MTACC has responded to the Candidate Revisions identified in FTA's conditional approval letter, dated October 26, 2010, and that the SMP is fully approved. The PMOC has verified SAS substantial compliance with the SMP since August 2010. The process of transferring the compliance verification process to the MTA is discussed below.

- **Cost Management Plan (CMP):** FTA conditional approval of the Cost Management Plan, including five (5) Candidate Revisions was provided on September 1, 2011. MTACC has submitted its final revisions to the CMP, which incorporate its responses to those Candidate Revisions. FTA/PMOC final review of these revisions is in progress.
- **Risk Mitigation Capacity Plan (RMCP):** Drafts of the ESA and SAS Risk Management Plans were transmitted to FTA Region II during October 2011. MTA addressed all PMOC comments in its submittal of the RMCP on October 28, 2011. Resolution of any final comments to the RMCP coordinated and combined with a review of the ESA and SAS Project Risk Management Plans are in progress.
- **Conformance Demonstration:** At the November 3, 2011 ELPEP meeting, the previously submitted MTACC “white paper” was discussed. FTA provided input regarding ELPEP performance requirements, MTACC reporting and documentation, FTA and PMOC validation. Significant discussion occurred regarding the intent and implementation of “Secondary Schedule Mitigation” as described in the ELPEP document. A workshop session for early December 2011 was scheduled to work through unresolved issues.

6.0 SAFETY AND SECURITY

[REDACTED]

Comment [S24]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

7.0 ISSUES AND RECOMMENDATIONS

[REDACTED]

Comment [S25]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

[REDACTED]

Comment [S26]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S27]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S28]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S29]: FOIA Exemption 5
U S C § 552 (b) (4)

[REDACTED]

Comment [S30]: FOIA Exemption 5
U S C § 552 (b) (4)

APPENDIX A- ACRONYMS

AFI	Allowance for Indeterminates
ARRA	American Recovery and Reinvestment Act
AWO	Additional Work Orders
BA	Budget Adjustment
CCM	Consultant Construction Manager
CMP	Cost Management Plan
CSSR	Contact Status Summary Report
CIL	Central Instrument Location
CPRB	Capital Program Review Board
CPP	Contract Packaging Plan
CWB	Current Working Budget
DCB	Detailed Cost Breakdown
DMP	Deformation Monitoring Points
ELPEP	Enterprise Level Project Execution Plan
EPC	Engineering-Procurement-Construction
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
GO	General Outage
IPS	Integrated Project Schedule
MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
N/A	Not Applicable
NTP	Notice to Proceed
NYCT	New York City Transit
NYSPTSBS	New York State Public Transportation Safety Board
PE	Preliminary Engineering
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
RMMC	Risk Management and Mitigation Capacity
ROD	Revenue Operations Date
ROW	Right of Way
RSD	Revenue Service Date
SAS	Second Avenue Subway
SCC	Standard Cost Category
SCIT	System Certified Integrated Testing
SMP	Schedule Management Plan
SSMP	Safety and Security Management Plan
SSOA	State Safety Oversight Agency
SSPP	System Safety Program Plan
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Technical Capacity and Capability
VE	Value Engineering
WBS	Work Breakdown Structure

APPENDIX B – TABLES

Table 1 - Summary of Schedule Dates

	FFGA	Forecast Completion	
		Grantee	PMOC
Begin Construction	January 1, 2007	03/20/2007A	03/20/2007A
Construction Complete	December 31, 2013	August 31, 2016	October 2017
Revenue Service	June 30, 2014	December 30, 2016	February 2018

Table 2 - Schedule Contingency

IPS Update #	59	60	61	62	63	64
Data Date	06/01/11	07/01/11	08/01/11	09/01/11	10/01/11	11/01/11
Contingency (CD)						
RSD=12/31/2016	67	67	67	67	67	67
RSD=02/28/2018	490	490	490	490	490	490

Table 4 - Project Budget/Cost 

	FFGA			FFGA Amend	MTA Current Working Budget (CWB)		Expenditures as of November 30, 2011	
	(\$ Millions)	% of Total	* Obligated (\$ Million)	TBD	\$ Millions	% of Total	\$ Millions	% of Total
Grand Total Cost:	4,866.614	100	4,375.76		5,267.614	100	1,502.311	28.52
Financing Cost	816 614	16 78			816 614	15 55		
Total Project Cost:	4,050.000	83.22	4,375.76		4,451.000	84.50	1,502.311	28.52
Total Federal:	1,350.693	27.75	866.760		1,350.693	25.64	478.708	9.09
Total FTA share:	1,300.000	96.25	792.867		1,300.000	24.68	467.595	8.88
5309 New Starts share	1,300 000	100	792 867		1,300 000	24 68	467 595	8 88
Total FHWA share:	50.693	3.75	73.893		50.693	0.96	11.112	.21
CMAQ	48 233	95 15	71 433		48 233	0 92	8 652	16
Special Highway Appropriation	2 460	4 85	2 460		2 460	0 04	2 460	05
Total Local share:	2,699.307	55.47	**3,509.000		**3,509.000	66.61	1,023.603	19.43
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		

* Obligated amounts obtained from the Transportation Electronic Award Management (TEAM) system and MTACC's Grant Management Department

** Current MTA Board approved budget

Table 5 – Contingency Drawdown



