

**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 January 2008**

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## 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 96<sup>th</sup> Street to 63<sup>rd</sup> Street, and will connect with the existing Broadway Line that extends to Lower Manhattan and Brooklyn. Subsequent phases will extend the line northward to 125<sup>th</sup> Street and to the southern terminus at Hanover Square in Lower Manhattan.
- **Length:** Phase 1 - 2.3 miles from 63<sup>rd</sup> Street to 105<sup>th</sup> Street. Total Project - 8.5 miles from 125<sup>th</sup> 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 72<sup>nd</sup> and 86<sup>th</sup> Streets, One new cut and cover station at 96<sup>th</sup> Street, and modification of the existing 63<sup>rd</sup> 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 January 31, 2008.*
- **Project Complete:** Total Phase 1 Project percent complete *is 8.76 % (based on total expenditures versus Phase 1 projected cost at completion) through January 31, 2008*
- **Revenue Operations Date:**

**Phase 1 (MOS)**

| FFGA              | Proposed FFGA as Amended | Forecast Completion      |           | Actual Completion |
|-------------------|--------------------------|--------------------------|-----------|-------------------|
|                   |                          | Grantee                  | PMO       |                   |
| November 19, 2007 | N/A                      | June 2014 <sup>(1)</sup> | 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:** *February 7, 2008*

#### D. Cost Data for Phase 1

|                                  | FFGA                 |              |           | FFGA<br>Amend<br>ments | Current Costs<br>Estimate at<br>Completion |            | Expenditures Thru<br>December 31, 2007 |  |
|----------------------------------|----------------------|--------------|-----------|------------------------|--|------------|--|--|
|                                  | (\$ Millions)<br>(1) | (%)          | Obligated |                        | (\$ Millions)<br>(2)                       | (%)        | (\$ Millions)                          | Percent of<br>Current<br>Project<br>Cost |
| <b>Total Project Cost:</b>       | <b>\$4,866.614</b>   | <b>100</b>   |           | N/A                    | <b>\$4,866.614</b>                         | <b>100</b> | \$426.096                              | 8.76                                     |
| <b>Total Federal share:</b>      | <b>1,350.692</b>     | <b>27.75</b> |           |                        | <b>35.878</b>                              | -          | 39.682                                 | .82                                      |
| Total FTA share:                 | 1,300.000            | 96.25        |           |                        | 33.418                                     | -          |  |  |
| 5309 New Starts share            | 1,300.000            | 96.25        |           |                        | 33.418                                     | -          |  |  |
| Total FHWA share:                | <b>50.692</b>        | <b>3.75</b>  |           |                        | <b>2.460</b>                               | -          |  |  |
| CMAQ                             | 48.233               | 95.15        |           |                        | 0  | -          |  |  |
| Special Highway<br>Appropriation | 2.459                | 4.85         |           |                        | 2.460                                      | -          |  |  |
| <b>Total Local share:</b>        | <b>3,515.922</b>     | <b>72.25</b> |           |                        | <b>273.984</b>                             |            | 386.414                                | 7.94                                     |
| State share:                     | 450.000              | 12.80        |           |                        | -  |            |  |  |
| Agency share:                    | 3,065.922            | 87.20        |           |                        | -  |            |  |  |
| City share:                      | 0                    | 0            |           |                        | -  |            |  |  |

(1) Updated to reflect Attachment 6 (Schedule of Federal Funds) from SAS FFGA

(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  |
|---|-----|---|
| <b>State Safety Oversight Agency</b>  |     |   |
| 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  |
| <b>System Safety</b>  |     |   |
| 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   |
| <b>Construction Safety</b>   |     |  |
| 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.   |
| <b>Shared Track</b>   |     |  |
| Does this project have shared track?  | N   |  |
| Has the Grantee coordinated with FRA regarding waivers for shared track usage?  | N/A |  |
| <b>Shared Corridor</b>  |     |  |
| 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

#### A. 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.

#### B. BUDGET/COST STATUS

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 submitted the cost estimate and its various attachments to the FTA as required by the FFGA application. Total project cost is \$4,866,614,000 and is broken down into the Standard Cost Categories (SCC) as follows:

| Standard Cost Category (SCC) # | Description                                    | Year of Expenditure (YOE) \$000 |
|--------------------------------|--|---------------------------------|
| 10                             | Guideway & Track elements                      | 612,404                         |
| 20                             | Stations, Stops, Terminals, Intermodal         | 1,092,836                       |
| 30                             | Support Facilities: Yards, Shops, Admin Bldgs. | 0                               |
| 40                             | Site Work & Special Conditions                 | 276,229                         |
| 50                             | Systems  | 322,707                         |
| 60                             | ROW, Land, Existing Improvements               | 240,960                         |
| 70                             | Vehicles                                       | 152,999                         |
| 80                             | Professional Services                          | 796,311                         |
| 90                             | Unallocated Contingency                        | 555,554                         |
| Subtotal                       |  | 4,050,000                       |
| Financing Cost                 |  | 816,614                         |
| Total Project                  |  | 4,866,614                       |

**Project Funding:** On November 19, 2007, the FTA and MTA executed a FFGA in the amount of \$4,866,614,468, including finance costs. Total Federal participation is \$1,350,692,821 and Local participation is \$3,515,921,647. The table below lists the associated grants with respective appropriated and obligated amounts:

| <b>Grant Number</b> | <b>Amount</b>       | <b>Obligated (\$M)</b> | <b>Disbursement (\$M)<br/>thru January 2008</b> |
|---------------------|---------------------|------------------------|---|
| 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-17-X001-00       | \$2,459,821         | \$2,459,821            | \$2,459,821                                     |
| <b>Total</b>        | <b>\$35,877,870</b> | <b>\$35,877,870</b>    | <b>\$35,877,870</b>                             |

**Project Expenditures and Commitments:** A total of \$445.768 million has been expended on the project through January 31, 2008, 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. (See Table 2)

**Project Cost Management and 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, construction, and test phases.

**Change Orders:** The table below shows the status of change orders for professional service, and construction contracts as of January 2008.

| <b>Professional Service/Construction</b> | <b>Total # of Approved Change Orders</b> | <b>Approved Change Orders (\$M)</b> | <b>% of Award Value</b> |
|--|--|-------------------------------------|-------------------------|
| DHA (Contract Mod.)                      | 1  | \$44,772                            | .01%                    |
| Contract 1 (C26002)                      | 12 (1 credit)                            | \$661,416                           | .02%                    |

### **C. PROJECT SCHEDULE STATUS**

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.

*Final Design is on schedule with interim submittals being made as planned. Real estate acquisition for the 96<sup>th</sup> Street Station is behind schedule.*

*Skanska, Schiavone and Shea (S3)'s Critical Path Method (CPM) schedule Update 7 (Baseline Revision 5) through December 2007 was issued and is being reviewed by MTACC. Overall, the schedule for utility relocation is behind due to unknown utilities uncovered during the west side utility relocation. Utility relocation on the east side of 2<sup>nd</sup> Ave. is scheduled to begin February 15, 2008. S3's current forecast is to complete the design of the TBM substation by the first week of February 2008. 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 intermediate milestones to confirm the process is on schedule.

**Table 1 – Project Milestones**

| Activity / Event   | MTACC's Schedule Information |                    |
|--|------------------------------|--------------------|
|  | Current                      | Previous Report    |
| 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/NTP Contract for Tunnel Work (1 <sup>st</sup> Contract)  | Mar 20, 2007 (A)             | Mar 20, 2007 (A)   |
| FTA Approval of Final Environmental Impact Statement (FEIS)  | Apr. 8, 2004 (A)             | Apr. 8, 2004 (A)   |
| Complete Final Preliminary Engineering   | April 17, 2006(A)            | April 17, 2006 (A) |
| Award Final Design for Phase 1   | April 18, 2006 (A)           | April 18, 2006 (A) |
| FTA Approval to Enter Final Design   | April 18, 2006(A)            | April 18, 2006 (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)    |
| Contractor Session for SAS and No.7 Line Extension   | May 25, 2004(A)              | May 25, 2004(A)    |
| MTACC In-House Risk Analysis for entire Phase 1  | June 4, 2004 (A)             | June 4, 2004 (A)   |
| Advertise 1 <sup>st</sup> Design/Build Tunneling Contract  | June 21, 2004 (A)            | June 21, 2004 (A)  |
| Value Engineering 2 <sup>nd</sup> Stage for Phase 1  | June 7, 2004 (A)             | June 7, 2004 (A)   |
| Pre-Bid Meeting for 1 <sup>st</sup> 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)   | Sept. 13, 2004 (A)           | Sept. 13, 2004 (A) |
| Revised request to enter Final Design (Phase 1)  | Nov. 15, 2005 (A)            | Nov. 15, 2005 (A)  |
| Receipt of Full Funding Grant Agreement  | Nov. 19, 2007 (A)            | Nov. 19, 2007 (A)  |
| Complete Extended Preliminary Engineering  | Nov. 30, 2005(A)             | Nov. 30, 2005(A)   |
| PE for the Full Length of SAS Substantially Complete   | Dec. 20, 2004 (A)            | Dec. 20, 2004 (A)  |

## D. DESIGN ENGINEERING STATUS

### Design Management

MTACC awarded the Final Design (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. Working group meetings are ongoing to support the Final Design of the various contract packages. PMOC continues to monitor these meetings. Final Design is progressing to the completion dates as indicated below (MTACC's Integrated Schedule Rev 2.5.1 Update#17):

- Contract 1 –C 26002 FD was completed in June 2006 (TBM Tunnels)
- Contract 2A –C 26005 and 2B –C 26010 FD scheduled completion date March 17, 2008 (96th Street Station)
- Contract 3 –C 26006 FD scheduled completion date December 17, 2008 (63rd Street Station)
- Contract 4A –C 26007 and 4B –C 26011 FD scheduled completion date October 24, 2008 (72nd Street Station)
- Contract 5A –C 26008 and 5B –C 26012 FD scheduled completion date June 24, 2008 (86th Street Station)
- Contract 6 –C 26009 FD scheduled completion date July 29, 2008

## E. CONSTRUCTION STATUS

### 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. *PB completed a Constructability/Peer Review of the 96<sup>th</sup> Street Station design (60% submittal) and subsequently issued its final report in December 2007. The SAS project team is evaluating the recommendations.*

#### **Contract 1: C-26002 (TBM Tunnels from 92<sup>nd</sup> to 63<sup>rd</sup> 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.

**Schedule:** Notice-to Proceed was issued on March 20, 2007, with a July 20, 2010 completion date (duration 40 months). *Relocation of the utilities continues to trend behind schedule by approximately 3 months.* 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. *S3's Critical Path Method (CPM) schedule Update 7 (Baseline Revision 5) through December 2007 was issued and the MTACC is reviewing it. PMOC has requested a copy of the schedule.*

**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 2<sup>nd</sup> 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:

- *95<sup>th</sup> Street –Connected new 42” sewer to existing sewer and backfilled*
- *94<sup>th</sup> to 95<sup>th</sup> Street –Finished installing sewer pipe, cradle and backfilled*
- *94<sup>th</sup> Street –Installed precast sewer manhole 94-1, install 18” sewer pipe and cradle*
- *93<sup>rd</sup> to 94<sup>th</sup> Street –Installed 12” gas main and 12” water main and backfilled*
- *93<sup>rd</sup> Street –Installed three additional timber piles for sewer chamber 93-1*
- *92<sup>nd</sup> to 93<sup>rd</sup> Street –Installed 12” water main and backfilled. Started the installation of the gas main*
- *92<sup>nd</sup> Street –Placed bottom slab for sewer chamber 92-1*

**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 allocated to cover additional work orders (AWOs). *Through January 2008, 12 AWOs have been negotiated and approved for a total of \$661,416.* The contract is within budget with an estimate at completion (EAC) of \$337,686,416 (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. *MTACC's Quality Department is providing adequate oversight of S3's compliance to its Quality Control System.*

**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. *One lost time incident was reported during this period.*

## **Contract 2: (96<sup>th</sup> Street Station)**

**Description:** This contract provides for the construction of a new station at 96th Street and 2nd Avenue. The repackaging of this contract reallocates the scope of work into two separate packages (Contract 2A –C 26005 Station Structure and Heavy Civil, and Contract 2B –C 26010 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: C-26009).

**Schedule:** *Construction forecasted to start July 31, 2008 and be completed by August 21, 2013*

**Construction Progress:** *N/A*

**Budget:** *N/A*

**Quality:** *N/A*

**Safety:** *N/A*

### **Contract 3: C-26006 (Rehabilitation of existing Lexington Avenue/63<sup>rd</sup> Street Station)**

**Description:** This contract provides for the rehabilitation of the existing Lexington Avenue/63<sup>rd</sup> 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 3<sup>rd</sup> 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: C-26009). Contract 3's scope of work will also include the mining of tunnels G3 and G4 from the 63<sup>rd</sup> Street Station to the 72<sup>nd</sup> Street Station.

**Schedule:** *Construction forecasted to start June 2, 2010 and be completed by July 6, 2012*

**Construction Progress:** *N/A*

**Budget:** *N/A*

**Quality:** *N/A*

**Safety:** *N/A*

### **Contract 4: (72<sup>nd</sup> Street Station)**

**Description:** This contract provides for the construction of a new station at 72<sup>nd</sup> Street and 2<sup>nd</sup> Avenue. The repackaging of this contract reallocates the scope of work into two separate packages (Contract 4A –C 26007 Station Cavern and Heavy Civil, and Contract 4B –C 26011 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: C-26009).

**Schedule:** *Construction forecasted to start April 21, 2009 and be completed by November 14, 2013*

**Construction Progress:** *N/A*

**Budget:** *N/A*

**Quality:** *N/A*

**Safety:** *N/A*

**Contract 5: (86<sup>th</sup> Street Station)**

**Description:** This contract provides for the construction of a new station at 86th Street and 2nd Avenue. The repackaging of this contract reallocates the scope of work into two separate packages (Contract 5A –C 26008 Stations Structure and Heavy Civil, and Contract 5B –C 26012 Station Finishes & MEP). Contract 5A’s scope of work 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: C-26009).

**Schedule:** *Construction forecasted to start December 22, 2008 and be completed by October 22, 2013*

**Construction Progress:** *N/A*

**Budget:** *N/A*

**Quality:** *N/A*

**Safety:** *N/A*

**Contract 6: C-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.

**Schedule:** *Construction forecasted to start January 29, 2009 and be completed by April 1, 2014*

**Construction Progress:** *N/A*

**Budget:** *N/A*

**Quality:** *N/A*

**Safety:** *N/A*

## **F. PROCUREMENT AND CONTRACTING ACTIVITIES**

**Contract Packaging Plan:** The scope of work associated with Phase 1 of the SAS Project was initially defined in 6 Construction Packages (contracts). The scope has subsequently been reallocated into 9 contracts. MTACC took 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.

**Property Acquisition and 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. Of concern were the issues of Just Compensation and Fixtures. *Currently, the MTA and FTA are working to finalize the language of the RAMP at which time it will be submitted for full approval.*

The MTA has retained a Consultant, O. R. Colan, to assist with relocating residential and commercial tenants. 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 96<sup>th</sup> Street Station will be six months late. MTA is rethinking its position of not awarding a construction contract until all the properties have been acquired.

**Rolling Stock:** *Activity is not schedule to start until 2010.*

## **G. INTERAGENCY AND MASTER UTILITY PLANNING**

Interagency and master utility planning is progressing as defined in Section 12 of the PMP. During Final Design coordination with utility providers to develop detailed plans for facility rearrangements and integration of these plans into the construction contract documents is ongoing. Work orders are being issued to secure the city's assistance to the project in the areas of public works engineering, and traffic engineering.

Among the major New York City agencies that will interface with the project are: New York City Department of City Planning (NYCDCP); New York City Fire Department (FDNY); New York City Department of Transportation (NYCDOT); New York City Medical Examiner; and New York City Department of Environmental Protection (NYCDEP).

## **H. SYSTEM SAFETY AND SECURITY**

On November 15, 2007, the FTA approved the SAS Safety and Security Management Plan (SSMP), noting however, that there was a vacancy in the Director of System Safety and Security position. *As of January 31, 2008, MTACC has not hired a Director of System Safety and Security although they have interviewed various candidates. It appears that the level of compensation is the issue which is preventing this position from being filled.* The SSMP is intended to provide an effective management process that applies the system safety and security discipline throughout design, construction, start-up, and operations and maintenance. The SSMP establishes the framework that the SAS Project will use to reduce hazards and vulnerabilities to the criteria specified in contract documents, as determined by MTACC.

## **I. RISK ASSESSMENT AND RISK MITIGATION**

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 with all concerns being resolved. *The PMP is anticipated to be updated in February 2008.*

*As part of its Risk Management Program, the MTACC has implemented a Constructability/Peer Review process with the following objectives:*

- *To ascertain that the current design is constructible;*
- *To identify risk elements and recommend mitigation measures;*
- *To review construction schedule, identify potential conflicts, and make recommendations for improvement;*
- *To review the construction cost estimate, identify potential scope changes or measures to reduce cost;*
- *To evaluate the bid-ability of the design documents;*
- *To perform peer review and make suggestions/recommendations of alternative design concepts; and*
- *To perform value engineering for possible cost savings.*

*During the period from July 9, to July 28, 2007, a Constructability/Peer Review was performed on the 60% design completion of the, 96<sup>th</sup> Street Station (Contract 2) by the Construction Management Team (PB Americas Inc.) A Final Report was issued in December 2007. DHA is evaluating recommendations made in the report for implementation. Constructability/Peer Reviews have been scheduled for each contract.*

## **J. QUALITY ASSURANCE/QUALITY CONTROL**

*MTACC's Quality Manager for Second Avenue has implemented a Total Quality approach for monitoring the Quality Control and Quality Assurance activities on the Project. MTACC Quality Personnel audit both the Designer's and CCM's Quality programs; then the three groups (MTACC, Designer & CCM) audit the Contractor's, Subcontractor's and Suppliers' Quality programs. In addition, Contract 1's Quality Manager has a very ambitious Quality program that is scheduled 6 weeks into the future and lists the audits and inspections to be performed. The inspections follow the schedule of work to be performed in those 6 weeks. Materials being delivered for the work tasks are inspected prior to the work beginning and the quality of the work being performed is audited/inspected as it is being done. The status of Non-Conformance Notices and the responsibility to perform corrective actions is distributed monthly. The Quality Program is definitely proactive and doing proper oversight.*

## **K. COMMUNITY RELATIONS**

*As part of its community relations program, MTACC continues to conduct extensive public and community outreach. They have placed message boards in the construction area to show the project's status and have posted a three week look ahead of construction activities and traffic updates on the SAS website. Interested members of the public can join the SAS mailing list, call the SAS Hotline (24 hours/7 days a week), send e-mails and attend the various community meetings. Due to inadequate space to hold all in attendance, Community Board 8 meeting schedule for January 29, 2008 had to be postponed. It has been rescheduled for February 25, 2008 and will address the relocation of the entrance in 305 East 72<sup>nd</sup> Street to the sidewalk on the north east side of 72<sup>nd</sup> Street.*

TABLE 2 - COST AND SCHEDULE SUMMARY

| Project   | Cost (in Millions) |                                     |                                   |  |                                     | Schedule       |                           |                              |                            |  |                      |  |
|---|--------------------|-------------------------------------|-----------------------------------|--|-------------------------------------|----------------|---------------------------|------------------------------|----------------------------|--|----------------------|--|
|   | Original Budget    | Latest Estimate at Completion (EAC) | Percent (%) Difference (+ or -)** | Spent Through 1/31/08 (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                       |                                   | \$49,455,293                           |                                     | 14.7%          | 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   | \$2,231,975,000    | \$2,231,975,000                     |                                   |  |                                     |                |                           |                              |                            |  |                      |  |
| 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                        |                                   | \$467,254                              |                                     | 1.1%           |                           |                              |                            |  |                      |  |
| 3rd Party Reimbursement   | \$58,000,000       | \$58,000,000                        |                                   | \$932,377                              |                                     | 1.6%           |                           |                              |                            |  |                      |  |
| Artwork Allowance   | \$6,000,000        | \$6,000,000                         |                                   |  |                                     |                |                           |                              |                            |  |                      |  |
| Preliminary Engr. & EIS   | 240,814,507        | 240,814,507                         |                                   | 236,683,519                            |                                     | 98.3%          |                           |                              |                            |  |                      |  |
| Final Design  | \$169,185,493      | \$169,185,493                       |                                   | \$75,663,007                           |                                     | 44.7%          | 4/18/2006                 |                              |                            |  |                      |  |
| Construction Mgmt.  | \$86,000,000       | \$86,000,000                        |                                   | \$1,309,841                            |                                     | 1.5%           | 5/31/2007                 |                              |                            |  |                      |  |
| Rolling Stock   | \$157,000,000      | \$157,000,000                       |                                   |  |                                     |                |                           |                              |                            |  |                      |  |
| Property Acquisition  | \$245,000,000      | \$245,000,000                       |                                   | \$29,269,989                           |                                     | 11.9%          |                           |                              |                            |  |                      |  |
| Contingency   | \$129,000,000      | \$129,000,000                       |                                   | \$903,800                              |                                     | 0.7%           |                           |                              |                            |  |                      |  |
| <b>Project Reserve</b>  |                    |                                     |                                   |  |                                     |                |                           |                              |                            |  |                      |  |
| Executive Reserve   | \$160,000,000      | \$160,000,000                       |                                   |  |                                     |                |                           |                              |                            |  |                      |  |
| <b>Subtotal</b>   | 4,050,000,000      | 4,050,000,000                       |                                   | 445,768,249                            |                                     | 11.0%          |                           |                              |                            |  |                      |  |
| Financing   | 816,614,000        | 816,660,000                         |                                   |  |                                     |                |                           |                              |                            |  |                      |  |
| <b>Totals</b>   | 4,866,614,000      | 4,866,660,000                       |                                   | 445,768,249                            |                                     | 9.2%           |                           |                              |                            |  |                      |  |

**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**

| <b>Priority (Pr)</b> | <b>Category (Cat.)</b> | <b>Grantee Action (D A I)</b> | <b>PMO Contractor Status</b>               |
|----------------------|------------------------|-------------------------------|--|
| 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.