

PMOC MONTHLY REPORT

Second Avenue Subway Phase 1 (MTACC-SAS) Project Metropolitan Transportation Authority New York, New York

June 1 to June 30, 2013



PMOC Contract No. DTFT60-09-D-00007

Task Order No. 4, Project No. DC-76-5020, Work Order No. 1

Urban Engineers of New York, P.C., 2 Penn Plaza, Suite 1103, New York, New York 10121
PMOC Lead, Charles A. Halboth, PE, 212-736-9100; cahalboth@urbanengineers.com
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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 (FFGAs) 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. 003. 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.

EXECUTIVE SUMMARY

1. PROJECT DESCRIPTION

The Second Avenue Subway project will include a two-track line under Second Avenue from 125th Street to the Financial District in lower Manhattan. It will also include a connection from Second Avenue through the 63rd Street tunnel to existing tracks for service to West Midtown and Brooklyn. Sixteen new ADA accessible stations will be constructed. The Second Avenue Subway will reduce overcrowding and delays on the Lexington Avenue line, improving travel for both city and suburban commuters, and provide better access to mass transit for residents of the far East Side of Manhattan. Stations will have a combination of escalators, stairs, and, in compliance with the Americans with Disabilities Act, elevator connections from street-level to station mezzanine and from mezzanine to platforms.

Phase One of the project will include the construction of new tunnels from 92nd Street and Second Avenue to 63rd Street and Third Avenue, with new stations along Second Avenue at 96th, 86th and 72nd Streets and new entrances to the existing Lexington Ave./63rd Street Station at 63rd Street and Third Avenue. New track and rail systems will extend from the 63rd Street Station through the new tunnels and previously constructed tunnels to 105th Street; facilitating intermediate service at the completion of Phase 1 between 96th Street and Brooklyn via the connection to the existing Broadway Line.

2. CHANGES DURING 2nd QUARTER 2013

a. Engineering/Design Progress

The Design Consultant continues to provide contract administrative and technical support for ongoing construction contracts, develop design modifications as required and provide technical support throughout the construction procurement process.

b. New Contract Procurements

The 86th Street Station Finishes & MEP Package, C-26012 (C5C) was awarded on June 12, 2013. This is the final construction package to be procured as part of SAS, Phase 1.

c. Construction Progress

All construction is approximately 53 % complete (overall project completion is approximately 54.2%) as of June 30, 2013. Summary progress for each contract is as follows:

- At the 86th Street Station, the majority of excavation work has been completed and the contractor is mobilizing for structural concrete placement activities.
- The 96th Street Station Heavy Civil/Structural Contractor (Contract C2A) is approximately 97.0% complete. Completion of Milestone #1, turnover of area for Contract C2B access, is scheduled for July 15, 2013. Substantial Completion is scheduled for September 13, 2013.
- The 96th Street Station Finishes, Mechanical, Electrical, and Plumbing Systems and Ancillary Building and Entrances (Contract C2B) is approximately 17.10% complete. Ongoing work includes: steel column and roof beam repair in the existing tunnel (99th Street thru 105th Street); invert placement in the South Tube; and mezzanine decking in the Launch Box.
- Work on the 72nd Street Station Heavy Civil/Structural Contractor (Contract C4B) has progressed to approximately 82.9 % complete. Concrete placement work is ongoing in Main Cavern, North and South Crossovers, G3/G4 Cavern, 63rd St Stub, G3/G4 TBM Tunnels, G3/S1 Cavern, Horseshoe Tunnel, Ancillary #1 and #2, and Entrance #2 and #3.
- At the 63rd Street Station, work continued on platform reconstruction, mechanical installation at the fan plants, Entrance #1 foundation construction and utility relocation, and mezzanine floor concrete placement.
- The Track, Signal, Traction Power, and Communication Systems Contract (C6) is approximately 7.6% complete. Ongoing work includes: removal of out of service wayside equipment and signal relay room equipment at the 63rd Street Station;

installation of conduits and cable tray brackets; and submission of Test Plans and Procedures.

d. Continuing and Unresolved Issues

- Closeout of construction contracts C1. Substantial completion was achieved on November 16, 2011. The time required to closeout this contract has been excessive.
- After dismissal of two lawsuits, the residents of 315 East 86th Street (Yorkshire Towers) have developed a new proposal for locating entrances along Second Avenue (86th Street Station – Entrance #1) rather than their current location on 86th Street. As of the writing of this report, it is unclear what steps the residents of Yorkshire Towers will take to advance this proposal.
- Scaffolding for Local Law 7 inspection of Yorkshire Towers continues to interfere with Entrance #2 construction. Efforts to coordinate the two tasks directly with Yorkshire representatives have not been successful. Excavation at Entrance #2 continues, but significant delays have been experienced.
- Discretionary design changes requested NYCT typically add scope and cost to the C6 package. At this stage of the project, these change requests must be curtailed to allow the project team to focus on executing the remainder of the project.

e. New Cost and Schedule Issues

- Recent schedule updates indicate significant delays to preconstruction submittal activities involving the rail signal system. Several of these have become “near-critical” in the Integrated Project Schedule. With NYCT being the system designer and submittal reviewer, the risk of this type of delay should be minimized. The root cause of these delays needs to be identified and resolved to allow this work to progress in a timely manner.

3. PROJECT STATUS SUMMARY AND PMOC ASSESSMENT

a. Grantee Technical Capacity and Capability

During the 2nd Quarter 2013, MTACC initiated a complete review of its construction management capacity and capability, with specific emphasis on the completion, turnover and closeout of individual work elements as well as overall contracts. It is anticipated that this effort will improve the efficiency with which contracts are administered by increasing staff awareness of the critical technical and contractual issues to be aware of when work is accepted and areas turned over to follow-on contractors.

The SAS Project Team continues to operate as an integrated project organization. Personnel from MTACC, NYCT, the Consultant Construction Management and Design Consultant are utilized throughout the five (5) functional groups in an efficient and cohesive manner that facilitates the efficient overall execution of the project.

b. Real Estate Acquisition

All real estate for the SAS Phase 1 Project has been acquired. Real estate acquisition and tenant relocation was performed in accordance with the approved SAS Real Estate Acquisition Management Plan, and Relocation Plan. These plans address Title 49 CFR Part 24, which

implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended and FTA real estate requirements 5010.1C.

c. Engineering/Design

The final design phase of the project was completed in late November 2010. However, during the 1st Quarter 2013, MTACC determined it was necessary to relocate and redesign Entrance #1 at the 72nd Street Station due to an irreconcilable dispute with the adjacent building owner at 301 E. 69th Street. This unforeseen condition has increased the design phase scope, but has not interfered with the ongoing engineering and construction support activities performed by the design consultant.

While some delays in technical submittal processing have been noted, the design engineer has generally provided adequate support to the project in a timely fashion.

d. Procurement

The 86th Street Station Finishes & MEP Package, C-26012 (C5C) was awarded on June 12, 2013. This is the final construction package to be procured as part of SAS, Phase 1.

Although some delays were encountered in the construction contract bid and award processes, procurement generally supported the schedule needs of the project.

Close out of construction Contract C5A was finalized via issuance of the final payment certificate on June 28, 2013. Closeout of construction Contract C1 is now anticipated in July 2013.

e. Railroad Force Account (Support and Construction)

Force Account labor on the SAS Phase 1 Project is being provided by NYCT employees and is budgeted at \$43,000,000. Through the 1st Quarter 2013, \$3,709,978 of the \$43,000,000 budget has been expended. The majority of the expenditure, \$3,411,336 is still associated with the 63rd Street/Lexington Avenue Station Restoration Contract (C3).

f. Vehicles

No additional vehicles will be procured for the SAS Phase 1 Project. MTA has demonstrated to FTA, and FTA has agreed, that the rolling stock needed for Phase 1 SAS operations can be provided from the existing fleet of New York City Transit (NYCT). MTACC has confirmed that spare vehicles resulting from service reductions within the NYCT system will be utilized to meet the SAS Phase 1 Project Concept of Operation.

g. Systems Testing and Start-Up

Responsibility for Systems testing and start-up is allocated to the Track, Power, Signals and Communications Systems Contract C-26009 (C6). The scope of the contract calls for the hiring of a Systems Integration Manager (SIM) supported by Systems Engineering Specialists (SES) to coordinate the efforts of the Systems Contractor and the Stations MEP Contractors in the preparation of their Systems Commissioning and Integration Testing (SCIT) Plans. The SCIT Plan provides the roadmap for the way forward for systems integration to ensure that the systems elements are integrated and tested in a structured, managed, comprehensive manner that enables MTACC/NYCT to confirm that the SAS system installation is “built-up” on a segment-by-segment basis and is compliant with the SAS plans and specifications. The plans will be

developed based on the MTA Capital Construction Guidelines for a Systems Commissioning and Integrated Test Plan.

During the 2nd Quarter 2013, the contractor continued the submission of contract deliverables, procurement of long lead equipment, and construction activities at the 63rd Street Station.

h. Project Schedule

Construction progress and implementation or risk mitigation measures during the 2nd Quarter 2013, continues to support MTA’s forecasted Revenue Service Date of December 30, 2016 (see Table 1 below).

Table 1: Summary of Critical Dates

	FFGA	Forecast Completion	
		Grantee	PMOC
Begin Construction	January 1, 2007	March 20, 2007A	March 20, 2007A
Construction Complete	December 31, 2013	Sept. 16, 2016	October 2017
Revenue Service	June 30, 2014	December 30, 2016	February 2018

i. Project Budget/Cost

The Current Working Budget for the SAS Phase 1 Project is still \$4,451.000M (exclusive of \$816.614M financing cost). The MTA Board has approved Local Funds totaling \$3,509.000M. Total Federal participation in the SAS Phase 1 Project is \$1,350.693M of which \$1,063.942M has been obligated. See Table 2 below for additional details.

MTA’s Estimate at Completion (EAC) Update #10 and the PMOC’s analysis shows the project can be built within the limits of the Current Working Budget.

Table 2: Project Budget/Cost Table 

	FFGA			FFGA Amend	MTA Current Working Budget (CWB)		Expenditures as of June 30, 2013	
	\$ Millions	% of Total	Obligated (\$ Millions)	TBD	\$ Millions	% of Total	\$ Millions	% of Total
Grand Total Cost:	4,866.614	100	4,572.942		5,267.614	100	2,414.036	45.83
Financing Cost	816.614	16.78			816.614	15.50		
Total Project Cost:	4,050.000	83.22	4,572.942		4,451.00	84.50	2,414.036	45.83
Total Federal:	1,350.693	27.75	1,063.942		1,350.693	24.60	730.216	13.86
Total FTA share:	1,300.000	96.25	990.049		1,300.000	23.68	665.964	12.64
5309 New Starts share	1,300.000	100	990.049		1,300.000	23.68	665.964	12.64
Total FHWA share:	50.693	3.75	73.893		50.693	0.96	64.252	1.22
CMAQ	48.233	95.15	71.433		48.233	0.88	61.792	1.17
Special Highway Appropriation	2.460	4.85	2.460		2.460	0.04	2.460	0.05
Total Local share:	2,699.307	55.47	3,509.000**		**3,509.000	63.92	1,683.820	31.97
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 is \$3,509,000,000.

j. Project Risk

Major issues that have either increased or decreased the risk of project schedule and cost increases during the 2nd Quarter 2013 have been summarized as follows:

Decrease	Increase
<ul style="list-style-type: none"> FTA's approval of MTACC's Technical Memorandum #11, on June 7, 2013 regarding the relocation and redesign of Entrance #1 at the 72nd Street Station generally confirmed adherence to the requirements of the FEIS and allows design to proceed. Procurement of the final construction contract (C5C) reduces the risk of unforeseen cost increases (market risk) and schedule delay through the bid and award processes. On June 20, 2013, the FTA informed the 	

Decrease	Increase
<p>MTACC it is “willing to entertain” a non-availability waiver request for the pad and rubber boot components of the Low-Vibration Track Pedestals. While this is not a guarantee of a waiver, it indicates progress in resolving a potentially significant cost and schedule risk.</p>	

MONTHLY UPDATE

The information contained in the body of this report is limited, in accordance with Oversight Procedure 25, to “inform the FTA of the most critical project occurrences, issues, and next steps, as well as professional opinions and recommendations.” Where a section is included with no text, there are no new “critical project occurrences [or] issues” to report this month.

ELPEP SUMMARY

Status:

The 2nd Quarter 2013 meeting to review MTACC's compliance with ELPEP requirements was held on July 2, 2013. With respect to SAS, the current status of each of the main ELPEP components is summarized as follows:

- **Technical Capacity and Capability (TCC):** The TCC Plan update has been completed. FTA/PMOC review is in progress with comments expected to be returned to MTACC by approximately July 15, 2013. Issuance of PMP Rev. 9 was delayed because of organizational issues. A final review of the update is currently being performed by MTACC's Quality management. Release of PMP Rev. 9 for FTA/PMOC review is anticipated for mid-July 2013.
- **Schedule Management Plan (SMP):** The SMP will require changes in response to results of the MTACC's internal ELPEP audit of project procedures. SAS internal review of the final draft of the audit report is anticipated to be completed by July 12, 2013. If this is achieved, then the final draft report can be issued by July 19, 2013.

The PMOC continues to monitor and verify SAS substantial compliance with the SMP.

- **Cost Management Plan (CMP):** The CMP will require changes in response to results of the MTACC's internal ELPEP audit of project procedures. New proposed cost curves have been completed and were presented to the FTA/PMOC at the June 2013 Monthly Budget and Schedule Meeting. Formal submission will be part of the PMP update process. The PMOC continues to monitor and verify SAS substantial compliance with the CMP.
- **Risk Mitigation Capacity Plan (RMCP) and Risk Management Plan (RMP):** Monthly Risk Review Meetings continue. At the present time, the Project Budget is \$4.451 billion and the Revenue Service Date is December 31, 2016. The risk analysis output based on the data gathered shows a very high level of confidence in completing SAS Phase 1 within the budget. However, the output for the unmitigated schedule contingency drawdown shows that for an 80% confidence level, the Revenue Service Date would move from December 31, 2016 to June 10, 2017. This is more than six months beyond the present plan, but the present plan is also within the range of forecast. Therefore, active mitigation of the most significant risks affecting schedule will benefit the project to ensure that the project finishes as planned.
- **Conformance and Compliance Demonstration:** An update of the ELPEP document is still under consideration and development. FTA has not settled on the timing of the ELPEP update and its relationship with the FFGA amendment.

Observation:

The SAS Project Team has implemented the majority of the principles and requirements embodied in the ELPEP. The procedural changes initiated by the ELPEP have become an integral part of the management of the project. Specific observations with respect to compliance of one or more of these plans are discussed in the appropriate section of this report.

Concerns and Recommendations:

None

1.0 GRANTEE'S CAPABILITIES AND APPROACH

1.1 Technical Capacity and Capability

1.1.1 Organization, Personnel Qualifications and Experience

Status:

During the 2nd Quarter 2013, MTACC has noted difficulty in finding candidates to fill several positions that have become available.

Observation:

Staff turnover requires that senior project management ensure that new staff are thoroughly oriented and trained in applicable MTACC and project-specific policies and procedures. The PMOC has observed several instances where SAS project staff do not appear cognizant of policies and procedures that are directly applicable to their area of responsibility.

Concerns and Recommendations:

The PMOC recommends a formalized orientation process for new employees be developed that ensures their familiarization with all applicable project policies and procedures.

1.1.2 Grantee's Work Approach, Understanding, and Performance Ability

a) Adequacy of Project Management Plan and Project Controls

Status:

Update #9 of the PMP is currently going through MTACC's internal review process. Issuance for PMOC review is anticipated in July 2013.

Observation:

Proposed enhancements to the PMP are being documented via the Candidate Revision process. The SAS PMP and its sub-plans are a comprehensive set of documents which provides an effective process in managing the SAS Project.

Concerns and Recommendations:

None

b) Grantee's Approach to FFGA and other FTA/Federal Requirements

Status:

MTACC continues to utilize the ELPEP and its various sub-plans in management of the FFGA. A collaborative effort with FTA-RII and the MTACC to update the original ELPEP document, dated January 15, 2010, to reflect the current status of the SAS projects' scope, schedule and budget baselines is in progress. Completion of the update is anticipated in the 3rd quarter 2013.

Observation:

MTACC has presented its position with respect to the LVT "booted block assembly" and its conformance with "Buy America" provisions. MTACC's internal analysis concluded this to be a sub-component and thereby acceptable. FTA provided its recommended approach to resolving the issue on June 20, 2013.

MTACC has been diligent in informing contractors of “Buy America” requirements

Concerns and Recommendations:

None

c) Grantee’s Approach to Force Account Plan

Status:

Through the 1st Quarter 2013, \$5,074,350 of the \$43,000,000 budget has been expended. The majority of the expenditure is still associated with the 63rd Street/Lexington Avenue Station Restoration Contract (C3).

Observation:

The Force Account requirements are documented in the SAS Force Account Plan. The plan gives a description and a cost estimate of the NYCT services required for the design of the track and signal elements of the system and to support construction activities for each individual contract. The Force Account budget appears to be adequate and has not changed in Revision 10 of the SAS Cost Estimate.

Concerns and Recommendations:

None

d) Grantee’s Approach to Safety and Security Plan

Status:

Each construction contractor continued implementation of its Safety, Security and Health Programs during the 2nd quarter 2013. First aid, recordable and lost time incidents are reported and corrective action taken to address deficiencies and negative trends.

The SAS Project Safety Team (CCM and OCIP representatives) continued its oversight of the construction contractors Safety, Security and Health Programs by performing daily/weekly inspection of work areas, investigation of incidents, and performing quarterly safety audits.

The Monthly Project Wide Safety Meeting continues to be held the first Friday of each month. Lessons learned from incidents/accidents are being shared such that the total project can benefit.

Observation:

Section 4 of the PMP includes the required project Health and Safety Plan (HASP) that describes the responsibility and protocols to maintain a safe environment throughout the construction of the SAS Project. The Monthly Project Wide Safety Meeting is a good forum in providing “Lessons Learned” in order to promote safe practices across the entire project.

Section 4 of the PMP also outlines the Project Safety and Security Management Plan (SSMP) as required by 49 CFR Part 659, which includes the Safety and Security Certification Plan (SSCP) and the Systems Safety and Reliability Assurance Program Plan (SSRA). MTACC is in the process of updating the SAS SSMP to more completely identify and define the required activities during the construction phase of the project. Select CM staff has received training on their roles in supporting this effort.

Concerns and Recommendations:

None

e) Grantee's Approach to Asset Management

Status:

Asset Management – Identification and control of project assets will be coordinated between the Track, Power, Signals and Communications Systems Contractor (C6), Station Contractors (C2B, C4C and C5C) and NYCT's Department of Subways.

Observation:

The SAS project team has developed a project asset inventory list which will be integrated into the NYCT property management system.

Concerns and Recommendations:

None

f) Grantee's Approach to Community Relations

Status:

During the 2nd Quarter 2013 MTA began renovation of an existing storefront building for their "official" Second Avenue Subway Community Information Center at 1628 2nd Ave., between E. 84th and E.85th Streets along the C5B construction site. The opening is scheduled for July 23, 2013.

On May 23, 2013, the SAS Project Team updated Community Board Eight on the status of construction. Community outreach continued via the distribution of electronic and printed construction updates and informational material.

Observation:

The MTACC's approach to community relations is set forth in detail in Section 12 of its Project Management Plan for SAS Phase 1. This plan is focused on the pre-construction activities generally involving dissemination of project-related information to the affected community and public hearings to support the NEPA process. Construction phase activities are described in Section 12.3.3 of the PMP as "appropriate outreach activities."

Conclusions and Recommendations:

MTACC's approach to Community Outreach has been successful in addressing and mitigating the adverse impacts of the construction process on the adjacent community. The PMOC notes that the overall goals and methodology involved in this effort have not been formally documented. As such, the PMOC recommends MTACC update its Project Management Plan (Revision 9) with a more comprehensive plan for construction phase community relations going forward, including an overall execution plan and proposed scope of activities. [Ref: SAS-22-Jun 12].

1.1.3 Grantee's Understanding of Federal Requirements and Local Funding Process

a) Federal Requirements

During the 2nd quarter 2013, MTA continued its grant management process by issuing monthly financial reports and updating the Transportation Electronic Award Management System (TEAM) to reflect disbursements from the active grants.

b) Uniform Property Acquisition and Relocation Act of 1970

Real estate acquisition and tenant relocation has been completed in accordance with the approved SAS Real Estate Acquisition Management Plan and Relocation Plan. These plans address Title 49 CFR Part 24, which implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and FTA real estate requirements 5010.1C.

c) Local Funding Agreements

On March 26, 2012, it was announced that the New York State Legislature has agreed to fully fund the Metropolitan Transportation Authority's five-year capital budget, allowing several major projects, including the Second Avenue subway to proceed as planned. No further updates were reported this period.

1.2 Project Controls

1.2.1 Scope Definition and Control

Status:

The scope of the Phase 1 SAS Project is still defined in ten construction packages (contracts). During the 2nd Quarter 2013, there has been no material change in the scope of the SAS Project. Selected work elements have been being transferred between construction packages in order to mitigate delays and minimize additional cost to the project.

Observation:

Transfer of work from one contract to another has been an effective means of mitigating schedule delays and consequential subsequent cost increases. The SAS Project Team is effectively in managing this activity. The scope of the SAS Project is still defined by the FEIS, ROD and the FFGA. NYCT is providing support for rail systems engineering, installation and overall operating systems inspection and testing.

Concerns and Recommendations:

None

1.2.2 Quality

Status:

During the 2nd Quarter 2013 the Second Avenue Subway Quality Management team continued holding Quality Meetings and Quarterly Quality Oversight of the Contractor with CCM, MTACC and PMOC participation. They participated in the job progress meetings, monitored quality matters in the field for each construction contract, reviewed and provided comments for Quality Work Plans, and participated in Preparatory Phase Sessions for numerous construction processes.

Observation:

Implementation of the Quality Management System as defined in the contract specification is ongoing. Quality control activities are being performed by the contractors per their Contractor's Quality Plans (CQP). The MTACC's SAS Quality Managers and Project Quality Managers are performing quality assurance activities. The PMOC attends Monthly Quality Management Meetings and Quarterly Quality Oversight on each SAS contract. The major issues noted by the PMOC during the second quarter of 2013 were delinquent submittals of Inspection Daily Reports on the C2A and C2B contracts and out of specification conditions for concrete on all contracts, especially on C4B. Inspection Daily Reports on C2A and C2B were being submitted in a timely manner but lapsed again. The new C2A/C2B Contractor's Manager is providing additional support so that this condition is rectified and does not recur. The SAS Deputy Project Executive directed that for every SAS contract, each week one Nonconformance Report (NCR) be generated for all instances where air entrainment, slump, and/or time to place concrete were out of specification during that week. As a result, each contractor, as shown below, is complying with this directive. The PMOC will meet with the SAS Quality staff in July 2013 to recommend that a consistent system be established for generating Nonconformance Reports and Inspection Daily Reports on each SAS contract and for entering them into the CM System.

Contract Package C1	
Status:	<p>There were 40 NCRs written on the C1 contract. 16 of them involved concrete installation involving the following structural elements:</p> <ul style="list-style-type: none">• Invert Slab – seven NCRs• Slurry wall – five NCRs• Concrete Tunnel Liner Arch – four NCRs
Observation:	<p>Of the 40 NCRs written on the C1 contract, two related to the slurry wall are still open. A survey was performed, by the C2B contractor in March 2013 and the results were forwarded to AAJV for review and action. A closure memo was prepared and is under review by the SAS C1 Project Director. These two NCRs are expected to be closed in July 2013.</p> <p>The status of the 16 NCRs involving concrete installation is as follows:</p> <ul style="list-style-type: none">• Invert Slab – None of the seven NCRs are still open• Slurry wall – Two of the five NCRs are open and are expected to be closed in July 2013• Concrete Tunnel Liner Arch – None of the four NCRs are still open
Concerns and Recommendations:	<p>Contract C1 has been Substantially Complete since March 2012. The Contractor has demobilized and has a limited presence on site. The SAS Project Team continues to emphasize the closure of the remaining NCRs and has reduced the number of open NCRs to two. The PMOC recommends that the SAS Project Team close these two NCRs as soon as possible.</p>

Contract Packages C2A and C2B	
Status:	<p>On C2A, through June 30, 2013, a total of 28 NCRs have been issued. 12 have been closed by both the contractor and MTACC, 2 NCRs were voided, and 14 NCRs are still open. In June 2013, four new NCRs were written and none were closed. One of the NCRs written in June was for concrete placement.</p> <p>On C2B, through June 30, 2013, a total of 11 NCRs have been issued. Two have been closed and 9 NCRs are still open. In June 2013, three new NCRs were written and one was closed. None of the NCRs written in June were for concrete placement.</p> <p>In May 2013, both contracts were one month behind in submitting their Daily Inspection Reports. Based on a concern raised by the PMOC, the SAS Quality Manager stressed that the C2A/C2B contractor must submit Inspection Daily Reports within a week of being written. The new C2A/C2B Contractor's Manager provided additional resources to both contracts and at the end of June 2013, Inspection Daily Reports are now one to two weeks behind.</p>
Observation:	<p>On the C2A contract, of the fourteen open NCRs, one is for concrete that was out of specification as reported by the contractor's test lab. This NCR was written on air entrainment and or slump that were out of specification on 13 out of 252 trucks that placed concrete from January 2011 through January 2013. This NCR was written based on a request from the PMOC to document all out of specification conditions encountered during placement of concrete. The Engineer of Record dispositioned all out-of-spec conditions "use-as-is" based on satisfactory test cylinder break results. An additional NCR will be prepared in July 2013 for out of specification conditions encountered from January 2013 through June 2013. Subsequent NCRs will be generated each week per direction of the SAS Program Office.</p> <p>On the C2B contract, of the nine open NCRs, none are for concrete that was out of specification.</p> <p>The PMOC observed that the C2B contractor's Quality Manager was entering back-up data into the CM system along with the Inspection Daily Reports. Although this back-up data must be retained, it does not have to be entered with the Inspection Daily Reports. All other SAS contractors do not include back-up data with their Inspection Daily Reports.</p>
Concerns and Recommendations:	<p>The PMOC is concerned that the C2A contractor's Quality Manager was not documenting out of specification concrete conditions on an NCR and will continue to interface with the SAS C2A Quality Manager to prevent this issue from recurring.</p> <p>The PMOC has noted an improvement in the time that both contracts are</p>

	submitting their Inspection Daily Reports and will continue to monitor the time it takes to submit them.
Contract Package C3	
Status:	Through June 30, 2013 a total of 45 NCRs have been issued. 34 have been closed and 11 NCRs are still open. In June 2013, seven new NCRs were written and one was closed. Six of the NCRs written in June were for concrete placement.
Observation:	Of the eleven open NCRs, eight are for concrete that was out of specification including one involving entrained air entrainment, three pertaining to slump, and four referring to time exceeding the two-hour requirement for placing the concrete.
Concerns and Recommendations:	The SAS Quality Manager has taken the proper action and the PMOC has no concerns.
Contract Package C4B	
Status:	Through June 30, 2013, a total of 72 NCRs have been issued. 27 have been closed and 45 NCRs are still open. In June 2013, 11 new NCRs were written and none were closed. Eight of the NCRs written in June were for concrete placement.
Observation:	Of the 45 open NCRs, 33 are for concrete that was out of specification including 12 involving entrained air entrainment, one pertaining to slump, and 20 referring to time exceeding the two-hour requirement for placing the concrete. The C4B contractor has submitted a waiver to the specification requesting a maximum pour time of 180 minutes.
Concerns and Recommendations:	The PMOC is concerned that this waiver may not be approved since if it is approved, it could set a precedent for other SAS, MTACC, and/or NYCT contracts. If the waiver is not approved, the PMOC recommends that the contractor devise a method that places the concrete within 120 minutes.
Contract Package C5B	
Status:	Through June 30, 2013 a total of 24 NCRs have been issued. 14 have been closed and 10 NCRs are still open. In June 2013, six new NCRs were written and none were closed. Four of the NCRs written in June were for concrete placement.
Observation:	Of the ten open NCRs, seven are for concrete that was out of specification. Since some of the NCRs had multiple issues, the total number of out-of-spec conditions included two involving entrained air entrainment, five pertaining to slump, and three referring to time exceeding the two-hour requirement for placing the concrete. As nonconformances are identified and documented, both the contractor and MTACC address them in an expeditious manner. Concrete placement NCRs must stay open pending results of cylinder breaks.

	It is the PMOC's opinion that the Quality System is functioning properly on this contract at this time.
Concerns and Recommendations:	None at this time.

Concerns and Recommendations:

Refer to previous section.

1.2.3 Project Schedule

Status:

A summary of project schedule information is as follows:

	FFGA	Forecast Completion	
		Grantee	PMOC
Begin Construction	January 1, 2007	March 20, 2007A	March 20, 2007A
Construction Complete	December 31, 2013	Sept. 16, 2016	October 2017
Revenue Service	June 30, 2014	December 30, 2016	February 2018

MTACC established December 30, 2016 as its target RSD and bases its schedule and schedule contingency reporting on this target. FTA/ELPEP used February 28, 2018 as its target RSD with the condition that a minimum 240 CD of contingency be maintained against this target through September 30, 2016. To date, the MTACC criteria has been the more stringent and has therefore been the basis of routine schedule and schedule contingency reporting.

Observation:

The Revenue Service Date (RSD), as forecast by Update #80 of the MTACC's Integrated Project Schedule (IPS), has remained December 30, 2016. For the 2nd Quarter 2013, the calculated completion of Phase 1 construction and testing has been revised to September 16, 2016, with 109 calendar days (CD) of schedule contingency when measured against the MTACC's target RSD of December 30, 2016.

This update period, some problems were identified with the integration of contractors' schedules into the IPS and the accuracy and reliability of the resulting summaries within the IPS. MTACC is aware of these issues and is devoting the necessary effort to resolve and correct these issues for the next update of the IPS.

Concerns and Recommendations:

The SAS Project Team has demonstrated its capability and capacity to actively manage the project schedule. Staff turnover and staff capability have been identified as recent concerns. MTACC is aggressively pursuing qualified staff replacements.

1.2.4 Project Budget and Cost

Status:

Total project cost in the approved FFGA (\$4,866,614,000) and Current Working Budget (CWB) are allocated into the Standard Cost Categories (SCC) as shown below in Table 1-1.

Table 1-1: Standard Cost Categories

Std. Cost Category (SCC)	Description	FFGA	MTA's Current Working Budget (March 31, 2013)
10	Guideway & Track Elements	\$612,404,000	\$638,107,000
20	Stations, Stops, Terminals, Intermodal	\$1,092,836,000	\$1,294,629,000
30	Support Facilities	0	\$0
40	Site Work & Special Conditions	\$276,229,000	\$534,865,000
50	Systems	\$322,707,000	\$265,792,000
60	ROW, Land, Existing Improvements	\$240,960,000	\$281,500,000*
70	Vehicles	\$152,999,000	0**
80	Professional Services	\$796,311,000	\$973,000,000
90	Unallocated Contingency	\$555,554,000	\$463,107,000
Subtotal		\$4,050,000,000	\$4,451,000,000
Financing Cost		\$816,614,000	\$816,614,000
Total Project		\$4,866,614,000	\$5,267,614,000


* Includes \$47M Cost-to-Cure

** FTA Region II has accepted MTACC/NYCT's assertion that recent services reductions will provide ample spare vehicles for the SAS Phase 1 Project.

Table 1-2 lists the associated grants in the Transportation Electronic Award Management (TEAM) System with respective appropriated, obligated, and disbursed amounts as of March 31, 2012. No additional Federal Funds were obligated to the MTA for the SAS Phase 1 Project during the 1st Quarter 2013. Grant amendment NY-03-0408-09 in the amount of \$186,566,000 is pending FTA approval. This amount represents the full FFY 2012 allocation published in the Federal Register on January 11, 2012. Total Federal Funds obligated as of June 30, 2013 is \$1,063,942,000.

Table 1-2: Appropriated and Obligated Funds

Grant Number	Amount (\$)	Obligated (\$)	Disbursement (\$) thru June 30, 2013
NY-03-0397	\$4,980,026	\$4,980,026	\$4,980,026
NY-03-0408	\$1,967,165	\$1,967,165	\$1,967,165
NY-03-0408-01	\$1,968,358	\$1,968,358	\$1,968,358
NY-03-0408-02	\$24,502,500	\$24,502,500	\$24,502,500
NY-03-0408-03	0	0	0
NY-03-0408-04	0	0	0
NY-03-0408-05	\$167,810,300	\$167,810,300	\$167,810,300
NY-03-0408-06	\$274,920,030	\$274,920,030	\$274,920,030
NY-03-0408-07	\$237,849,000	\$237,849,000	\$105,985,116
NY-03-0408-08	\$197,182,000	\$197,182,000	0
NY-03-0408-09	\$186,566,000	Pending	0
NY-17-X001-00	\$2,459,821	\$2,459,821	\$2,459,821
NY-36-001-00*	\$78,870,000	\$78,870,000	\$78,870,000
NY-95-X009-00	\$25,633,000	\$25,633,000	\$25,633,000
NY-95-X015-00	\$45,800,000	\$45,800,000	\$41,120,000
Total	\$1,250,508,200.00	\$1,063,942,200.00	\$730,216,316

 * Denotes American Recovery and Reinvestment Act (ARRA) funds.

A total of \$2,414,036,478 has been expended on the project through June 30, 2013, of which \$443,515,336 has been spent on design and \$1,368,409,153 on construction (MTACC's June 2013 Cost and Schedule Summary Input).

Observation:

Local funds totaling \$1,683,820,162 have been spent as of June 30, 2013.

Concerns and Recommendations:

None

1.2.5 Project Risk Monitoring and Mitigation

Status:

The SAS Project Team employs a variety of risk management techniques to identify, quantify and manage risks that may impact the project cost or schedule. A full-time Risk Manager supervises implementation of specific risk monitoring and mitigation techniques as prescribed by Section 6.0 of the PMP and the SAS Risk Management Plan.

Monthly reports documenting project risk management activities are published. The Risk Register will be updated early in the 3rd Quarter of 2103.

Observation:

The SAS risk management process has been instrumental in the development of strategies and techniques to manage a variety of retained risks including inter-contract interfaces, safety and security certification and submittal processing, among others. To date, the project team has successfully managed the well-known “macro” risks such as procurement delay, site access, community outreach and geotechnical uncertainty.

Concerns and Recommendations:

The PMOC recommends the SAS Project Management Team refresh and refocus its risk management effort to a more focused and finite level to identify those “micro” technical and organizational issues that could delay the RSD. Potential issues in this category may include availability of permanent power, required NYC DOB or other third party acceptance of completed work, and management of specific, schedule-critical handoffs between contracts.

1.2.6 Project Safety and Security

Status:

Safety – The OSHA Lost Time Accident Rate and Recordable Accident Rate from the start of construction until May 31, 2013 are 2.05 and 5.55, respectively. The Lost Time Accident rate is slightly above the national average of 2.0 and the Recordable Accident Rate is significantly above the national average of 3.5. The cumulative construction time worked since the project inception is 6,049,384 hours. Total lost time injuries since project inception is 62 and other recordable injuries are 106. The total number of recordable injuries is 168 (sum of the lost time injuries and the other recordable injuries).

Security – Implementation of the Contractor’s Site Security Plans are ongoing. During the 2nd Quarter 2013, no security incidents were noted.

Observation:

None.

Concerns and Recommendations:

None

1.3 FTA Compliance

Status:

On September 27, 2012, MTACC transmitted SAS PMP Revision 8.1, which incorporates all FTA/PMOC comments to date. A log of “Candidate Revisions” for PMP Revision 9, is being maintained.

Observation:

The SAS Project Team has substantially complied with ELPEP and its associated sub-plans throughout the 2nd Quarter 2013. Any non-compliance issues are specifically discussed in Section 4.4 (Compliance With Schedule Management Plan), Section 5.4 (Project Contingency) and Section 6.3 (Risk Management Status) of this report.

On April 1, 2013, SAS submitted its TAC Paper to the FTA demonstrating that its redesign of the 72nd Street Station, Entrance #1 complied with the SAS EIS. FTA has approved this submittal.

Concerns and Recommendations:

None.

1.3.1 FTA Milestones Achieved

The last key FTA milestone achieved was entry into the Full Funding Grant Agreement on November 19, 2007.

The ELPEP Hold Point “90% Project Bid/50% Construction Complete” was achieved in March 2013. The next ELPEP Hold Point “100% Project Bid/85% Construction Complete” is currently forecast to be achieved in the 3rd Quarter 2014.

1.3.2 Readiness for Revenue Operations

Status:

No change this period.

2.0 PROJECT SCOPE

2.1 Status & Quality: Design/Procurement/Construction

2.1.1 Engineering and Design

Status:

The design phase of SAS Phase 1 was completed in late November 2010. The redesign of Entrance 1 at the 72nd Street Station is underway. This redesign was deemed necessary due to irreconcilable differences with adjacent building owners regarding utility relocations and access.

Observation:

The primary role of the design team currently includes:

- Construction Administration, generally including shop drawing review, responding to RFIs, providing design clarifications where needed and technical support during construction package bidding.
- Detailing and documentation of design changes as may be required.
- Supporting AWO evaluation and resolution.
- Entrance 1 redesign at 72nd Street Station. This work should complete in December 2013.

Concerns and Recommendations:

None

2.1.2 Procurement

Status:

On June 12, 2013, The MTACC awarded a Contract C-26012 – 86th Street Station Finishes, Mechanical, Electrical, Plumbing Systems, Ancillary Buildings and Entrances to 86th Street Constructors, JV, for the lump sum price of \$208,376,000. 86th Street Constructors is a joint venture of Schiavone Construction Co. LLC and John P. Picone, Incorporated.

This is the tenth and final construction contract to be awarded for Phase 1 of the Second Avenue Subway.

Observations and Analysis:

None.

Concerns and Recommendations:

None.

2.1.3 Construction

Status:

All 10 construction contracts for the SAS Phase 1 Project have been awarded. No significant delays or problems were encountered during this reporting period that would jeopardize the achievement of the RSD.

- Observations:

Contract C-26002 (C1) – TBM tunnels from 92nd Street to 63rd Street

- Substantial Completion was achieved on March 30, 2012 and contract closeout is ongoing.
- Final acceptance is expected in July 2013.

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

- Overall contract is 97.0% complete.
- Ancillary 2 concrete inverts 27A and 27B have been completed.
- Main Station (95th thru 97th) concrete inverts numbers 18 thru 25 have been completed
- Main Station (South of 95th Street) nine concrete inverts 50 feet each has been placed.
- Entrance #1 mass excavation approximately 75.0% complete.
- Entrance #2 mass excavation approximately 75.0% complete.
- Ancillary #1 mass excavation approximately 98.0% complete.
- Ancillary #2 mass excavation approximately 98.0% complete.

Contract C-26010 (C2B) 96th Street Station Concrete, MEP/Finishes, Utilities, and Restoration

- Overall the contract is approximately 17.10% complete.
- Existing Tunnel (99th thru 105th Streets)
 - Steel columns and roof beam repair is 72.0% complete
 - Benches are 86.0% complete
 - FRE pipes S1/S2 are 95.0% complete
- In progress work includes
 - Wall pours
 - South tube inverts
 - Mezzanine decking, rebar installation and formwork

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

- Surveying of the Deformation Monitoring Points (DMPs) is ongoing and will continue throughout the project.
- MPT
 - The contractor is using a “soft” MPT arrangement at Entrance #1 for easy adjustment for the utility installation.
- Quality
 - There was a G4 mockup review of the trackside wall cladding on June 12, 2013. The PMOC observed during an earlier site visit (June 11) that the specified 2” spacing of

the tiles was excessive and not providing the desired aesthetic appearance. MTACC has advised the PMOC that the architect has revised the tile spacing requirements.

- Additional mockups have been erected on the G4 (lower platform) for the platform lighting, platform side wall cladding, and elliptical stainless steel column cladding.
- Schedule
- During the 2nd Quarter 2013 MTACC and the contractor continued mitigating the schedule delay for Milestone #3 (turnover of Communication Rooms to C6 contractor). Through June 2013 the revised date for partial turnover of Communication Rooms is July 15, 2013. This is not the complete milestone but will allow the C6 contractor to proceed with minimal delay. The Station Service Center has been removed from the required rooms to be turned over to the C6 contractor.
 - Completed mezzanine concrete floor placement.
 - Continuing with CMU wall erection.
 - Continued with intumescent paint to steel in the Area 5.
- Entrance #1
 - Completed Basement wall demolition.
 - Completed Support of Excavation (SOE), exterior & interior pier foundations and placement of pier footings.
 - Continued with street utility work.
- Ancillary #1
 - At Ancillary #1 the building owner's contractors completed removing the abandoned tanks and oil separator and resumed construction of the air and pipe plenums.
 - Completed placement of concrete protection bases around the new steel columns and continued to install replacement ceiling sheeting and floor infills.
- Platforms
 - Completed reinstallation of service carrier frame on the active track at the G4 level. Previously a section of the frames were installed too low and hit a train.
 - Water leaks along the Upper (G4) Platform are preventing continuation of intumescent painting in that area.
 - Continued with conduit installation at the G3 & G4 platforms.
 - Continued with water mist on the G3 platform.
 - Began preparations to begin rubbing board and platform floor tiles.
 - Installing platform to platform stairs.
- Fan Plants
 - Received the fans for the East & West Fan Rooms.
 - Continued with Condensate Water return (CER) piping in West Fan Room.
 - Continued duct, pipe and conduit in East Fan Room.

- Contract C6 Coordination
 - The C6 contractor continued to work in the station on the G3 & G4 platforms on the inactive track, removing existing concrete trackbed, track supports and track and replacing with new concrete trackbed, track pad with the Low Vibration Track “booted block” pedestal, and replacing the track.

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

- Rebar installation and permanent concrete pours is ongoing in the Main Cavern. Sixty-seven wall panels and 7 arch pours have been completed.
- South Crossover wall panel place is in progress.
- G4 Tunnel – Arch completed
- G3S1 Cavern north and south end walls have been completed. Arch and wall rebar installation and concrete place is in progress.
- Stub Cavern permanent concrete placement of arch is ongoing.
- Ancillary #1 walls and arch concrete placement was completed.
- Ancillary #2 and Entrance #2 drifts 2 and 3 walls/arches were completed. Drift 4 is in progress with completion planned for late July 2013.
- Entrance #3 drift 6 wall and arch completed.
- Building remediation ongoing at 1405 2nd Ave. and 259 East 71st Street.

Contract C-26011 (C4C) 72nd Street Station Excavation, Utility Relocation and Road Decking

- Quality Kick Off: Judlau’s Project Quality Manager presented 29 slides of how Judlau plans to implement their Quality System. The presentation consisted of the benefits of the Contractor’s Quality Program and the specifics of the 19 elements of the plan and questions & answers throughout the presentation
- Job Progress Meeting: The third Job Progress Meeting was held, on site construction has not begun; Judlau reported that most sub-contractors have been selected and approved and shop drawings are being developed and submitted.

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

- Substantial Completion was achieved on November 16, 2011.
- Final close out was achieved on June 28, 2013 via issuance of the final payment certificate.
- Contract C-26008 (C5B): 86th Street Station Cavern & Heavy Civil
- Work continued with 2 shifts. During this Quarter the 3rd shift was eliminated due to a lack of production.
- All surface operations end at 10:00PM daily.
- MPT
 - Bi-Monthly meetings with the NYPD are ongoing.

- A permit request sent to NYDOT for approval of an off-peak lane closure between 78th & 79th Streets.
- MTACC has issued a Request for Proposal for Phase I of the project-wide changes to requirements for the Traffic Management System (TMS) equipment.
- Quality
 - STJV is in the process of submitting inspection reports for the smoothing shotcrete layer for the top heading in the cavern.
 - Wisko (subcontractor) continues to visit the site for inspections of the smoothing layer of shotcrete.
- Schedule

MTACC reported that work at Entrance #2 has mitigated 10 days of the approximate 95 day delay due to the issues with Yorkshire Towers. The hand excavation at the SOE wall due to the Yorkshire street shed continues. Entrance #1 is continuing on schedule. The underpinning at Entrance #1 will be removed July 26, 2013. The North Shaft area delay is approximately 25 days but can begin to mitigate the delay with the start on trackbed drainage. The South Open Cut is approximately at -21 days but can begin mitigation if they start the trackbed invert ahead of the July 15 scheduled start date. Blasting at Entrance #2 will tentatively start September 1, 2013.
- Main Cavern
 - Continued blasting for the trenches, laying drainage pipe and placing concrete encasement at the south end of the cavern.
 - Began forming and concrete placement of sump areas at the south end of the cavern.
 - Planning for beginning some waterproofing and mud slab in the cavern.
- North Shaft
 - Miscellaneous blasting continues at the north end of the cavern. All muck removal now being done at the north shaft.
- South Open Cut Area
 - Dumping at the south muck station has stopped and is continuing at the north. The contractor is planning to shut down the south mucking and will begin dismantling the bucket system in July 2013. Only the gantry hoist will remain.
- Ancillary #2
 - Completed blasting in the open cut shaft.
- Entrance #1
 - Completed the load transfer.
 - Continuing encasement of existing concrete columns.
 - Completed mud slab and continued waterproofing in the Access Tunnel.
- Entrance #2

- Continued with hand excavation at the SOE wall on north side of E. 86th St. Rock excavation began in the north driveway of the Yorkshire Towers on Monday, June 24, 2013. Blasting is tentatively scheduled to begin September 1, 2013.
- Rock Excavation (for the week ending June 30, 2013)
 - As reported to the PMOC by the MTACC C-26008 Project Office
 - Total rock (estimated) for complete project – 154,623 BCY
 - Total rock excavated to date – 140,000 BCY (90.5%)

The remaining rock excavation is at the delayed work at Entrance #2.

Contract C-26012 (5C) – 86th Street Station Finishes, Mechanical, Electrical, Plumbing Systems, Ancillary Buildings and Entrances

- The contract was awarded to 86th St. Constructors, Joint Venture (Schiavone/Picone Joint Venture) on June 12, 2013.
- The Project Office is tentatively scheduling the Project Kick-Off Meeting for the week of July 8, 2013.

Contract C-26009 (C6): Systems – Track, Power, Signals and Communications

- Contractor continued coordination with both 63rd and 96th Street Systems Integration Managers. Volume I (Overall Testing Plan) and Volume II (Interface Control Plan) have been approved. Volume III (System Test Plan) was submitted and the contractor is awaiting MTACC's comments.
- Signal Work: Equipment order was released to Alstom and the first set of Track Cases will be delivered July 2018.
- Track Work: Major procurements, except the 3rd Rail and U69 Guard Rail, are procured. Insulated Joint work is currently in progress at 63rd Street (1.5 years ahead of schedule per the contractor) and is expect to complete this work by the end of August 2013.
- Traction Power: 2000/500 MCM cable has been delivered. Balfour AWO #10, Transformer change, was negotiated. However, this AWO will not be accepted by CSJV until the DBE attainment for this AWO is waived. Transdyne SCADA Equipment is progressing and is due by the end of 2013.
- Communication Work: The 63rd Street Station Communication Rooms are scheduled to be turned over to CSJV on July 15, 2013.
- MTACC approval of key contractor personnel is ongoing.

Concerns and Recommendations:

- The SAS Project Team continues to identify, prioritize and address construction problems which have the potential to delay the project. There are no new concerns or recommendations at this time.

2.1.4 Force Account (FA) Contracts

Status:

As of June 30, 2013, force account expenditures are \$5,074,350 of the \$43,000,000 budget. The majority of the expenditure is in support of the 63rd Street/Lexington Avenue Station Restoration Contract (C3).

Observation:

Force account labor is being provided by NYCT. The principal source of force account expenditures are for general orders, work trains, and flagging support for the modification of the 63rd Street/Lexington Avenue Station.

Concerns and Recommendation:

None

2.1.5 Operational Readiness

Status:

NYCT has developed a Concept of Operations Plan for the SAS Project. NYCT will validate SAS Phase 1 readiness during Pre-Revenue Service Operations Training and Testing scheduled from June 15, 2016 to October 25, 2016.

Observation:

The IPS will be updated to reflect any adjustments or changes in pre revenue service activities.

Concerns and Recommendation:

None

2.2 Third-Party Agreement

Status:

During the 2nd Quarter 2013, the SAS Project Team continued its Interagency Coordination as defined in Section 12 of the SAS PMP. MTACC, PB/CCM and contractors meet with Con Edison and ECS representatives bi-weekly to discuss and resolve utility related issues. Coordination with Verizon, DEP, NYCDOT, and NYC Fire Department is ongoing.

Observation:

MTACC/NYCT has entered into cooperative and force account agreements as needed with other agencies and utility providers to perform construction work for the Project. The current working budget for third-party agreements is \$76,768,950. As of June 30, 2013 reimbursements totaling \$42,488,749 have been made. It is anticipated that SAS Cost Estimate Revision No. 10 will increase the budget to \$90,000,000.

Concerns and Recommendation:

None

2.3 Contract Packages and Delivery Methods

Status:

Phase 1 of the Second Avenue Subway is being delivered via ten separate construction packages. Each construction contract package utilizes the design-bid-build process based upon a fixed price construction contract. Competitive procurements are based on NYCT standard procedures. There was no change to the procurement or delivery method for any of the construction packages during the 2nd Quarter of 2013.

Table 2-1 below shows specific procurement procedures for each open construction contract package and its current status.

Observation:

MTACC awarded Contract C-26012 (C5C) - 86th Street Station: construction of the ancillary facilities, station finishes and MEP equipment to 86th Street Constructors, JV on June 12, 2013. This is the final construction contract that will be awarded as a part of Phase 1 of the Second Avenue Subway. No further procurements are anticipated.

Concerns and Recommendations:

None

2.4 Vehicles

Status:

No change. No additional vehicles will be procured for the SAS Phase 1 Project.

2.5 Property Acquisition and Real Estate

Status:

Real estate acquisition and tenant relocation was performed in accordance with the approved SAS Real Estate Acquisition Management Plan and Relocation Plan. These plans address Title 49 CFR Part 24, which implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended and FTA real estate requirements 5010.1C.

All real estate acquisitions required for the construction of SAS Phase 1 have been completed.

Observation:

Acquisition of easements associated with the revised design of Entrance #1 at the 72nd Street Station are underway.

Conclusions and Recommendations:

None at this time.

2.6 Community Relations

Status:

On June 3rd 2013, it was announced that the SAS Community Outreach Program has been selected to receive a Silver Award by the American Council of Engineering Companies (ACEC) of New York. This program includes Public Workshops, Construction Advisory Committees, monthly newsletters, community underground tours, a Community Information Center, which is

currently under construction. MTACC also launched the Good Neighbor Initiative, which addresses a broad range of environmental enhancements such as construction site cleanliness and maintenance, fence wrapping, retail and way-finding signage, sidewalk width, and lighting issues.

The SAS Community Outreach Program has been instrumental in mitigating the noise, vibration and air quality impacts in the area of the 72nd Street and 86th Street Stations, as well as traffic congestion, pedestrian safety, noise, dust and smoke issues throughout the construction areas. The award recognizes the creativity of the community outreach team, as well as the participation of residents and businesses in finding ways to mitigate construction impacts.

Observation:

MTACC has expended a significant amount of effort in developing and maintaining the Community Outreach Program, which has generally been effective in facilitating the resolution of adverse construction impacts and communicating with community stakeholder groups.

Conclusions and Recommendations:

The PMOC has previously recommended that the community relations effort be more completely integrated into the mainstream of project scope, budget and risk management activities to support the goals of cost-effective and transparent decision making and the related goals of the ELPEP. This concern will be addressed as part of Revision 9 to the PMP. [Ref: SAS-26-Jun 12].

3.0 PROJECT MANAGEMENT PLAN AND SUB-PLANS

3.1 Project Management Plan

Status:

- The SAS Project Management Team is in the process of updating the Project Management Plan. The new revision will be designated as PMP Revision 9 and should be available for review in the 3rd Quarter of 2013.

Observation:

- The project has progressed to a point that now involves certain activities and processes not addressed in detail by previous revisions of the PMP. The updated PMP should include these activities and processes which include but are not limited to:
 - Construction Phase Community Outreach
 - Contract closeout and interface management
 - Startup and turnover

Concerns and Recommendations:

- “Candidate Revisions” are being reviewed and the specific means by which they will be addressed identified. Candidate Revisions are scheduled to be fully incorporated in the PMP draft revision by 3rd Quarter 2013.

3.2 PMP Sub Plans

Status:

As part of the ongoing PMP update, any revisions in the PMP which have a “ripple impact” to the PMP Sub Plans will require updating.

Observations:

SAS Sub-Plan documents consist of: Project Quality Manual, Quality Assurance Plan, Risk Management Plan, Design Criteria Manual, Cost Management Plan, Schedule Management Plan, Project Design Quality Manual, Real Estate Acquisition Plan, Real Estate Acquisition Management Plan, Contingency Management Plan, Safety and Security Management Plan and Quality Implementation Procedures.

Concerns and Recommendations:

Any non-compliance issues are specifically discussed in Section 4.4 (Schedule), Section 5.4 (Cost Contingency) and Section 6.3 (Risk Management Status) of this report.

3.3 Project Procedures

Status:

MTACC is currently conducting an audit of 21 of the total of 79 project procedures that are referenced by the SAS PMP or its sub-plans (particularly the CMP and SMP) and the ELPEP.

Observations:

Results of this audit should be available by July 2013. This audit may initiate additional revisions to the PMP and/or its major sub-plans.

Concerns and Recommendations:

None.

4.0 PROJECT SCHEDULE STATUS

4.1 Integrated Project Schedule

Status:

The Integrated Project Schedule (IPS) is a management level schedule that integrates all ten construction packages along with design, procurement, startup and other support activities. IPS Update #83 was received on July 5, 2013 and is based on a Data Date of June 1, 2013. This update contained “.PDF” schedule reports for all remaining work, the critical/longest path, variance tabulation between Updates # 82 and 83; summary schedule and the “.XER” schedule file for the IPS. The IPS forecasts the completion of all construction and NYCT Pre-Revenue Training & Testing activities by September 16, 2016, with approximately 109 calendar days (CD) or 78 work days (WD) of contingency when measured against MTACC’s target Revenue Service Date (RSD) of December 30, 2016.

Table 4-1: Summary of Schedule Dates

	FFGA	Forecast Completion	
		Grantee	PMOC
Begin Construction	January 1, 2007	March 20, 2007A	March 20, 2007A
Construction Complete	December 31, 2013	Sept. 16, 2016	October 2017
Revenue Service	June 30, 2014	December 30, 2016	February 2018

Table 4-2 provides a tabulation of schedule performance and current completion status for each construction contract.

Table 4-2: Summary Schedule Performance by Construction Package

Pkg.	Award Date	Contract S/C	% Complete			Upd. #80 Forecast S/C	Upd. #83 Forecast S/C	Schedule Duration (CD)	Qtr. Change (CD)
			Contract Time	Payment	Δ Time v. Money				
C1	3/20/07	3/20/12	100%	97.0%	3.0%	3/20/12A	3/20/12A	609	0
C2A	5/28/09	4/17/13	105%	96.5%	8.7%	7/17/13	9/25/13	161	70
C2B	6/22/12	11/25/15	30%	16.3%	13.5%	12/22/15	1/1/16	37	10
C3	1/13/11	5/13/14	74%	50.3%	23.6%	12/3/14	1/15/15	247	43
C4B	10/1/10	12/3/13	87%	83.0%	3.5%	2/5/14	12/30/13	27	-37
C4C	2/14/13	11/13/15	14%	1.0%	12.6%	11/13/15	11/11/15	-2	-2
C5A	7/9/09	11/16/11	100%	100.0%	0.0%	11/16/11A	11/16/11A	313	0
C5B	8/4/11	9/4/14	62%	54.9%	6.9%	9/18/14	9/25/14	21	7
C5C	5/25/16	5/25/16	0%	0.0%	0.0%	5/16/16	5/25/16	0	9

C6	1/18/12	8/18/16	32%	8.1%	23.5%	8/16/16	7/29/16	-20	-18
<p>1. "Future" contracts use MTACC estimated dates based upon preliminary schedules.</p> <p>2. Quarterly Change reflects schedule gain/loss over most recent calendar quarter. Negative sign denotes time gain and positive sign denotes time loss.</p> <p>3. Schedule Duration reflects schedule gain/loss based on adjusted contract duration. Negative sign denotes time gain and positive sign denotes time loss.</p>									

Observations and Analysis:

The 90 Day Preliminary Schedule for Contract C-26011, 72nd St Station MEP & Finishes, was submitted and accepted. The detailed baseline schedule was received and several working sessions were held to review the schedule. The Baseline Schedule was approved for “logic” on June 3, 2013. A re-submittal for incorporation of cost, resources, and DCB items is still required.

The Notice of Award for Construction Package Contract C-26012, 86th St Station MEP & Finishes was given on June 12, 2013. IPS Update #84 will be updated to reflect this date.

NYCT Department of Subways formally approved the proposed duration of Integrated Testing for Traction Power at the 72nd, 86th and 96th Street Stations this period. Traction power testing at the 86th Street Station (Activity C6TC 215) is a critical path activity. Consequently the overall construction and testing period was reduced by 14 WD.

MTACC has noted that the level of schedule detail within the IPS for communications work will be enhanced for several reporting periods. To date, this enhancement has not occurred.

MTACC continued evaluating the C6 Contractor’s proposal for potential schedule mitigation. This effort is expected to continue for several months.

Table 4-2 calculates schedule slippage for the 2nd Quarter of 2013 and time overrun/underrun for each contract. It also compares the percentage contract time elapsed to date and the estimated percentage of work complete based upon payments to the contractor. These metrics result in the following observations:

- Maximum schedule slippage during the 2nd Quarter of 2013 was experienced by Contract C2A, which is forecasting Substantial Completion to be approximately 2 months late.
- Contract 3 demonstrates the maximum variance between elapsed contract time and work completed of 23.6%. Consistent with this metric, the Contract C3 forecast Substantial Completion date was delayed by 43 CD this Quarter.
- Contract C2B, C4C and C6 exhibit a large variance between percentage of work completed and the percentage of contract time elapsed to date. This variance is the result of access restraints from predecessor contracts and was anticipated based upon the overall structure of the IPS.

Milestone Summary: A tabulation of current schedule performance against contractual milestones is presented in the following table.

Table 4-3: Schedule Milestone Performance

Pkg	MS	Description	Dates			Affected Pkg.	Variance (CD)		Sch. Float
			Adjusted (2)	Upd. #82 (3)	Upd. #83 (4)		Contract = (2) - (4)	Month = (3) - (4)	
C2A	#1	96 th Tun'1 Exc, Inv. 97-99, Anc. #2	07/15/13	07/15/13	07/29/13	C2B	-14	-14	89
C2A	#2	96 th Tun'1 Inv. 92-95, Anc. #1, Ent #1& #2	07/15/13	09/13/13	09/24/13	C2B	-71	-11	90
C2A	SS	Completion of all remaining work – 95 th to 97 th Streets including Entrance #3.	07/15/13	09/13/13	09/24/13	C2B	-71	-11	163
C3	#3	Compl Mezz Levels Comm. Rms/Sta. Serv. Ctr.	04/15/13	02/05/14	03/10/14	C6	-329	-33	81
C3	#4	Compl Lwr/Uppr Platforms & Signal Rms	10/14/13	02/07/14	03/12/14	C6	-149	-33	174
C3	#5	Compl All work Anc#2 in Parking Garage	08/30/13	09/09/13	11/04/13		-66	-56	381
C3	#6	Complete work @ Ancillary #1	07/09/12	08/08/13	08/08/13		-395	0	401
C3	SS	Substantial Completion	05/13/14	01/05/15	01/15/15	C6	-247	-10	55
C4B	#1	Compl All work North of Grid Line 17	06/25/13	08/08/13	08/09/13	C4C	-45	-1	88
C4B	SS	Substantial Compl/All work South GL 17	12/03/13	01/14/14	01/14/14	C4C	-42	0	34
C5B	#1	Compl All work South of Grid Line 15	03/04/14	03/19/14	03/18/14	C5C	-14	1	35
C5B	SS	Substantial Compl/All Work North GL 15	09/04/14	12/30/14	12/30/14	C5C	-117	0	34
C6	#2A	Complete LAN - 96th St. Station	05/18/15	05/18/15	05/18/15	C2B	0	0	173
C6	#2B	Complete WAN - 96th St. Station	05/18/15	05/18/15	05/18/15	C2B	0	0	173
C6	#3A	Complete LAN - 86th St. Station	07/18/15	07/17/15	07/17/15	C5C	1	0	125
C6	#3B	Complete WAN - 86th St. Station	07/18/15	07/17/15	07/17/15	C5C	1	0	125
C6	#4A	Complete LAN - 72nd St. Station	02/18/15	02/18/15	02/18/15	C4C	0	0	235
C6	#4B	Complete WAN - 72nd St. Station	02/18/15	02/18/15	02/18/15	C4C	0	0	235
C6	#5A	Complete LAN - 63rd St. Station	04/18/14	11/26/14	07/07/14	C3	-80	142	61
C6	#5B	Complete WAN - 63rd St. Station	04/18/14	11/26/14	07/07/14	C3	-80	142	61
C6	#5C	Complete all 63rd St. Station work	04/18/14	11/26/14	07/07/14	C3	-80	142	61
C6	SS	Substantial Completion	08/18/16	08/18/16	07/29/16		20	20	111

Pkg	MS	Description	Dates			Affected	Variance (CD)		Sch. Float
			Adjusted (2)	Upd. #82 (3)	Upd. #83 (4)	Pkg.	Contract = (2) - (4)	Month = (3) - (4)	

Notes:

1. All schedule dates based upon June 1, 2013 update (IPS Update #83)
2. Contract packages 1 and 5A have completed all work and follow-on activities are proceeding w/o impact.
3. Contract packages 4C and 5C; no variances with contract milestones to date.

Concerns and Recommendations:

MTACC’s “Variance Discussion” for IPS Update #83 notes the following:

- For C2B, the IPS does not currently reflect the Contractor’s Milestone forecast dates for Milestones 1 through 10. The Contractor’s Schedule is under evaluation to analyze the difference in Milestone dates. It is anticipated that the contractor’s interim milestone dates will reflect the contract milestones dates and the C2B baseline schedule will be fully incorporated into the IPS.
- For C3, the IPS does not reflect the Contractor’s current Substantial Completion forecast date. The Contractor Schedule is under evaluation to analyze the difference in Substantial Completion date. January 15, 2015 represents the Substantial Completion date agreed upon by the CCM office and the Contractor’s office.
- For C6, the IPS does reflect the Contractors Milestone forecast dates for all Milestone Dates. The contractor’s schedule is being evaluated to better understand these variances.

The PMOC notes that significant schedule delays were reported for both C2A and C3 during this update period. Available schedule float suggests these delays will not impact the current RSD. The PMOC recommends that the schedule milestone variances noted above be fully reconciled for IPS Update #84. The number of variances noted above creates significant concern over the reliability of IPS forecast schedule dates.

4.2 90-Day Look-Ahead

Status:

Based on the Integrated Project Schedule (IPS) Update#83 (DD=6/01/13), major activities that can be anticipated to either start or complete over the upcoming 90 days include the following:

Table 4-4: 90-Day Look-Ahead Schedule

Activity ID	Start	Finish
C2A – 96th Street Station Sitework& Heavy Civil		
Completion of Entrance 2; Handoff to C2B		7/9/13
Ancillary #1 Invert Slab & Shotcrete		7/15/13
Substantial Completion		9/24/13
C2B – 96th Street Station Concrete, Finishes & Utilities		
Prep for Mezzanine Construction		8/21/13
Plumbing/Fireproofing – Existing Tunnel		7/5/13

Activity ID	Start	Finish
CIP Exterior Wall – Ancillary #2		9/10/13
C3 – 63rd Street Station Rehab		
Approve/Procure/Fabricate Arch. Finishes Pkg.		6/28/13
P/S/A Mechanical Shop Dwgs		6/14/13
Station Ductwork Fabrication		9/12/13
Begin Utility Relocation – Entrance #1	7/15/13	
C4B – 72nd Street Station Mining & Lining		
Main Cavern (South) – F/R/P/S Walls		9/9/13
Main Cavern (North) – F/R/P/S Arch		7/9/13
G3/S1 Cavern Arches – F/R/P/S		8/26/13
Horseshoe Tunnel Arch		6/13/13
C4C – 72nd Street Station Finishes		
Mobilization		6/18/13
Critical Submittals		7/29/13
C5B – 86th St. Station Mining & Lining		
Ancillary #2 – Mudmat/Shotcrete		7/26/13
North Cavern Invert Waterproofing		9/24/13
Entrance #2 – MPT3/North SOE + Decking		7/22/13
Cavern Excavation Complete		7/17/13
C5C – 86th St. Station Finishes & MEP		
Mobilization		8/23/13
C6 – Systems		
Submit DC Breaker Wirings – 86 th St. SS (1)		8/23/13
Submit HT SWGR Wirings - 86 th St. SS (1)		8/23/13
Circuit Design – 1200 CIR (1)		7/26/13
Circuit Design – 96 th St. RR (1)		7/26/13
Circuit Check – 147 CIR (1)		7/5/13
Submit Shop Dwgs & Catalog Cuts – LVT Track		6/20/13
(1) Indicates critical or near-critical schedule activity		

Observations and Analysis:

90-Day Look-Ahead Notes:

1. The 90-Day Look-Ahead confirms that excavation activities at the 86th Street Station are nearly complete and the primary work will be structural concrete placement for the foreseeable future.
2. C2B continues to perform contract work earlier than planned through cooperation with the C2A contractor.
3. A very large number of schedule activities must be completed at the 63rd Street Station (C3) over the next 90+ day period in order to maintain the current schedule. The record

of “on-schedule” performance at this station has not been good. Additional delays can reasonably be forecast.

4. The C3 construction package was awarded on January 11, 2011, approximately 2.5 years ago. The 90-Day Look-Ahead indicates that significant contractor pre-construction activities remain incomplete including ductwork shop drawings and subcontracting for interior specialty finish work. Delayed completion of these type of activities significantly increases the risk of unanticipated delay to project construction.
5. Several preconstruction activities for traction power and rail signal systems are “near-critical” and must be completed within the next 90 days in order to maintain the current schedule. It is not known if any communication system preconstruction activities share this status as their durations tend to be excessive and do not allow facilitate a “critical-path” analysis.

Concerns and Recommendations:

Refer to See Section 4.3 of this report for additional comments and recommendations.

4.3 Critical Path Activities

Status:

Based on Update #83 of the IPS, the calculated date for completion of all SAS Phase 1 activities is September 13, 2016. This results in 109 calendar days of contingency when compared to the MTACC’s revenue service goal of December 30, 2016.

The IPS contains numerous contractual milestones and schedule constraints which support modeling the interaction of the construction packages. Accurate modeling of the interaction of the active construction packages complicates the identification and interpretation of the overall project critical path. Due to the inherent limits in the accuracy of CPM methodology and the information developed in a complicated project of this nature, the schedule model can never be a 100% accurate representation of the project. As such, the PMOC monitors and evaluates all “near-critical” paths with a schedule float value of 60 work days or less.

Based on an analysis of the critical path(s), the PMOC considers the primary “critical” or “near-critical” schedule drivers of the project to be:

1. Design, manufacture and installation of traction power systems at the 96th and 86th Street Stations.
2. Design, manufacture and installation of signal system equipment at 96th and 63rd Street Stations.
3. Construction of the 86th Street Station
4. Construction of the 72nd Street Station
5. Signal system installation at the 72nd Street Station
6. Reconstruction of Entrance #1 at 63rd Street Station and follow-on signal system installation.

Observations:

Project Critical Path: There are several independent float paths which precede the “critical” (TF=0) path, which is currently constrained to start no earlier than March 15, 2015. Upon formal incorporation of the C5C construction schedule, this constraint will be removed, which should result in a more continuous path.

The path containing the lowest schedule float value of all paths preceding the “critical” path is included in this narrative. Paths with lower float values which also precede the “critical” path will be identified. The most “critical” path that spans between the current data date of June 1, 2013 and the project completion date (RSD) consists of three distinct elements:

1. The initial portion of this path involves procurement activities for the C5C construction package. The IPS forecast June 14, 2013 for the award of this package with 11 WD of schedule float before this task would become “critical”. The actual award occurred on June 12, 2013. This 2 WD schedule improvement will adjust the C5C milestones, and will be incorporated into the next update of the IPS.
2. A schedule “lag” of 447 WD connects the C5C contract award to C5C MS#9, Complete Work in all Traction Power Rooms (North). C5C MS#9 initiates Activity #C6AR86-06, which is the C6 contractual “full access” date to traction power rooms at the north end of the 86th Street Station. This milestone defines a time period during which the C5C contractor will construct necessary elements of the 86th Street Station to support follow-on C6 installation activities and serves to constrain subsequent C6 work activities so they cannot start before March 18, 2015. This “lag” will be replaced with the actual C5C construction schedule when it is available.
3. The final portion of this path involves traction power installation and testing at the 86th Street Station. As previously noted, NYCT Department of Subways concurred with a reduction in duration of integrated testing for traction power elements of the SAS. This resulted in a 14 WD reduction in the duration of Activity C6TC 215, Traction Power Systems Integrated 86th Street Station. Since this activity is on the “critical path”, the overall duration of construction and testing was reduced by the same value. All third party construction is now forecast for completion on July 28, 2016, when the C6 Packages is scheduled for completion. NYCT operational testing, including dispatch tower testing, proof of route familiarity and new systems and equipment familiarization are the final activities for SAS, Phase 1, with an updated completion forecast for September 14, 2016. Adding the current schedule contingency of 78 WD results in the target RSD of December 30, 2016.

Secondary Paths: Major secondary or “near-critical” float paths of significance to the overall status of the project include the following:

- +3 WD:** This path involves the shop drawing development, manufacture, and installation and testing of signal equipment at the 96th Street Station. This work (Act. # C6S 96 40, Circuit Design – 96th St. RR) was scheduled to start on April 1, 2013 (IPS Update #81). The current IPS update has revised the start date to June 1, 2013. Based upon the shortening of the “critical path” previously discussed and the apparent lack of any progress on the activities within this path, this path should

have become the critical path for this update (#83). The explanation involves the next two successor activities within this float path.

Act #	Description	Original Duration (WD)		
		IPS #82	IPS #83	Δ
C6S 96 45	Circuit Check – 96 th St. RR	25	20	5
C6S 95 50	Detailing and Detail Check – 96 th St. RR	90	60	30
Total				35

The combined durations of these successor activities have been reduced to compensate for the shortening of the critical path and the elapsed time between Update #82 and #83. These changes were not documented in the narrative report accompanying the schedule update. This apparent manipulation of the schedule update data creates significant concern for the validity, accuracy and reliability of the IPS updates.

This path contains a two schedule lags of excessive duration between detail checking and the start of the manufacture of room equipment and manufacture of room equipment and the manufacture of wayside equipment. The result of these “changes” results in a forecast of the start of field installation activity at 96th Street on April 20, 2015, which is minimally different from the previously reported April 16, 2015 (Update #82); testing is scheduled to complete in mid-June 2016, followed by integrated testing and system operation.

+7 WD: This path is initiated by signal circuit design and equipment manufacture for installation throughout the 63rd Street area (Act # C6S 63 35, Circuit Check – 147 CIR). Field installation is schedule to start on August 27, 2014 and proceed continuously through pre-operational testing in May 2016. The start of field installation is also controlled by the Substantial Completion of Contract C3, currently forecast for January 5, 2015. As previously reported, a negative schedule lag of 155 WD duration allows the start of system installation work to supersede the schedule logic and start before the substantial completion of the C3 contract.

Based upon the progress reported for the first activity in this path (Act # C6S 63 35 Circuit Check – 147 CIR), no work was accomplished this period. Last reporting period, this pat had +44 WD of schedule float.

+9 WD: This path is initiated by the “design” of the communications system at the 96th Street Station (Act #C6C 150, Communications Design – 96th Street) , which is reportedly underway. The original duration of the “design” activity exceeds two years and the successor “installation” activity has a duration of 235 WD. MTACC has previously committed to providing a better breakdown of communication activities. Following design and installation of hardware and software, local and integrated testing is scheduled to start on January 4, 2015 and is forecast to complete in approximately 18 months, completing on July 15, 2016, followed by integrated system and proof of operation testing.

The work represented by this schedule path lost 8 WD of schedule float during this reporting period. Identification of the specific cause of this change is not

possible when the schedule activity scope is indeterminate and its duration excessive. This lack of definition can be found with numerous activities throughout the systems portion of the IPS.

+12 WD: This path is constrained from starting until January 28, 2014 and is initiated by the handoff from C4B to C4C and follows construction of Ancillary #1 through the turnover of the Relay Room to the C6 Contractor on November 3, 2014. The remainder of this path involves signal system in the 72nd Street area. The majority of work represented by this path appears to be at track side (switch machines, track circuits, etc.). As such, it is unclear why the turnover at Ancillary #1 controls a large portion of the work on this path. This path concludes on June 15, 2016 with the availability of the signal system for operational testing.

The start of this path is controlled by the following:

- The Hand-off/Substantial Completion of Contract C4B, currently forecast for December 30, 2013.
- A 242 WD lag extending from the award of Contract C4C, which occurred on February 14, 2013.

This work could start immediately after the hand-off from C4B, but is delayed an additional 22 WD as a result of the lag originating from C4C contract award. The 242 WD lag is more than adequate to represent C4C “mobilization”. The PMOC understands this lag will be removed upon formal incorporation of the C4C construction schedule. However, as currently configured, the schedule conceals 22 WD of float on this path. The PMOC recommend the schedule be adjusted to allow the C4B->C4C hand-off milestone to control the start of this path to more accurately forecast the opportunity for earlier-than-planned start of this portion of the C4C scope.

+13 WD: This path is initiated by signal system circuit design (Act # C6S 72 15, Circuit Design – 72nd St. RR) at the 72nd Street Station, which is currently underway. This path then follows the manufacture, of room and wayside equipment, which is forecast to complete on January 8, 2015. The path then follows installation and testing of signal equipment in the Relay Room through to the start of testing on December 24, 2015.

No progress on work represented by this float path was reported this update period. IPS Update #82 reported this path to have +20 WD of schedule float Adjustments to lags controlling the start of room equipment manufacture and wayside equipment manufacture appear to account for the minimal change in float during this reporting period.

+33 WD: This path involves the construction of Entrance #1 by the C3 Contractor and extends through C3 Substantial Completion on January 15, 2015. MTA and the Contractor disagree over the scope defining Substantial Completion and this matter is currently being resolved. As previously reported, a negative schedule lag of 155 WD duration allows the start of system installation work to supersede the schedule logic and start before the Substantial Completion of the C3 contract.

The PMOC recognizes that the “access restraint” between C3 and the start of signal system installation may not be a “true” physical constraint and similarly understands MTACC disagreement with the C3 Contractor’s forecast of substantial completion. However, the “negative lag” approach for adjusting the schedule model to conform to MTACC’s undocumented vision of what the schedule should look like merely adds another layer of confusion and potential distortion to the matter.

The PMOC continues to recommend the MTACC clarify the relationship involving Entrance #1/C3 Substantial Completion and the start of signal installation with the affected contractors and utilize more conventional schedule logic to model the activities and relationships in that area at that time.

+34/35 WD: These two independent float paths represent excavation and structural concrete installation at the north and south caverns of the 86th Street Station (C5B). At each location, the work follows the same general progression; completion of excavation of the intermediate and public caverns, invert drainage and waterproofing, followed by invert, wall and arch concrete installation. Completion of the south cavern is forecast for March 25, 2014, (Milestone #1) and completion of the north cavern is forecast for September 25, 2014 (Contract Substantial Completion). Each of these milestones denotes handoffs of specific locations within the station to the C5C Contractor. The schedule for this work was maintained during this update period.

+49 WD: This path involves the shop drawing development, manufacture, and installation and testing of signal equipment at the 86th Street Station. This work (ACT # C6S 86 50, Circuit Design – 1200 CIR) was scheduled to start on April 1, 2013 (IPS Update #81). Current IPS Update # 83 has revised the start date to June 3, 2013. IPS Update #82 reported this path to have +16 WD of schedule float. Although no progress was reported for this update period, this path gained 33 WD of schedule float. A reduction in the duration of a downstream activity # C6S 86 55, Detailing and Detail Check – 1200 CIR of 30 WD and activity # C6S 86 60, Submit Circuit Design to NYCT for Review of 40 WD appear to account for this variation. Neither of these revisions was included in the Revision History section of the narrative report accompanying the update.

Other Float Paths: The following list summarizes the schedule float currently available for project elements where time-of-performance has been a concern.

Schedule Float		Description
Upd. #83	Upd. #82	
+90	+108	Rainbow Hardware, Excavation Stage 7A, MS#2 handoffs to C2B
+82	+96	Deliver Concrete Ties (including LVT) and Track
+74	+108	Handoff C5B→C5C @ Entrance #2
+186	+200	C4C – Entrance #1 Design & Construction
+243	+252	Permanent Power Available

Concerns and Recommendations:

Based on its review of the critical and near-critical paths, the PMOC offers the following:

1. It is understood that the IPS is not a “production” schedule, and the usual concerns regarding the use of schedule lags are not completely applicable. However, for “near critical” paths (reference the +12 and +33 WD paths) excessive periods of no activity created by lags should be replaced with documentable work activities and defensible schedule logic.
2. This update of the IPS identifies several issues related to preconstruction activities associated with the railroad signal system, (reference the +3, +7, +13 and +49 WD float paths). MTACC has acknowledged technical difficulties in the integration of the C6 schedule into the IPS and personnel difficulties with scheduling staff assigned to the systems contract. It is anticipated that MTACC will resolve these issues for the next update of the IPS.
3. The PMOC recommends that the narrative report accompanying the IPS update contain a more complete discussion of schedule revisions made during the update period as well as a discussion of any problems or questionable data associated with the update.
4. The PMOC is concerned that the SAS Project Team has become preoccupied with the dramatic, major schedule improvement of the RSD via acceleration of systems installation and testing activities. A consequence of this preoccupation is that the smaller details and lesser opportunities for schedule improvement may not be receiving adequate consideration. The PMOC recommends a moratorium in the evaluation of the C6 acceleration proposal and refocusing on enhancement and reliability of the finish package turnover milestones upon which any C6 acceleration is dependent.

4.4 Compliance with Schedule Management Plan

Status:

Since August 2010, the PMOC has monitored and evaluated the SAS Project Team’s compliance with its Schedule Management Plan, developed as part of the overall ELPEP process.

Observations and Analysis:

Based solely upon a review of IPS Update #83, it would be the opinion of the PMOC that SAS Phase 1 is not in compliance with the deliverables and intangible goals enumerated in the Enterprise Level Project Execution Plan (ELPEP), dated January 15, 2010 (Section IV. b, page 8) and as further described by the Schedule Management Plan (SMP). Select defects in the IPS are described in Section 4.3 of this report.

However prior performance and the numerous challenges associated with a complicated project and reporting system such as this must also be acknowledged. MTACC has committed to resolving the IPS defects and their underlying causes for Update #84 (July 2013). The PMOC will reserve its determination of ELPEP compliance with respect to the IPS pending a review of Update #84.

The current status of schedule metrics identified by the ELPEP includes:

- Forecast Revenue Service Date
 - ELPEP Requirement: February 28, 2018
 - Current Forecast: December 30, 2016

- Minimum schedule contingency (measured against February 28, 2018 RSD)
 - ELPEP Requirement: 240 CD
 - Current Forecast: 530 CD.
- Minimum Allowable Float; Real Estate Acquisition
 - ELPEP Requirement: 60 CD
 - Current Forecast:
 - C4C, Entrance #1: Condemnation period for new easement (Act # C4C ENT1REL) = 186 WD (approx. 260 CD)
 - C4C, Entrance #1: Complete Cost-to-cure work (Act # C4C ENT1COC) = 188 WD (approx. 263 CD)
- Minimum Allowable Secondary Float Path
 - ELPEP Requirement: 25 CD
 - Current Forecast: Independent “near critical” paths @ +3 WD (4 CD), +7 WD (10 CD) and +9 WD (13 CD), +12 WD (17 CD), +13 WD (18 CD). It does not appear to be economically reasonable to mitigate (accelerate) work on these paths to achieve full ELPEP compliance.
- Secondary Schedule Mitigation (critical path compression)
 - ELPEP Requirement: 125 CD
 - Current Forecast: Not Available.

The SAS Management Team has demonstrated that it is using the IPS to actively plan, organize, direct and control individual packages and the overall project, and to provide reliable forecasts of the SAS revenue service date (RSD) and other major accomplishments.

Concerns and Recommendations:

With respect to project schedule management, the MTACC has realized the beneficial outcomes envisioned by the ELPEP on SAS. MTACC has generally been in compliance with its Schedule Management Plan; however, the deficiencies and “root causes” of the deficiencies noted earlier in this report must be addressed in order to assure continued compliance with its SMP.

No further concerns or recommendations in this section.

5.0 PROJECT COST STATUS

5.1 Budget/Cost

Status:

The FFGA baseline budget and current working budget are broken down into Standard Cost Categories in year of expenditure dollars as follows:

Table 5-1: Allocation of FFGA and Current Working Budget to Standard Cost Categories

Std. Cost Category (SCC)	Description	FFGA	MTA's Current Working Budget (March 31, 2013)
10	Guideway & Track Elements	\$612,404,000	\$638,107,000
20	Stations, Stops, Terminals, Intermodal	\$1,092,836,000	\$1,294,629,000
30	Support Facilities	0	\$0
40	Site Work & Special Conditions	\$276,229,000	\$534,865,000
50	Systems	\$322,707,000	\$265,792,000
60	ROW, Land, Existing Improvements	\$240,960,000	\$281,500,000*
70	Vehicles	\$152,999,000	0**
80	Professional Services	\$796,311,000	\$973,000,000
90	Unallocated Contingency	\$555,554,000	\$463,107,000
Subtotal		\$4,050,000,000	\$4,451,000,000
Financing Cost		\$816,614,000	\$816,614,000
Total Project		\$4,866,614,000	\$5,267,614,000

* Includes \$47M Cost-to-Cure

** FTA Region II has accepted MTACC/NYCT's assertion that recent services reductions will provide ample spare vehicles for the SAS Phase 1 Project.

The PMOC notes that the MTACC's CWB omits the cost for new Rolling Stock or corresponding reduction in funding and that this CWB does not represent an approved budget modification in any form.

Observation and Analysis:

Table 5-1 represents MTACC's most recent update (March 31, 2013) of its CWB into the FTA Standard Cost Categories.

Conclusions and Recommendations:

MTACC is executing Phase 1 of the SAS within the constraints of its CWB. PMOC will continue to monitor MTACC conformance to its budget.

5.1.1 Project Cost Management and Control

Status:

The SAS Project Team accumulates and reports actual cost expenditures against MTACC-established cost categories on a monthly basis. The aggregate budget value of the cost categories equals the CWB of \$4.451B. In general, MTACC cost categories correspond to individual contracts or groups of contracts for products or services supplied by a 3rd party vendor. Values within the MTACC Cost Categories can be mapped to the FTA Standardized Cost Categories. Budget and cost are reported using the FTA Standardized Cost Categories on a Quarterly basis.

Observation:

MTACC continues to demonstrate that its cost reporting and management processes and procedures are adequate for and responsive to the needs of the project. No new observations this period.

Concerns and Recommendations:

None.

5.1.2 Project Expenditures and Commitments:

Status:

As of June 30, 2013, a summary comparison of the SAS Current Working Budget (Estimate Revision #9) and expenditures is as follows:

Description	CWB	Expended	%
Total Construction (1)	\$2,674,814,299	\$1,473,774,783	53.0%
Total Soft Cost	\$1,255,727,995	\$940,173,145	74.9%
Contingency	\$520,457,706	(Included above)	
Subtotal	\$4,451,000,000	\$2,413,947,928	54.2%
(1) % complete includes AWOs executed to date.			

Observations:

The PMOC notes that expenditures are generally representative of the level of completion of each project element. It is noted that “soft costs” as defined on this project, include significant front-end costs (property acquisition, OCIP, etc.) which skew the percentage of those categories expended to date.

Based upon financial expenditures reported by the MTACC during June 2013, SAS Phase 1 is approximately 54.2 % complete. The completion status of the active construction contracts through June 2012, also based upon reported expenditures through that date, is as follows:

- C26002 (Tunnel Boring) – 97.1%
- C26005 (96th Street Station) – 96.5%
- C26010 (96th Street Station) – 16.3%

- C26013 (86th Street Station) – 100%
- C26008 (86th Street Station) – 54.94%
- C26012 (86th Street Station) – 0%
- C26006 (63rd Street Station) – 50.3%
- C26007 (72nd Street Station) – 83.0%
- C26011 (72nd Street Station) – 1.0%
- C26009 (Systems) – 8.1%

Aggregate Construction % Completion:

- 100% of all construction work is under contract
- 53.0% of all construction is complete

Based upon cost data received from MTACC for March 2013:

- Value of construction in place this period = \$25,821,291
- Estimated value of construction remaining = \$1,201,039,516
- Target construction completion = August 18, 2016
- # Months remaining = 38.7

Average rate of construction required to achieve target completion date = \$31,073,703/MO. It is noted that no progress (payments) was reported for Contracts C3, C5B and C6. As such, estimated progress for this period is somewhat understated.

Soft Cost expenditures (not including real estate, OCIP, etc.) during June 2013 totaled approximately \$5.1M. This expenditure is higher than that experienced in recent months and reflects an increase in design, construction administration and construction management expenses. At this rate, the PMOC estimates there is adequate soft cost budget remaining to complete the project, with minimal funds available beyond December 30, 2016. Revision 10 to the Soft Cost Budget should provide additional contingency for these cost categories.

Conclusions and Recommendations:

The average progress (payments) achieved over the most recent six month period is \$47,491,222. Based on a review of cost data for June 2013, it appears that adequate overall progress was made on the project to achieve the RSD of December 30, 2016.

5.1.3 Change Orders

Status:

As of June 30, 2013, the status of Additional Work Orders (AWOs) on Phase 1 of the Second Avenue Subway Project is summarized as follows:

Table 5-2: AWO Summary

Contract / (Package)	% Complete	Award	Exposure		Executed	
			\$	% of Award	\$	% of Award
C26002 (1)	97.00%	\$337,025,000	\$41,184,443	12.22%	\$41,184,443	12.22%
C26005 (2A)	96.50%	\$325,000,000	\$50,713,752	15.60%	\$36,590,189	11.26%
C26010 (2B)	16.30%	\$324,600,000	\$11,206,128	3.45%	\$1,129,543	0.35%
C26006 (3)	50.30%	\$176,450,000	\$8,909,077	5.05%	\$3,555,912	2.02%
C26007 (4B)	83.00%	\$447,180,260	\$6,033,920	1.35%	\$7,694,128	1.72%
C26011 (4C)	1.02%	\$258,353,000	\$10,788	0.00%	\$10,788	0.00%
C26013 (5A)	100.00%	\$34,070,039	\$6,525,471	19.15%	\$6,525,471	19.15%
C26008 (5B)	54.94%	\$301,860,000	\$7,911,712	2.62%	\$7,427,688	2.46%
C26012 (5C)	0.00%	\$208,376,000	\$0	0.00%	\$0	0.00%
C26009(6)	8.10%	\$261,900,000	\$2,200,156	0.84%	\$558,567	0.21%
TOTAL		\$2,674,814,299	\$134,695,447	5.04%	\$104,676,729	3.91%

To date, approximately \$1,473,774,783 (55.1%) of all construction work has been completed. As a % of work completed, the AWO exposure for these contracts = 9.14% and the executed AWO % = 7.1%. Based on performance to date, a forecast of total AWO expenditure of approximately \$190M appears reasonable. This compares favorably with the \$229M AWO contingency contained in the MTACC CWB. The PMOC notes that AWO expenditures for certain construction contract packages are trending above established budget values and industry “standards”. The PMOC continues to recommend that all AWOs be critically reviewed, evaluated and documented on a contemporaneous basis to determine if compensable responsibility exists for some of these expenditures.

Observation and Analysis:

The value of AWOs reported by MTACC/NYCT in June 2013 is summarized as follows:

	<u>Executed AWOs</u>	<u>AWO Exposure</u>
June 2013	\$108,704,729	\$134,795,447
May 2013	\$107,609,358	\$126,701,819
Change	\$1,095,371	\$8,093,628
Change	1.02%	6.391%

The change in AWO Exposure during June 2013 is summarized as follows:

Const. Pkg.	AWO Exposure \$			Changes this Period
	June-13	May-13	Period Δ	
C1	\$41,184,443	\$41,184,443	\$0	Exposure value is based upon tentative settlement of all outstanding AWOs. Contract closeout in progress.
C2A	\$50,813,752	\$49,210,165	\$1,603,587	Net exposure increase is based on revised

Const. Pkg.	AWO Exposure \$			Changes this Period
	June-13	May-13	Period Δ	
				estimates for AWO # 123, 139, 140 and 148 and initial estimates for AWO # 132, 135, 143, 144, 146, 149, 152 and 154. Four AWOs were added this period one of which included and exposure estimate.
C2B	\$11,206,128	\$7,412,346	\$3,793,782	Net exposure increase is based on revised estimates for AWO # 6, 8, 12, 22, 23, 24 and 27 as well as initial estimates for AWO # 16, 17, 20, 26, 29, 30 and 33. No new AWOs were added this period.
C3	\$8,909,077	\$7,325,456	\$1,583,621	Net exposure increase based on revisions to the estimated value of AWO # 20, 24, 30, 36, 43, 45, 52, 53, 54, 55, 56 and 57 as well as initial estimates for new AWO # 60 through 76. Sixteen AWOs were added this period, all of which included exposure estimates.
C4B	\$6,033,920	\$4,887,759	\$1,146,161	Net exposure increase based on revisions to the estimated value of AWO # 33 and initial estimates of the value of AWO # 71, 74 and 76. Three AWOs were added this period, one of which included an exposure estimate.
C4C	\$10,788	\$0	\$10,788	Exposure increase based upon the addition of AWO #2
C5A	\$6,525,471	\$6,525,471	\$(2,377,416)	Exposure value is based upon settlement of all outstanding AWOs. Contract closeout finalized this period.
C5B	\$7,911,712	\$8,024,584	\$(112,872)	Reduction in exposure value is based on a revised estimate for AWO # 44.
C5C	\$0	\$0		No AWO exposure to date.
C6	\$2,200,156	\$2,131,595	\$68,561	Net increase in exposure is based on revised estimates for AWO # 11, 14 and 15 and the addition of exposure estimates for AWO # 16 and 19.
	\$134,795,114	\$126,701,819	\$8,093,628	

The changes in Executed AWO Value are summarized as follows:

Const. Pkg.	Executed AWO \$			Changes this Period
	June-13	May-13	Period Δ	
C1	\$45,212,443	\$45,212,443	\$0	No change this period. Close-out negotiation of outstanding AWOs in progress.
C2A	\$36,590,189	\$36,534,759	\$55,430	Increase based on the execution of AWO # 139, 146, 152 and 154.
C2B	\$1,129,543	\$636,075	\$493,468	Increase based on the execution of AWO # 6, 8, 24 and 28.
C3	\$3,555,912	\$3,387,230	\$168,682	Increase based on execution of AWO # 35, 40, 48 and 51.
C4B	\$7,694,128	\$7,616,332	\$77,796	Increase based on execution of AWO # 70, 71 and 74.
C4C	\$10,788	\$0	\$10,788	No AWOs executed to date.
C5A	\$6,525,471	\$6,525,471	\$0	No change this period. Contract closeout was finalized this period.
C5B	\$7,427,688	\$7,427,688	\$0	No change this period.
C5C	\$0	\$0		No AWOs executed to date.
C6	\$558,567	\$269,360	\$289,207	Increase based on the execution of AWO # 11, 14 and 15.
	\$108,704,729	\$107,609,358	\$1,095,371	

Concerns and Recommendations:

MTACC, with support from NYCT, has demonstrated a disciplined and diligent approach to effectively negotiating additional work orders for a fair and reasonable price. Credits for deleted or reduced work scope are pursued aggressively.

5.2 Project Funding


Status:

Total Federal participation is currently \$1,350,692,821. Appropriated, obligated and disbursed totals are shown in Table 5-3 below.

Table 5-3: Appropriated and Obligated Funds (Federal)

Grant Number	Amount (\$)	Obligated (\$)	Disbursement (\$) thru June 30, 2013
NY-03-0397	\$4,980,026	\$4,980,026	\$4,980,026
NY-03-0408	\$1,967,165	\$1,967,165	\$1,967,165
NY-03-0408-01	\$1,968,358	\$1,968,358	\$1,968,358
NY-03-0408-02	\$24,502,500	\$24,502,500	\$24,502,500
NY-03-0408-03	0	0	0
NY-03-0408-04	0	0	0
NY-03-0408-05	\$167,810,300	\$167,810,300	\$167,810,300
NY-03-0408-06	\$274,920,030	\$274,920,030	\$274,920,030

Grant Number	Amount (\$)	Obligated (\$)	Disbursement (\$) thru June 30, 2013
NY-03-0408-07	\$237,849,000	\$237,849,000	\$105,985,116
NY-03-0408-08	\$197,182,000	\$197,182,000	0
NY-03-0408-09	\$186,566,000	Pending	0
NY-17-X001-00	\$2,459,821	\$2,459,821	\$2,459,821
NY-36-001-00*	\$78,870,000	\$78,870,000	\$78,870,000
NY-95-X009-00	\$25,633,000	\$25,633,000	\$25,633,000
NY-95-X015-00	\$45,800,000	\$45,800,000	\$41,120,000
Total	\$1,250,508,200.00	\$1,063,942,200.00	\$730,216,316

 * Denotes American Recovery and Reinvestment Act (ARRA) funds.

A total of \$2,414,036,478 has been expended on the project through June 30, 2013, of which \$443,515,336 has been spent on design and \$1,368,409,153 on construction (MTACC's June 2013 Cost and Schedule Summary Input).

Observation and Analysis:

The New York State Legislature has agreed to fund the remaining three years of MTA's 2010 – 2014 Capital Program which will provide adequate funds to support the SAS Phase 1 Project's current working budget.

Concerns and Recommendations:

None

5.2.1 Overall Project Funding

Refer to Section 5.2 of this Report.

5.2.2 Local Funding

Refer to Section 5.2 of this Report.

5.3 Cost Variance Analysis

Status:

Events that represent major project milestones for measuring cost variances include:

- Full Funding Grant Agreement (FFGA) – 11/19/2007
- Enterprise Level Project Execution Plan – 01/15/2010
- MTACC Current Working Budget – 6/2011
- Current Estimate At Completion – 6/2013

Cost variances identified at these milestones provide insight to the internal and external forces shaping the project and their impact on the final cost of the project.

This analysis will be updated upon receipt of MTACC's Revision 10 to the SAS Phase 1 Cost Estimate. Evaluation of review comments based on the Draft version of Revision 10 are currently being evaluated.

Observation and Analysis:

Based on the PMOC’s review of Revision 10, the proposed increase in soft costs (basically professional services as defined by Section 8.0 of the FTA SCC) is primarily driven design and CCM cost increases. Using the Rev. 10 numbers, soft costs are approximately 20.8% of the project budget (\$4.45B) and 22% of the EAC (approx. \$4.2B). These percentages compare favorably to FTA documented averages (Reference TCRP 31, Managing Capital Costs of Major Federally Funded Transportation Projects) of about 24%. These estimates appear to include adequate contingency to ensure these elements will complete the project within these budgetary limits.

Using the MTACC financial reporting format contained in its Capital Construction Reports, the PMOC maintains an independent Estimate-At-Completion (EAC) report for Phase 1 of the Second Avenue Subway Project. This EAC is based on:

1. Contract awards, AWOs and actual expenditures.
2. Forecasts and projections based upon Item 1.
3. The results of MTACC’s cost estimate (Rev. 9) for SAS Phase 1, where needed.
4. Cost information provided by the SAS project team through established contemporaneous reporting.
5. Events, Issues, and trends with a high risk of cost impact as identified by the PMOC.

A summary of the SAS Phase 1 EAC, based on values developed as noted above is as follows:

Table 5-4: Estimate @ Completion

	CWB	EAC
Total Construction	\$2,710,354,299	\$2,904,530,820
Engineering Services	\$591,298,960	\$625,000,000
Third Party Expenses	\$536,268,950	\$552,500,000
TA Expenses	\$128,160,085	\$130,760,085
Contingency	\$324,917,706	
Executive Reserve	\$160,000,000	
TOTAL	\$4,451,000,000	\$4,223,556,486

Conclusions and Recommendations:

Based on the information available, the PMOC’s EAC validates the reasonableness of the MTACC’s Current Working Budget of \$4.451B. Based upon current information, this effort suggests the project can be built within the limits of the Current Working Budget. This effort will be revisited periodically, to incorporate updated information and evaluate its effect on the overall EAC.

5.4 Project Contingency

Status:

The ELPEP requires the MTACC to maintain specific contingency funds in accordance with the following “achievement driven” schedule:

- \$220 million through 90% Bid and 50% Construction
- \$140 million through 100% Bid and 85% Construction
- \$45 million through Start Up and Pre-Revenue Operations

The independent analysis of contingency drawdown maintained by the PMO is generally consistent with that maintained by the SAS Project team and confirms it to be in compliance with the estimated minimum contingency balance of \$191,000,000.

Observations and Analysis:

During December 2012, contingency changes were limited to routine incorporation of AWOs into the individual project and overall program reporting systems. No other 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.

The PMOC has updated and adjusted its contingency drawdown and utilization model to reflect changes made this period. Models maintained by both the PMOC and the SAS Project Team verify that the current contingency balance is greater than the Planned Balance and exceeds the ELPEP Required Balance.

	<u>May 2013</u>	<u>June 2013</u>
Required Balance (ELPEP):	\$200,556,000	\$191,000,000
Planned Contingency Balance:	\$247,712,260	\$244,507,425
Actual Contingency Balance (PMOC):	\$354,971,000	\$346,571,000
Actual Contingency Balance (MTACC):	\$354,629,000	TBD

During March 2013, based upon the actual physical % completion of the work, it was agreed that MTACC had achieved the initial “hold point” on the contingency drawdown curve. From this point forward, the ELPEP required minimum contingency balance will be reduced monthly.

Concerns and Recommendations:

This evaluation is based on a thorough evaluation of construction contingency. Soft cost contingency is evaluated periodically and the analysis adjusted accordingly. At this time, it appears the available contingency is adequate to support completion of the Project.

6.0 PROJECT RISK

6.1 Initial Risk Assessment

No change this period.

6.2 Risk Updates

Status:

On June 7, 2013, the “Draft Final” results of the C5C Risk Workshop were distributed for general review and comment. The relevant findings and conclusions of this effort include:

1. “For an 80% confidence level, the originally planned substantial completion date of May 2016 moves to December 2016. This accounts for the potential delay of NTP (2 months) and potential exposure in project duration (5 months).”
2. Accesses, interfaces and turnovers are the schedule drivers of this contract, as opposed to productivity and duration of the scheduled activities. The aggressiveness of the schedule is shown by the low confidence of meeting the contractual handoffs to Contract 6 (see table 4). A very aggressive contractor will need to track and monitor all access milestones and look for opportunities to increase the chances of meeting them.
3. With respect to the impact on the contractual access agreed with the systems contractor (C6), the 7 major milestones were reported in table 4 with their respective confidence in meeting the commitments and the potential risk in terms of delay months. It is worth noting that the aggressive milestone to provide “...full access/turnover of all communications rooms” to C6 shows a very low chance on being achieved (<10%) with a potential risk of 4 month delay. This milestone is particularly important due to the uncertainty in the ability of C6 to perform all their work in the scheduled 4 months to turn it back to C5C for completion, testing, etc.
4. There is a 70% confidence in meeting the current all-inclusive budget of \$256.1M (including AFI and AWO). This confidence level is considered relatively high for a contract of this size; however to reach the recommended 80% confidence level, the AWO budget should be increased by \$6.2M to give a total budget of \$262.3M.

Observation and Analysis:

To date, the project team has focused on acceleration of C6 (Systems) installation work as the best approach to generate additional schedule contingency. Based upon the information presented above, this approach may improve the forecast June 2017 RSD, but will not address the “root cause” of the delay, which is the time of performance and coordination of the stations MEP and architectural finish work and consequential handoff of work areas to the C6 Contractor.

Conclusions and Recommendations:

The results of the C4C Risk Analysis are similar (five month extended time of performance) to C5C. The PMOC is concerned about the potential “cumulative effect” on the schedule of both projects experiencing delays of this magnitude and the further delay of the RSD. The PMOC recommends revisiting the C4C and C5C packages in a “value engineering/risk assessment”

workshop format in an effort to identify and assess the potential merit of additional schedule acceleration and risk mitigation strategies that will enhance the probability of achieving the scheduled handoffs to the systems contractor.

6.3 Risk Management Status

Status:

Risk Management includes the manner by which the project team identifies and copes with risks retained by the MTACC. The SAS Risk Manager supports and coordinates specific risk management efforts, which may involve a wide range of senior project management personnel.

Observation and Analysis:

Risk management activities observed by the PMOC over the recent reporting period include:

1. Contract Risk Registers are maintained and will be completely updated in July 2013.
2. Updating of the cost and schedule drawdown curves to provide risk-informed cost and schedule forecasts
3. Formal risk mitigation meetings on a monthly basis.
4. Mitigation measures were implemented to address the risk associated with gaining access to 301 E 69th Street to complete the 72nd Street Station Entrance 1. An option was developed that re-configures the entrance thus avoiding relocation of utilities and the associated approval process required from the Building Owner.
5. SAS senior managers recognize that management of contract interfaces is one of the most significant risks associated with the project and have initiated an aggressive process to assure this risk is effectively mitigated. Mitigation measures include an interface organization, bi-weekly meetings and a detailed “to do” list for each interface to assure that the interface milestones can be achieved as planned.
6. Continued issuance of the Monthly Risk Report.

Conclusions and Recommendations:

The SAS Project Team continues to utilize the Risk Management Process as a means to identify threats to the project cost performance and schedule goals and actively manage retained risks.

6.4 Risk Mitigation

Status:

Risk Mitigation Meeting No. 26 was held on June 26, 2013. Recent risk management activities reviewed included the development of an updated and enhanced interface management plan, finalized schedule contingency drawdown curves based upon the IPS and current risk register and an updated EAC forecast for each construction contract.

Observation and Analysis:

Risks reviewed during this period include:

<u>Risk</u>	<u>Discussion Summary</u>
<p>Risk CNS 4 (C6) Problems related to managing the contractual interfaces during construction may result in delays and related claims.</p>	<p>An enhanced interface management plan has been issued and will be implemented. Supplemental staff dedicated to this effort are being considered.</p>
<p>Risk COM 2 (C6) Continuous and potentially late changes to the communications systems could delay C6 and the RSD.</p>	<p>It is reported that all design changes requested by user departments during the final design reviews have been agreed upon and will be implemented. Future design changes that impact project cost or schedule must be justified by the User Department making the request.</p> <p>Control of User Department changes to shop drawings that may result in work beyond the existing contract scope was identified as an ongoing risk. Any such comments will be deleted from the review comments returned to the Contractor and the User Department instructed to process the change request in accordance with normal procedure.</p> <p>The effectiveness of these mitigation strategies will be monitored on a regular basis.</p>
<p>Risk C5B, C2B, C4C, C5C and C6 Schedules There is the risk that the Project schedule will be delayed beyond the present revenue service date.</p>	<p>The SAS project team is actively reviewing the C6 Contractor's proposal for schedule acceleration. It is understood that any acceleration agreement must involve an equitable distribution of risk between contractor and MTACC. The ability to achieve the handoff milestones between finish contractor and the systems contractor are the key element in this effort.</p>
<p>Risk 72nd Street Station Entrance 1 (301 E 69th) There is a risk that work on Entrance 1 will be delayed due to delays in obtaining design approval from Owner for utility relocation in the building at 301 E 69th Street.</p>	<p>FTA's approval of the TAC Memo has allowed the redesign of this entrance to proceed at full speed. Utility routing and access appear to be the primary risk remaining, however there is optimism that MTA and the building owner's interests align and that resolution should be achievable. Excavation and underpinning work can start prior to complete resolution of utility issues, relieving some concern about schedule delay.</p>
<p>Risk CNS 8 (C6) Delayed Safety Certification delays RSD</p>	<p>Progress on technical activities supporting this effort have been reported to be satisfactory. An updated SSMP is under review and will be distributed.</p> <p>Concern remains over the alignment of the SSMP with applicable NYSDOT Oversight Standards. Efforts to identify and coordinate all relevant regulatory and oversight requirements with the SAS SSMP are ongoing.</p>

<u>Risk</u>	<u>Discussion Summary</u>
<p>Buy America – LVT</p> <p>Low-Vibration Track (LVT) pedestal conformance with “Buy America” requirements has been challenged and requires a ruling from FTA.</p>	<p>FTA provided its recommended approach to resolving the matter on June 20, 2013.</p>

The Risk Register will be updated during the 3rd Quarter, 2013. Prior to the next Risk Mitigation Meeting, the Risk Manager will meet with project CMs in an effort to solicit their input and ensure their concerns are represented at the Risk Mitigation Meeting.

Concerns and Recommendations:

The SAS Project Management Team continues to utilize the risk mitigation process to reduce the adverse cost and schedule impact of identified risks. MTACC is in the process of refining and enhancing its risk mitigation process in response to changing project conditions and challenges.

6.5 Cost and Schedule Contingency

6.5.1 Cost Contingency

Status:

Refer to Section 5.4 of this report.

6.5.2 Schedule Contingency

Status:

Schedule contingency reported by MTACC, based upon Update #83 of the SAS IPS, conforms to schedule contingency threshold limits established by the ELPEP. Based on this update, schedule contingency measured against MTACC’s RSD commitment date of December 30, 2016 is 109 CD. When measured against the FTA/PMOC RSD estimate of February 28, 2018, the contingency is currently 530 CD vs. the 240 CD stipulated by ELPEP.

Observations:

Tracking available schedule contingency over recent schedule updates is summarized below:

Table 6-1: Schedule Contingency

IPS Update #	68	71	74	77	80	83
Data Date	03/01/12	06/01/12	09/01/12	12/01/12	3/1/13	6/1/13
Contingency (CD)						
RSD=12/31/2016	80	90	No	90	90	109
RSD=02/28/2018	503	513	Report	513	513	530

Concerns and Recommendations: None

7.0 LIST OF ISSUES AND RECOMMENDATIONS

Priority in Criticality column 1 – Critical 2– Near Critical

Number with Date Initiated	Section	Issues/Recommendations	Criticality
SAS-09- Jan10	3.0 PMP	<p>The PMP and its sub-plans must be updated to reflect the new management processes and strategies of the ELPEP.</p> <p><u>PMOC Recommendation:</u> Update the PMP and its sub-plans within the timeframes established in the ELPEP.</p> <p><u>Update (March 2013):</u> PMP Revision 9.0 is still anticipated for mid-2013.</p> <p><u>Update (June 2013):</u> A final review of the update is currently being performed by MTACC’s Quality management. Release of PMP Rev. 9 for FTA/PMOC review is anticipated for mid-July 2013.</p>	2
SAS-20- Dec10	5.1.3 Change Orders	<p>Processing duration for AWOs is excessive. The average processing duration currently equals the published MTA maximum duration of 90 days. Improvement is required to facilitate contractor cooperation and reduce risk of “backlash” through perceived unfair treatment.</p> <p><u>Update (December 2012):</u> PMOC monitoring of the AWO process is on-going. PMOC audit of selected AWO files will be performed when authorized by FTA Region II.</p> <p><u>Update (March 2013):</u> PMOC monitoring of the AWO process is on-going</p> <p><u>Update (June 2013):</u> PMOC will perform an in-depth file review of the high dollar AWOs in addition to its ongoing monitoring of the AWO process during the 3rd Quarter 2013.</p>	1
SAS-22- Jun 12	1.1.2 f Community Relations	<p>MTACC’s community outreach efforts have had a positive impact on relations with the affected community. Many of the specific issues and resulting actions may have been beyond contemplation prior to the start of construction. Based upon the “lessons learned” to date, the PMOC recommends the MTACC develop a more comprehensive plan for</p>	2

Number with Date Initiated	Section	Issues/Recommendations	Criticality
		<p>construction phase community relations going forward, including an overall execution plan and proposed scope of activities</p> <p><u>Update (December 2012):</u> PMOC will coordinate with the MTACC to issued Candidate Revisions for Update No. 9 to the SAS PMP to address this concern. Update to the PMP is forecasted for mid-2013.</p> <p><u>Update (March 2013):</u> PMP Revision 9.0 is still anticipated for mid-2013.</p> <p><u>Update (June 2013):</u> Release of PMP Rev. 9 for FTA/PMOC review is anticipated for mid-July 2013.</p>	
SAS-24-Jun 12	2.3 Contract Packages and Delivery Method	<p>Despite the delays experienced to date, the SAS Project Team does not consider it worthwhile to accelerate the procurement schedule of either of the remaining finish packages (C4C, C5C). Each of these packages have several months of “preconstruction time” built into their schedules where access to work areas is not available due to the work of predecessor contracts. This “preconstruction time” is necessary for purchase and fabrication of long lead items, etc. Delays that absorb some of this “preconstruction time” have the potential to delay completion of these packages.</p> <p>The PMOC recommends the SAS Project Team reconsider acceleration of the procurement schedule for one or both of the remaining construction packages.</p> <p><u>Update (December 2012):</u> By including several weeks of schedule float to the procurement schedule for the 72nd Street Station (C4C) finishes package. The SAS Project Team has significantly reduces the risk of delaying the contract award date of February 4, 2013. A similar approach has been implemented for the C5C package. This item is considered closed.</p> <p><u>Update March 2013:</u> Procurement for Package C4C was executed on schedule and procurement of package C5C should be completed during 2nd Qtr 2013. This item will be</p>	2

Number with Date Initiated	Section	Issues/Recommendations	Criticality
		<p>closed unless delays unforeseen at this time are encountered.</p> <p>Update June 2013: The 86th Street Station Finishes & MEP Package, C-26012 (C5C) was awarded on June 12, 2013. This is the final construction package to be procured as part of SAS, Phase 1. This item has been adequately addressed and is considered closed.</p>	
SAS-26- Jun 12	2.6 Community Relations	<p>The community relations effort has proven to be an important element of the management of this project. It is the recommendation of the PMOC that the community relations effort be fully incorporated into the mainstream of project scope, budget and risk management activities to support the goals of cost-effective and transparent decision making and the related goals of the ELPEP</p> <p>Update (December) 2012: PMOC will coordinate with the MTACC to issued Candidate Revisions for Update No. 9 to the SAS PMP to address this concern. Update to the PMP is forecasted for mid-2013.</p> <p>Update March 2013: No update this period.</p> <p>Update June 2013: No update this period.</p>	2

Number with Date Initiated	Section	Issues/Recommendations	Criticality
SAS-27- Jun 12	3.2	<p>The PMOC has noted that community relations activities continue to be a very significant element of the overall management of this project. However, neither the PMP nor any applicable sub plan identify this work, the manner by which it will be managed or executed, the scope of the work or any budgetary or financial controls.</p> <p>The PMOC recommends the development or update of applicable plans and procedures governing such work during the next PMP update period.</p> <ul style="list-style-type: none"> ▪ <u>Update (December) 2012:</u> PMOC will coordinate with the MTACC to issued Candidate Revisions for Update No. 9 to the SAS PMP to address this concern. Update to the PMP is forecasted for mid-2013. ▪ <u>Update (June) 2013:</u> Release of PMP Rev. 9 for FTA/PMOC review is anticipated for mid-July 2013. 	2

8.0 GRANTEE ACTIONS FROM QUARTERLY AND MONTHLY MEETINGS

Priority in Criticality column

1 – Critical

2 – Near Critical

Number with Date Initiated	Section	Grantee Actions	Criticality	Projected Resolution
SAS-A17- Aug08	2.4 Vehicles	<p>The PMOC requested additional information regarding certain statements in the draft Rail Fleet Management Plan:</p> <ul style="list-style-type: none"> ▪ NYCT should provide a test plan for increasing the period between inspections of the new technology fleet. ▪ NYCT should explain why, in light of the ongoing state of good repair fleet replacement program, the cars financed under the SAS project are no longer needed. ▪ MTACC should explain why they are considering removing the vehicles from the project scope without reducing the project funding. <p>Update: The supply of vehicles for SAS Phase 1 will be addressed in the Draft Fleet Management Plan, scheduled for distribution in July 2010.</p> <p>Update: A Draft Fleet Management Plan was not submitted during July 2010. This item remains open.</p> <p>Update: As of August 31, 2010, a Draft Fleet Management Plan has not been submitted.</p> <p>Update: A Draft Fleet Management Plan was received, reviewed with comments provided to the FTA.</p>	2	7/30/10

Number with Date Initiated	Section	Grantee Actions	Criticality	Projected Resolution
		<p>Update: Vehicle requirements and associated cost to be addressed as part of the FFGA amendment.</p> <p>Update: No additional vehicles will be procured for the SAS Phase 1 Project. MTACC/NYCT's assertion that recent services reductions will provide ample spare vehicles for the SAS Phase 1 Project has been reflected in the Rail Fleet Management Plan which was accepted by FTA Region II. A "zero" dollar budget for the procurement of vehicles is reflected in the projects Current Working Budget (CWB) and also in the latest cost estimate (Rev. 9). No further action is planned by the PMOC.</p>		

APPENDIX A -- LIST OF ACRONYMS

AFI	Allowance for Indeterminates
ARRA	American Recovery and Reinvestment Act
AWO	Additional Work Order
BCE	Baseline Cost Estimate
BFMP	Bus Fleet Management Plan
CCM	Consultant Construction Manager
CD	Calendar Day
CMAQ	Congestion Mitigation and Air Quality
CPM	Critical Path Method
CPRB	Capital Program Review Board
CR	Candidate Revision
CSJV	Comstock Skanska Joint Venture
CWB	Current Working budget
DC	Design Consultant
DOB	New York City Department of Buildings
EAC	Estimate at Completion
ELPEP	Enterprise Level Project Execution Plan
FAT	Factory Acceptance Testing
FD	Final Design
FEIS	Final Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
HASP	Health and Safety Plan
HLRP	Housing of Last Resort Plan
IFP	Invitation for Proposal
IFB	Invitation to Bid
IPS	Integrated Project Schedule
LF	Linear Feet
MEP	Mechanical, Electrical, Plumbing
MTACC	Metropolitan Transportation Authority – Capital Construction
N/A	Not Applicable
NEPA	National Environmental Policy Act
NTP	Notice to Proceed
NYCDEP	New York City Department of Environmental Protection
NYCT	New York City Transit
OCIP	Owner Controlled Insurance Program
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PQM	Project Quality Manual
RAMP	Real Estate Acquisition Management Plan
RFMP	Rail Fleet Management Plan
RFP	Request for Proposal
ROD	Record of Decision

ROD	Revenue Operations Date
RSD	Revenue Service Date
S3	Skanska, Schiavone and Shea, JV
SAS	Second Avenue Subway
SCC	Standard Cost Categories
SSCP	Safety and Security Certification Plan
SOE	Support of Excavation
SSMP	Safety and Security Management Plan
SSOA	State Safety Oversight Agency
SSRA	Systems Safety and Reliability Assurance Program Plan
SOE	Support of Excavation
SSMP	Safety and Security Management Plan
SSOA	State Safety Oversight Agency
SSPP	System Safety Program Plan
TEAM	Transportation Electronic Award Management System
TF	Total Float (schedule)
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Technical Capacity and Capability Plan
TIA	Time Impact Analyses
UNO	Unless Noted Otherwise
WBS	Work Breakdown Structure
WD	Work Day

APPENDIX B-- PROJECT OVERVIEW AND MAP

Project Overview and Map – Second Avenue Subway



Scope

Description: The project will connect Manhattan’s Central Harlem area with the downtown financial district, relieving congested conditions on the Lexington Avenue line. The current project scope includes: tunneling; station/ancillary facilities; track, signal, and electrical work; vehicle procurement; and all other subway systems necessary for operation. The current phase, Phase 1 of 4, will provide an Initial Operating Segment (IOS) from 96th Street to 63rd Street, and will connect with the existing Broadway Line that extends to Lower Manhattan and Brooklyn. Subsequent phases will extend the line northward to 125th Street and to the southern terminus at Hanover Square in Lower Manhattan.

Guideway: Phase 1 is 2.3 miles long, from 63rd Street to 105th Street. It is a two-track project that is below grade in tunnels, and does not include any shared use track.

Stations: In Phase 1 there are: two new mined stations located at 72nd and 86th Streets, one new cut and cover station at 96th Street, and major modifications of the existing 63rd Street Station on the Broadway Line.

Support Facilities: There are no additional support facilities planned for Phase 1 of the project.

Vehicles: MTA envisions the need for eight-and-one-half train sets to satisfy the Phase 1 operating requirements (7) and to provide sufficient spares (1½).

Ridership Forecast: Upon completion of Phase 1, ridership is expected to be 191,000 per average weekday (MTA’s Regional Travel Forecast Model).

Schedule

12/20/01	Approval Entry to PE	06/12	Estimated Rev Ops at Entry to PE
04/18/06	Approval Entry to FD	03/14	Estimated Rev Ops at Entry to FD
11/19/07	FFGA Signed	06/30/14	Estimated Rev Ops at FFGA
12/30/16	Revenue Operations Date at date of this report (MTACC schedule)		
54.2%	Percent Complete Construction at June 30, 2013		
77.3%	Percent Complete Time based on Rev Ops Date of December 30, 2016		

Cost (\$)

3,839 M	Total Project Cost (\$YOE) at Approval Entry to PE (w/o Financing Costs)
3,880 M	Total Project Cost (\$YOE) at Approval Entry to FD (w/o Financing Costs)
4,866 M	Total Project Cost (\$YOE) at FFGA signed (w/ \$816 M Financing Costs)
4,673 M	Total Project Cost (\$YOE) at Revenue Operations (w/o Financing Costs)
5,489 M	Total Project Cost (\$YOE) at date of this report including \$ 816 M in Finance Charges
\$2,414M	Amount of Expenditures at date of this report from Total Project Budget of \$4,451M
54.2%	Percent Complete based on Expenditures at date of this report
\$354M	Total Project Contingency remaining (allocated and unallocated contingency)

* Being revisited as a result of the Enterprise Level Project Execution Plan

APPENDIX C – LESSONS LEARNED

There were no Lessons Learned to report for 1st Quarter for 2013

#	Date	Phase	Category	Subject	Lessons Learned
1	Oct-09	Construction	Schedule	Delays to excavation caused by adjacent Fragile Buildings	The PMOC recommended and MTACC adopted a plan to review the stability of all of the buildings affected by the Second Avenue Subway project. MTACC instructed the DC to review all the buildings along the project. Furthermore, they have the designer developing shoring plans for the fragile buildings and including this work in the future contracts. In this way the stabilization work cannot delay the contracts as it is part of the contract.
2	Nov-09	Construction	Schedule	3 rd Party Utilities changed the size of an electric vault after construction began.	The PMOC recommended that MTACC get the utility companies to agree that once they have approved the plans, they cannot make major changes after award. MTACC's SAS Project Executive is meeting with the utilities to work out this problem.

APPENDIX D – PMOC STATUS REPORT
(Transmitted separately in Final)

APPENDIX E – SAFETY AND SECURITY CHECKLIST

Project Overview			
Project mode (Rail, Bus, BRT, Multimode)	Rail		
Project phase (Preliminary Engineering, Design, Construction, or Start-up)	Design and Construction		
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGC, etc.)	Design/Bid/Build		
Project Plans	Version	Review by FTA	Status
Safety and Security Management Plan	7041.01.007308-0	11/15/07	Approved by FTA
Safety and Security Certification Plan	7041.01.007308-0 Appendix D		Certification by New York State Public Transportation Safety Board (NYSPTSB)
System Safety Program Plan			
System Security Plan or Security and Emergency Preparedness Plan (SEPP)			
Construction Safety and Security Plan		N	Each active construction contractor's Construction Safety and Security Program Plan has been approved by MTACC.
Safety and Security Authority			
Is the grantee subject to 49 CFR Part 659 state safety oversight requirements?	Y		
Has the state designated an oversight agency as per Part 659.9?	Y		NYSPTSB
Has the oversight agency reviewed and approved the grantee's SSPP as per Part 659.17?	Y		The NYSTB issued a letter of recertification on September 2, 2010.
Has the oversight agency reviewed and approved the grantee's Security			

Project Overview		
Plan or SEPP as per Part 659.21?		
Did the oversight agency participate in the last Quarterly Program Review Meeting?	N	
Has the grantee submitted its safety certification plan to the oversight agency?	N	Certification is within the scope of the C6 Systems Contract.
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	Y	
SSMP Monitoring	Y/N	Notes/Status
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	Y	
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y	
Does the grantee implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	Y	
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	Y	Activity included in the monthly and quarterly reports from the grantee and is reported at each contractor's Job Progress Meeting.
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	Y	Responsibilities during the design and construction phases identified
Does the grantee update the safety and security responsibility matrix/organizational chart as necessary?	Y	

Project Overview		
Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	Y	
Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y	Included in Appendix F of the SSMP
Does the grantee implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities?	Y	Frequency to be increased
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	Nine active construction contracts are being monitored daily by the CCM with oversight being performed by the grantee.
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	Y	Hazard and Vulnerability Analysis
Has the grantee ensured the development of safety design criteria?	Y	Included in SAS project Design Criteria Manual
Has the grantee ensured the development of security design criteria?	Y	Included in SAS project Design Criteria Manual
Has the grantee ensured conformance with safety and security requirements in design?	Y	Ongoing part of design review process
Has the grantee verified conformance with safety and security requirements in equipment and materials procurement?	Y	Verification will continue with the procurement of equipment during the Station contracts (C2B, C4B, and C5B).
Has the grantee verified construction specification conformance?	Y	Reference Section D3.4 Construction Criteria Conformance of the

Project Overview		
		SSMP
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	Y	Reference Section D3.2 Certification Items List of SSMP
Has the grantee verified conformance with safety and security requirements during testing, inspection and start-up phases?	Y	Certiifiable elements have been identified and are currently being verified during equipment factory acceptance testing. Effort is ongoing.
Does the grantee evaluated change orders, design waivers, or test variances for potential hazards and /or vulnerabilities?	Y	Part of formal configuration control process. Efforts are ongoing.
Has the grantee ensured the performance of safety and security analyses for proposed work-arounds?	NA	
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following: Activation Plan and Procedures Integrated Test Plan and Procedures Operations and Maintenance Plan Emergency Operations Plan	Y	Referenced plans are being developed as part of the Systems Contract (C6).
Has the grantee issued final safety and security certification?	N	To be covered as part of the testing in Contract 6
Has the grantee issued the final safety and security verification report?	N	To be covered as part of the testing in Contract 6
Construction Safety		
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	
Does the grantee's contractor(s) have a documented companywide safety and security program plan?	Y	

Project Overview		
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	Reference sections 011150 Safety Requirements and 011160 Security Requirements of the Contract Terms and Conditions
Provide the grantee's OSHA statistics compared to the national average for the same type of work?	The OSHA Lost Time Accident Rate and Recordable Accident Rate from the start of construction until February 28, 2013 are 2.08 and 5.50, respectively. Both rates showed an improvement from the previous reporting period. The Lost Time Accident rate is slightly above the national average of 2.0 and the Recordable Accident Rate is above the national average of 3.5. The cumulative construction time worked since the project inception is 5,383,388 hours. Total lost time injuries since project inception is 56 and other recordable injuries are 92.	National Average 2.0 and 3.5 respectively
If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	MTACC has expanded its safety program to include a monthly walk-thru of the various work zones by the SAS Project Management Team. In addition the SAS Project Safety Manager holds a monthly meeting with all Contractor Safety Managers, OCIP Representative, and the insurance carrier representative in order to make all aware of the safety concerns on the project and to exchange lessons learned. Each contractor is also holding	

Project Overview		
	its own “tool box” meetings focusing on various safety topics. Corrective Action Plans have been requested from contractors with high safety incident rates.	
Does the grantee conduct site audits of the contractor’s performance versus required safety/security procedures?	Y	
Federal Railroad Administration		
If shared track: has grantee submitted its waiver request application to FRA? (Please identify specific regulations for which waivers are being requested)	NA	
If shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	NA	
Is the Collision Hazard Analysis underway?	NA	
Other FRA required Hazard Analysis – Fencing, etc.?	NA	
Does the project have Quiet Zones?	NA	
Does FRA attend the Quarterly Review Meetings?	NA	

APPENDIX F – ON-SITE PICTURES
(Transmitted separately in Final)

Appendix G -- Core Accountability Items				
Project Status:		Original at FFGA	Current*	ELPEP**
Cost	Cost Estimate	\$4,050M	\$4,451M	\$4,980M
Contingency	Unallocated Contingency	\$555.554M	\$307M	\$220M
	Total Contingency (Allocated plus Unallocated)	\$555.554M	\$354M (May 2013)	\$200M
Schedule	Revenue Service Date	June 30, 2014	December 30, 2016	February 28, 2018
Total Project Percent Complete	Based on Expenditures	54.2%		
	Based on Earned Value	N/A		
Major Issue				
Buy America		Status	Comments	
		Open	Verbal guidance has been provided, however written confirmation is pending.	
Safety and Security Certification		Open	Revision of SSMP is underway to incorporate construction phase information. Applicable testing information for certifiable elements is "captured" during submittal process. FAT has started.	
Date of Next Quarterly Meeting:		TBD		

* MTACC's Current Working Budget

** Enterprise Level Project Execution Plan (ELPEP), reflecting medium level of risk mitigation

All data based on June 30, 2013 reporting.