**FEDERAL TRANSIT ADMINISTRATION**

**PROJECT MANAGEMENT OVERSIGHT PROGRAM**

**Contract No. DTFT60-04-D-00012**
**Project No. DC-27-5006**
**Task Order No. 3**

**Grantee: METROPOLITAN TRANSPORTATION AUTHORITY**
**SECOND AVENUE SUBWAY (MTACC-SAS)**

# REGION II MAJOR CAPITAL PROJECTS

**Monthly Report – Part I December 2007**

**Urban Engineers of New York, P.C.**
**350 Fifth Avenue, Suite 6024**
**New York, New York 10118**

## TABLE OF CONTENTS

Page No.



**TABLES**

## LIST OF ACRONYMS

| | |
|---|---|
| AWO | Additional Work Order |
| CSI | Construction Standards Institute |
| DHA | DMJM+Harris and ARUP |
| ESWA | Early Systems Work Agreement |
| FD | Final Design |
| FEIS | Final Environmental Impact Statement |
| FFGA | Full Funding Grant Agreement |
| FTA | Federal Transit Administration |
| MEP | Mechanical, Electrical, Plumbing |
| MTA | Metropolitan Transportation Authority |
| MTACC | Metropolitan Transportation Authority – Capital Construction |
| N/A | Not Applicable |
| NYCT | New York City Transit |
| PE | Preliminary Engineering |
| PMOC | Project Management Oversight Contractor (Urban Engineers) |
| PMP | Project Management Plan |
| PQM | Project Quality Manual |
| RAMP | Real Estate Acquisition Management Plan |
| ROD | Record of Decision |
| SAS | Second Avenue Subway |
| SCC | Standard Construction Categories |
| SSMP | Safety and Security Management Plan |
| SSOA | State Safety Oversight Agency |
| SSPP | System Safety Program Plan |
| TBD | To Be Determined |

# SECTION III SECOND AVENUE SUBWAY (SAS) PROJECT

## I EXECUTIVE SUMMARY

### A. Project Description

- **General Description**: The Second Avenue Subway (SAS) 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 project consists of four phases, with Phase 1 providing 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.

- **Length**: Phase 1 - 2.3 miles from 63rd Street to 105th Street. Total Project - 8.5 miles from 125th Street and Lexington Avenue in Central Harlem to Lower Manhattan.

- **No. of Stations**: Total Project - 16 new stations. Phase 1 - two new mined stations located at 72nd and 86th Streets, One new cut and cover station at 96th Street, and modification of the existing 63rd Street Station on the Broadway Line.

- **Additional Facilities**: New storage tracks will be provided along the alignment and at the north and south terminals during the later phases of the project, but not as part of Phase 1.

- **Vehicles**: Total Project - Approximately 224 railcars that are 75 feet long (28 new 8-car train sets). Phase 1 - 68 new rail cars (includes 12 spares).

- **Ridership Forecast**: The full length SAS is forecast to carry 560,000 daily riders in 2030. Upon completion of Phase 1, ridership is expected to be 191,000 per the MTA's Regional Travel Forecast Model.

### B. Project Status

- The project is in the Final Design/Construction phase.

### C. Schedule

- **Preliminary Engineering** (PE): Entry into PE was approved by FTA on December 20, 2001; PE completed April 17, 2006.

- **Record of Decision** (ROD): Record of Decision issued on July 8, 2004.

- **Final Design** (FD): Entry into FD (Phase 1) was approved by FTA on April 18 2006.

- **Full Funding Grant Agreement** (FFGA): The FFGA was executed on November 19, 2007.

- **Construction:** The start of the Construction Phase was authorized with the approval of an Early Systems Work Agreement (ESWA) on January 5, 2007. The first construction contract, Contract 1 Tunnel Boring, was awarded on March 20, 2007. A Ground-Breaking ceremony was held on April 12, 2007. Construction is *1.29 %* complete based on total expenditures of contract 1 versus total projected construction cost (all contracts) at completion through *December 2007*.

- **Project Complete:** *Total Phase 1 Project percent complete is 8.76 %(based on total expenditures versus Phase 1 projected cost at completion) through December 31, 2007.*

- **Revenue Operations Date**:

**Phase 1 ( MOS)**

| FFGA | Proposed FFGA as Amended | Forecast | | Actual |
|---|---|---|---|---|
| | | Grantee | PMO | |
| November 19, 2007 | N/A | June 2014 (1) | June 2014 | TBD |

(1) Updated SAS Project Phase 1 Integrated Schedule, Revision 2.5.1 *update #17-as of October 31, 2007*

- **Other:** The Environmental Impact Statement was approved on April 8, 2004.

- **Next Quarterly Review Meeting**: TBD

## D. Cost Data for Phase 1

| | Proposed FFGA Amount (1) | | FFGA Amendments | Current Costs (2) | | Expenditures Thru *November 30, 2007* | |
|---|---|---|---|---|---|---|---|
| | ($ Millions) | (%) | | ($ Millions) | Percent of Total Current Cost | ($ Millions) | Percent of Current Project Cost |
| **Total Project Cost:** | **$4,866.614** | **100** | N/A | $4,866.614 | | *$426.096* | *8.76* |
| **Total Federal share:** | **1,350.692** | **27.75** | | 40.076 | - | 39.682 | .82 |
| Total FTA share: | 1,300.000 | 96.25 | | 33.419 | - | | |
| 5309 New Starts share | 1,300.000 | 96.25 | | 33.419 | - | | |
| Total FHWA share: | 50.692 | 3.75 | | 6.657 | - | | |
| CMAQ | 48.233 | 95.15 | | 4.198 | - | | |
| Special Highway Appropriation | 2.459 | 4.85 | | 2.459 | - | | |
| **Total Local share:** | **3,515.922** | **72.25** | | 273.984 | | *386.414* | *7.94* |
| State share: | 450.000 | 12.80 | | - | | | |
| Agency share: | 3,065.922 | 87.20 | | - | | | |
| City share: | 0 | 0 | | - | | | |

(1) Current cost based on SCC Main Worksheet – Build Alternative dated of 5/1/07.

(2) Financial data provided monthly by MTACC.

The FFGA budget included a contingency of $629.0 million. The project contingency is distributed as follows:

- AFI's and AWO's (Design, Pre-bid and construction - $441 million.
- Project Reserve - $ 160 million
- Real Estate - $ 17 million
- Rolling Stock - $ 11 million

The Project Reserve contingency of $160 million was developed at the Risk Workshops but has not been allocated to date.

**E. Technical Capacity Review**

- Project Management Plan (PMP): Updated PMP (Revision 5) for the final design/construction phase of the project was conditionally approved by the FTA on March 22, 2007.

- Project Quality Manual (PQM) Plan: Updated PQM (Revision 2) for the final design/construction phase of the project was approved by the FTA on March 28, 2007.

- Bus Fleet Management Plan (BFMP): Updated BFMP dated February 2007 was conditionally accepted by the FTA in May 2007.

- Rail Fleet Management Plan (RFMP): Updated RFMP conditionally approved by the FTA on April 24, 2007.

**F. System Safety Review**

- The New York State Public Transportation Safety Board, the State Safety Oversight Agency (SSOA), re-certified NYCT's System Safety Program Plan (SSPP) on March 15, 2006 to the revised 49 CFR Part 659 requirements.

**G. Major Issues/Problems**

- None.

**Attachment A- Safety Checklist - Second Avenue Subway**

| Areas of Focus | Y N | Status |
|---|---|---|
| **State Safety Oversight Agency** | | |
| Does the state have a designated State Safety Oversight Agency (SSOA) as defined in 49 CFR Part 659? | Y | New York Public Transportation Safety Board. |
| If so, does the SSOA's authority extend to pre-revenue operations? | Y | Yes, All Phases. |
| Has the SSOA established its System Safety Program Standards (SSPS)? | Y | Standards are based on the requirements of 49 CRF Part 659. |
| Has the SSOA received, reviewed, and approved the Grantee's System Safety Program Plan (SSPP)? | Y | SSPP re-certified on March 15, 2006 per the revised 49 CFR Part 659 requirements. |
| Does SSOA participate in Project Development? Participation includes things such as: review design documents; attend review meetings; and comment on the how the safety aspects of the project are being addressed. | Y | Reference section 2.2.7 of the SAS System Safety & Reliability Plan. |
| Has the SSOA performed a pre-revenue safety review of the Grantee's project? | N | No |
| **System Safety** | | |
| Is the Grantee's overall Safety Program properly documented in its Project Management Plan (PMP)? | Y | See PMP Section 3 |
| Do the Grantee's PMP and associated Safety Program include an appropriate safety policy adopted by its top management? | Y | By approving plan |
| Do the Grantee's PMP and associated Safety Program establish a specific organizational entity and/or individual responsible for the Safety Program? | Y | See PMP |
| Do the Grantee's PMP and associated Safety Program specify staffing requirements, procedures and authority for the safety activities? | Y | See PMP Section 3 |

**Attachment A- Safety Checklist - Second Avenue Subway**

| Areas of Focus | Y N | Status |
|---|---|---|
| Do the Grantee's PMP and associated Safety Program include a formal Safety Certification Program (SCP)? | Y | See PMP (draft program is available) and SAS System Safety & Reliability Plan. |
| Do the Grantee's PMP and associated Safety Program include the development/use of a Safety Design Criteria Manual or equivalent documents? | Y | See DCM Chapter 26 and SAS System Safety & Reliability Plan. |
| Has the Grantee developed and the SSOA approved the Grantee's SSPP? What is the status of this process between the Grantee and SSOA? | Y | SSPP re-certified on March 15, 2006 per the revised 49 CFR Part 659 requirements. |
| Is the Grantee implementing its Safety Program as defined in the PMP? Are the safety milestones being met? (Note: This assumes that the Safety Program is properly documented in the PMP.) | Y | See Project Schedule |
| **Construction Safety** | | |
| Is the Grantee's Construction Safety Program (CSP) documented in the PMP? | Y | Included in the Construction Phase PMP. |
| Has the Grantee implemented its CSP? | Y | Section 011150 of the General Requirements specifies the requirement for furnishing all labor, material, tools, equipment, procedures and safety plans necessary to create and maintain a safe work environment. |

**Attachment A- Safety Checklist - Second Avenue Subway**

| Areas of Focus | Y N | Status |
|---|---|---|
| How do the Grantee's OSHA statistics compare to the national average for the same type of work? If the comparison is not favorable, what actions are being taken by the Grantee to improve its safety record? | Y | Statistical data being accumulated for the SAS project. |
| Is the Grantee using wrap-up insurance on this project? | Y | Owner Controlled Insurance Program (OCIP) has been implemented. Insurance coverage by Allied North America, administered by Project Technologies International, LLC. |
| Is the Grantee using safety incentives/disincentives on this project? | Y | Ongoing. |
| **Shared Track** | | |
| Does this project have shared track? | N | |
| Has the Grantee coordinated with FRA regarding waivers for shared track usage? | N/A | |
| **Shared Corridor** | | |
| Does this project include shared corridor? Please describe the geography of the shared corridor. | N | |
| What is the Grantee doing to specifically address safety concerns in the shared corridor portion of the project? | N/A | |

## II. ACTION ITEMS – ITEMS FOR GRANTEE ACTION

**Status of Action Items**

The status of Action Items is shown in the following summary chart.

**Note:** Items marked with a "C" in the "PMO Contractor Status" column will be dropped from future reports.

**Key Item**

2. XX PMO CLIN 5 – Project Management Plan

3. XX PMO CLIN 3 – Project Monitoring

**Legend**

| Priority (Pr) | Grantee Action | PMO Contractor Status |
|---|---|---|
| 1 – Most Critical | D – Remedial Action Developed | R – Review On-going |
| 2 – Critical | A – Remedial Action Approved | C – Completed - No further review required |
| 3 – Least Critical | I – Action Implemented | |

**Items for Action**

| Pr | Item | Identification | Nature of Problem | Grantee Action | | | Comments | Status |
|---|---|---|---|---|---|---|---|---|
| | | | | D | A | I | | |
| | | | | | | | | |

There are no open items.

## III. OBSERVATIONS AND CURRENT ISSUES

### GENERAL AGENCY ASSESSMENT

*MTA Capital Construction (MTACC) Company is a public corporation with a specific mission to plan, design and construct major current and future MTA system expansion projects, including the Second Avenue Subway (SAS) project. MTACC has engaged the services of a design consultant, DMJM+Harris and ARUP (DHA), and a consultant construction management services firm, PB Americas, to assist in its management of the project by supplementing MTACC staff. MTA's Real Estate Department is taking the lead in the acquisition of property required for the project. The PMOC is of the opinion that MTACC has an effective management team in place to achieve the Revenue Operations Date. The PMOC will continue to monitor the project in accordance with the requirements of the PMP.*

**Budget/Cost:** *On November 19, 2007, the FTA and MTA executed a FFGA in the amount of $4,866,614,000. Federal participation is $1,348,233,000 and Local participation is $3,518,381,000. A total of $426.096 million has been expended on the project through December 31 2007, including $5.455 million on the Manhattan East Side Access (ESA) study and related FEIS work during the 1995-1999 capital program and $420.641 million as part of the 2000-2004 capital programs.*

**Budget Control**: MTACC continued to effectively monitor, control, and report project costs and expenditures. The PMOC will continue monitoring MTACC's Budget Control during the Final Design phase and beyond.

**Schedule:** The table 1 identifies major project milestones established by the MTACC through award of the first construction contract. Not all milestones/activities/events are included. *MTACC issued an updated SAS Project Phase 1 Integrated Schedule, Revision 2.5.1 update #17 as of October 31, 2007. The schedule is currently being reviewed by the PMOC.* At the October 10, 2007 Construction Progress Meeting, the contractor stated the design of the TBM's substation would be completed at the end of 2007 and given to Con Ed for review, approval and put into service the end of December 2008. *The Contractor's substation submittal was not submitted in December 2007.*

Since Con Ed took 17 months to review and certify the East Side Access substation, the PMOC suggested a schedule fragnet (fragmentary network) be prepared for the contractor's design and Con Ed's review and certification of the SAS TBM substation. This would provide intermittent milestones to confirm the process is on schedule.

**Contract Packaging Plan:** The scope of work associated with Phase 1 of the SAS Project was initially defined in 6 Construction Packages (contracts). Efforts however are underway to reallocate the scope of work into 9 contracts. MTACC is taking this action because contractors are having difficulty getting bonding on contracts valued greater than $400 million. Contracts 2, 4 and 5 exceeded the $400 million level. The reduction in contract value will give more contractors the opportunity to bid on the project. However, additional coordination and interfacing among the various contractors will be required.

**Project Cost Estimate:** The MTACC has updated the SAS Project Phase 1 cost estimate to address the concerns noted during the Risk Assessment process. Adjustments have been made to increase the unallocated contingency, real estate cost, and support an additional 6 months' float.

The MTACC has submitted the cost estimate and its various attachments to the FTA as required by the FFGA application. Total project cost (including finance charges) is $4,866,614,000.

**Quality Management:** The PMOC reviewed the Quality Management System addressed in SAS Project Quality Manual (PQM), Revision 2, dated November 2006, and found that it complied with FTA guidance and was therefore acceptable. The FTA subsequently approved an updated PQM was on March 28, 2007. The SAS Quality Management System as described in the PQM establishes a systematic approach to ensure that the contracted products and services meet the requirements of the specifications. The SAS Project quality team continues to be proactive in the implementation of the quality management system. The SAS Quality Assurance Manager approved the Quality Management System to be utilized by S3 (Contract 1-tunnel boring contractor) in July 2007. S3's quality personnel are actively conducting preparatory phase session meetings, design process control reviews, incoming and in-process materials inspections, test monitoring and performing quality system audits.

**Real Estate:** MTA Real Estate is handling all real estate matters related to the SAS project and is responsible for acquiring the real estate interests needed for the project. MTA's real estate acquisition process is addressed in the Real Estate Acquisition Management Plan (RAMP). The initial PMOC review determined that the RAMP did not comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act (Uniform Act). MTACC submitted an updated RAMP during the last week of May 2007.

Following this update, FTA Real Estate met with MTA's Real Estate group to review lessons learned on the Fulton Street Transit Center project, which utilized the same process as the SAS project. The FTA sent MTA a list of the required additions in an August 13, 2007 letter. The MTA incorporated the comments into the RAMP and resubmitted it to the FTA in October 2007. The PMOC reviewed the Plan and recommended a few changes. A meeting on the lessons learned on the Fulton project was held on November 1, 2007. As a result, the SAS RAMP was revised and submitted. The FTA gave conditional approval of the RAMP on November 15, 2007.

The MTA has retained a Consultant, O R Colan, to assist with the relocating residential and commercial tenants

The last Public Hearing required for the proposed acquisition of temporary, permanent and fee interests in the properties for the four stations (63rd, 72nd, 86th & 96th streets) was held on September 20, 2007. Respondents have until the end of 2007 to challenge the MTA's property taking, after which time they cannot challenge them. All Contract 1 properties have been acquired. *The PMOC is concerned that the real estate acquisition process is taking longer than anticipated and the properties needed for the 96th Street Station will be six months late. MTA needs to rethink its position on holding off awarding a construction contract until all the properties have been acquired.*

**Design and Engineering Management:** MTACC awarded the FD of Phase 1 to DHA on April 18, 2006 at a value of approximately $143.485 million ($116.000 million FD and $27.485 million construction phase design support). Design completion milestones have been incorporated into the project schedule. Because of the rescoping of Contracts 2, 4 and 5 these milestones might be impacted. Working group meetings are ongoing to support the Final Design of the various contract packages. PMOC continues to monitor these meetings.

**Construction Management:** On May 31, 2007, MTACC awarded a contract to PB Americas to perform Construction Management services for Phase 1 of the SAS project. As Consultant Construction Manager (CCM), PB Americas will provide services for 91 months with a not-to-exceed value of $80.9 million. PB is playing an active role coordinating activities among the various agencies, the contractor (S3) and the SAS Project Team. S3 concerns are being addressed with action items being assigned and tracked for closure. Working Group and Job Progress Meetings are being held bi-weekly to keep all parties informed.

**CONTRACT 1: G-26002 (TUNNELS FROM 92ND TO 63RD STREETS)**

**Description:** Contract 1 provides for the construction of tunnels between 92nd Street and the existing Lexington Ave./63rd Street Station, using a Tunnel Boring Machine (TBM) and other mining methods. It includes all preparatory work for tunneling, such as utility relocation and construction of a launch box and two vertical shafts. It also includes preparatory work for the subsequent contracts, such as maintenance of electrical and other facilities.

**Final Design:** *Final design was completed in June 2006.*

**Construction Progress:** Contract 1 was awarded to S3 Tunnel Contractors (a joint venture of Skanska, Schiavone and Shea) on March 20, 2007 for $337,025,000. *Contractor efforts have focused on relocating the utilities on the west side of 2nd Avenue to prepare for the installation of the secant pile and slurry walls as support of the excavation for the TBM launch box. Work areas are as indicated below:*

- *94th to 95th Street – Widening sewer trench for revised connection at 95th St. Pumping/grading trench in preparation for sewer cradle.*
- *93rd to 94th Street – Placing concrete sewer cradle.*
- *93rd Street Intersection – Verizon replacing cables in wooden manholes.*
- *92nd to 93rd Street – Backfilling sewer trench, raising sewer connection at 1 location.*
- *91st to 92nd Street – Completed case in place concrete wall.*
- *91st Street Intersection – Forming of new electrical manhole.*

**Schedule:** *Notice-to-Proceed was granted on March 20, 2007, with a July 20, 2010 completion date (duration 40 months). Overall, utility relocations are behind schedule. This is primarily due to the removal of unidentified utilities and a large sub-surface wall which were not on the plans. There are three time extensions which were negotiated with S3 for a total of 36 working days. To recover the lost time, additional manpower has been added and weekend work scheduled. The PMOC is currently reviewing the Critical Path Method (CPM) schedule update No. 6 of Revision 5.*

**Budget:** *The budget for Contract 1 is $353,876,250. It is comprised of S3's bid price of $337,025,000 plus a contingency of $16,851,250. The contingency is 5% of the bid price and is used to cover additional work orders (AWOs). Presently 12 AWOs have been approved for*

*$666,400, with 7 AWOs pending. The contract is within budget with an estimate at completion (EAC) of $337,691,400 (bid price plus approved AWOs).*

**Quality:** *MTACC has approved S3's Quality Control System. S3's quality organization is actively conducting preparatory meetings, design process control reviews, testing and inspection of material, and audits of suppliers.*

**Safety:** *S3 has a proactive safety organization. Toolbox meetings are held to acquaint personnel with the safety requirements. S3 safety personnel and the OCIP representative continue to monitor the site for compliance. Violations are corrected immediately. The public is kept abreast of the activity in the work area by message boards.*

**CONTRACT 2: G-26005 (NEW STATION AT 96TH STREET)**

**Description:** This contract provides for the construction of a new station at 96th Street and 2nd Avenue. The repackaging of this contract will reallocate the scope of work into two separate packages (2A - Station Structure and Heavy Civil and 2B – Station Finishes & MEP). Contract 2A's scope of work will include construction of the station structure, the station entrances, mezzanines, platforms, ancillary buildings, ventilation plants, and modification of the existing tunnel section between 96th Street and 105th Street. Contract 2B's scope of work will include the construction of the station architectural finishes and mechanical, electrical and plumbing (MEP) elements. It also provides for the infrastructure (structure, finishes, power, and MEP requirements) for the Systems Contract (Contract 6: G-26009).

**Final Design:** *Contract 2A and 2B Final Design is ongoing and is schedule to be completed March 17, 2008.*

**CONTRACT 3: G-26006 (REHABILITATION OF EXISTING LEXINGTON AVENUE/63RD STREET STATION)**

**Description:** This contract provides for the rehabilitation of the existing Lexington Avenue/63rd Street Station to accommodate the connection to the SAS Line. The scope of this contract consists of opening half of the station, on both the upper and lower levels, to full revenue service. New entrances are to be added at the 3rd Avenue end of the station. Employee facilities and all MEP facilities are to be added and rehabilitated to support both the existing "F" and new "Q" Line services. It also provides for the infrastructure (structure, finishes, power, and MEP requirements) for the Systems Contract (Contract 6: G-26009). Contract 3's scope of work will also include the mining of tunnels G3 and G4 from the 63rd Street Station to the 72nd Street Station.

**Final Design:** *Final Design is in progress and is scheduled to be completed on December 17, 2008.*

**CONTRACT 4: G-26007 (NEW STATION AT 72ND STREET)**

**Description:** This contract provides for the construction of a new station at 72nd Street and 2nd Avenue. The repackaging of this contract will *now* reallocate the scope of work into *two* separate packages (4A – Station Cavern and Heavy Civil and 4B – Station Finishes and MEP. Contract 4A's scope of work will include excavation for a three track cavern, construction of the

station structure, the station entrances, mezzanines, platforms, ancillary buildings and ventilation plants. Contract 4B's scope of work will include the construction of the station architectural finishes and MEP elements. It also provides for the infrastructure (structure, finishes, power, and MEP requirements) for the Systems Contract (Contract 6: G-26009).

**Final Design:** *Final Design is ongoing and is scheduled to be completed October 24, 2008 for both Contract 4A and 4B.*

**CONTRACT 5: G-26008 (NEW STATION AT 86TH STREET)**

**Description:** This contract provides for the construction of a new station at 86th Street and 2nd Avenue. The repackaging of this contract will reallocate the scope of work into two separate packages (5A - Stations Structure and Heavy Civil and 5B – Station Finishes & MEP). Contract 5A's scope of work will include excavating the station cavern, construction of the station's structure, entrances, mezzanines, platforms, ancillary buildings and ventilation plants. Contract 5B's scope of work will include the construction of the station architectural finishes and MEP elements. It also provides for the infrastructure (structure, finishes, power, and MEP requirements) for the Systems Contract (Contract 6: G-26009).

**Final Design:** *Final Design for Contracts 5A and 5B is scheduled to be completed June 24, 2008.*

**CONTRACT 6: G-26009 (SYSTEMS CONTRACT – TRACK, SIGNALS, POWER AND COMMUNICATION)**

**Description:** This contract provides for the installation of all of the systems equipment, integration of the systems that link the new stations to each other and to the existing systems, and the commissioning of the systems for the revenue operation of the new SAS Line.

**Final Design:** *Final Design is ongoing and is scheduled to be completed July 29, 2008.*

**Table 1 – Project Milestones**

| Activity / Event | MTACC's Schedule Information | |
|---|---|---|
| | Current | Previous Report |
| FTA Approval of Final Environmental Impact Statement (FEIS) | Apr. 8, 2004 (A) | Apr. 8, 2004 (A) |
| MTA Board Approval to Advertise First D/B Tunneling Contract | Apr. 28, 2004 (A) | Apr. 28, 2004 (A) |
| Notice of Availability of FEIS in Federal Register | May 7, 2004 (A) | May 7, 2004 (A) |
| MTACC In-House Risk Analysis for entire Phase 1 | June 4, 2004 (A) | June 4, 2004 (A) |
| Contractor Session for SAS and No. 7 Line Extension | May 25, 2004(A) | May 25, 2004(A) |
| Advertise 1st Design/Build Tunneling Contract | June 21, 2004 (A) | June 21, 2004 (A) |
| Value Engineering 2nd Stage for Phase 1 | June 7, 2004 (A) | June 7, 2004 (A) |
| Pre-Bid Meeting for 1st D/B Tunneling Contract | July 20, 2004 (A) | July 20, 2004 (A) |
| Record of Decision (ROD) | July 8, 2004 (A) | July 8, 2004 (A) |
| Submit request to enter Final Design (Phase 1)<br>Revised request to enter Final Design (Phase 1) | Sept. 13, 2004 (A)<br>Nov. 15, 2005 (A) | Sept. 13, 2004 (A)<br>Nov. 15, 2005 (A) |
| PE for the Full Length of SAS Substantially Complete | Dec. 20, 2004 (A) | Dec. 20, 2004 (A) |
| FTA Approval to Enter Final Design | April 18, 2006(A) | April 2006 (A) |
| FTA Approval of Early Systems Work Agreement (Approval of ESWA also view as authorization to enter Construction) | Jan. 5, 2007 (A) | Jan. 5, 2007 (A) |
| Award Contract for Tunnel Work (1st Contract) | Mar 20, 2007 (A) | Mar 20, 2007 (A) |
| Complete Extended Preliminary Engineering | Nov. 30, 2005(A) | Nov. 30, 2005(A) |
| Complete Final Preliminary Engineering | April 17, 2006(A) | April 17, 2006 (A) |
| Award Final Design for Phase 1 | April 18, 2006 (A) | April 2006 (A) |
| Receipt of Full Funding Grant Agreement | Nov. 19, 2007 (A) | Nov. 19, 2007 (A) |

**FTA Requirements for Entering into Final Design:** In accordance with the FTA's April 18, 2006 letter approving entry into Final Design, MTACC must address and resolve seven technical and financial issues during Final Design and prior to FTA entering into a Full Funding Grant Agreement (FFGA). The following list enumerates those items and their current status:

1. **Update and Maintain a Current Project Level Capital Cost Estimate** – MTACC has updated the SAS Project Phase 1 cost estimate to address the concerns noted during the risk assessment process. It has made adjustments to increase the unallocated contingency and support an additional 6 months' float. The cost estimate and its various attachments have been submitted to the FTA. **This action is considered closed.**

2. **Update and Maintain a Current Safety and Security Management Plan** – MTACC submitted an informal draft SAS Safety and Security Management Plan (SSMP) to the PMOC on January 26, 2007 and it was reviewed by the PMOC's Safety and Security Specialists. Following a conference call between the PMOC and FTA, the PMOC requested MTACC to update its Design Criteria Manual to include a chapter on Security Design similar to those utilized on the East Side Access project. This chapter was received in October 2007, reviewed by the PMOC and comments were returned. *The SSMP Spot Report was submitted November 12, 2007. FTA approved the SSMP on November 15, 2007.* ***This action is considered closed.***

3. **Advance the Project Design and Construction Consistent with the Environmental Mitigation Measures from the FEIS and ROD** – MTACC committed to developing a tracking mechanism to ensure that all environmental mitigation measures, identified in Attachment A of the Record of Decision, are being addressed during Final Design. To date, 3 Technical Memorandums have been issued that address changes to the project subsequent to the FEIS and ROD. On July 30, 2007, the FTA concurred with Memorandum 3 that the design changes to the SAS Project will not result in additional significant adverse environmental impacts. If changes are made in the future, FTA will need to determine if additional environmental studies will be necessary before the changes are approved. MTACC is preparing Technical Memorandum No. 4 to address a change to entrance number 3 at the 72nd Street Station.

4. **Develop and Implement a Management Plan for Accomplishing the Risk Mitigations** – The SAS Project Team and the FTA's Risk Assessment Team have worked effectively in addressing issues, which could impact the success of the project. They have developed a Risk Management Program through various workshops and mutual cooperation. The PMOC has documented the efforts of the Risk Assessment Team in various draft Spot Reports. On June 6, 2007 the PMOC forwarded the reports to FTA Headquarters for review. The PMOC will monitor the implementation of the Risk Management Program as the project progresses through the design, construction and test phases. The MTACC has identified and documented the risk mitigation initiatives in a scoping document for incorporation into the PMP.

This document was reviewed by the PMOC and FTA. All concerns were subsequently resolved.

5. **Provide the Required Documentation to Support the Current "Medium" New Starts Rating** – The PMOC received the FY 2008 New Starts submission from MTACC on August 30, 2006. The PMOC review of the SCC Worksheets revealed several anomalies associated with the number of required rail vehicles, project description, and SCC Worksheet revision status. MTACC made the required corrections and submitted new worksheets. The PMOC documented its findings in a Spot report that it issued on October 9, 2006. A copy containing FTA requested corrections was transmitted to MTACC on October 23, 2006. **This action is considered closed.**

6. **Update the PMP and each Sub-plan as Applicable to Support Future Construction Activities** – Updated PMP (Revision 5) for the final design/construction phase of the project was approved by the FTA on March 22, 2007. The FTA approved an updated PQM (Revision 2) for the final design/construction phase of the project on March 28, 2007. MTCC has updated all documents required in support of the FFGA application (RFMP, BFMP, RAMP, etc.). **This action is considered closed.**

7. **Prepare an Acceptable Before and After Study Plan** – The PMOC received the SAS Before and After Study Plan on October 24, 2006 and provided comments to the SAS Team in February 2007. MTACC officially submitted the Before and After plan to the FTA on March 6, 2007. *FTA approved the Before and After plan on November 15, 2007.* ***This action is considered closed.***

## TABLE 2 - COST AND SCHEDULE SUMMARY

| | Cost (in Millions) | | | | | | Schedule | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Project** | **Original Budget** | **Latest Estimate at Completion (EAC)** | **Percent (%) Difference (+ or -)**** | **Spent Through 12/31/07 (Funding Report)** | **Percent (%) Complete Planned** | **Actual** | **Award/NTP Date** | **Original Completion Date*** | **Actual Forecasted Completion** | **Original Duration (Months)** | **Duration Percent (%) Difference (+ or -)**** | **Percent (%) Complete** |
| Contract 1 - Tunnel Boring<br>S3 Joint Venture ( Skanska/Schiavone/Shea) | $337,025,000 | $337,025,000 | | $30,752,696 | | 9.1% | 3/20/2007 | 7/20/2010 | 7/20/2010 | 40 months | N/A | |
| Contract 2 - 96th Street Station<br>Name of Contractor | N/A | | | | | | | | | | | |
| Contract 3 - 63rd Street Station<br>Name of Contractor | N/A | | | | | | | | | | | |
| Contract 4 - 72nd Street Station<br>Name of Contractor | N/A | | | | | | | | | | | |
| Contract 5 - 86th Street Station<br>Name of Contractor | N/A | | | | | | | | | | | |
| Contract 6 - Track and Systems<br>Name of Contractor | N/A | | | | | | | | | | | |
| Contracts to Be Bid | $2,225,975,000 | $2,225,975,000 | | | | | | | | | | |
| OCIP (Insurance) | $160,000,000 | $160,000,000 | | $51,083,169 | | 31.9% | | | | | | |
| TA Labor | $28,000,000 | $28,000,000 | | | | | | | | | | |
| Engrg. Force Account | $42,000,000 | $42,000,000 | | $269,865 | | 0.6% | | | | | | |
| 3rd Party Reimbursement | $58,000,000 | $58,000,000 | | $553,753 | | 1.0% | | | | | | |
| Artwork Allowance | $6,000,000 | $6,000,000 | | | | | | | | | | |
| Preliminary Engr. & EIS | 240,814,507 | 240,814,507 | | 236,675,046 | | 98.3% | | | | | | |
| Final Design | $169,185,493 | $169,185,493 | | $67,946,875 | | 40.2% | 4/18/2006 | | | | | |
| Construction Mgmt. | $86,000,000 | $86,000,000 | | $875,374 | | 1.0% | 5/31/2007 | | | | | |
| Rolling Stock | $157,000,000 | $157,000,000 | | | | | | | | | | |
| Property Acquisition | $245,000,000 | $245,000,000 | | $29,155,387 | | 11.9% | | | | | | |
| Contingency | $129,000,000 | $129,000,000 | | $668,400 | | 0.5% | | | | | | |
| Project Reserve | $6,000,000 | $6,000,000 | | | | | | | | | | |
| Executive Reserve | $160,000,000 | $160,000,000 | | | | | | | | | | |
| **Subtotal** | 4,050,000,000 | 4,050,000,000 | | 417,980,565 | | 10.3% | | | | | | |
| Financing | 816,614,000 | 816,660,000 | | | | | | | | | | |
| **Totals** | 4,866,614,000 | 4,866,660,000 | | 417,980,565 | | 8.6% | | | | | | |

**Attachment B- Summary of Concerns and Recommendations**

The status of PMO Contractor Concerns and Recommendations is shown in the following summary chart.

**Note:** Items marked with a "C" in the "PMO Contractor Status" column will be dropped from future reports.

**Key Item**

Subtask 11A XX **CLIN 0002** – Technical Capacity Review

Subtask 12A XX **CLIN 0003** - Monitor Project Development and Implementation

**Legend**

| Priority (Pr) | Category (Cat.) | Grantee Action (DAI) | PMO Contractor Status |
|---|---|---|---|
| 1 – Most Critical | S1 – Scope | D – Remedial Action Developed | R – Review On-going |
| 2 – Critical | S2 – Schedule | A – Remedial Action Approved | C – Completed – No further review required |
| 3 – Least Critical | S3 – Safety/Security | I – Action Implemented | |
| | B – Budget | Y – Yes | |
| | Q – Quality | N – No | |

## Attachment B - Summary of Concerns and Recommendations

| Pr | Item | Identification | Cat | Nature of Concern | PMO Recommendation | Grantee Action | | | Status | Status |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | D | A | I | | |
| | | | | | | | | | | |

There are no Summary of Concerns and Recommendations for SAS.