

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 April 2009

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

TABLE OF CONTENTS

Page No.

SECTION III SECOND AVENUE SUBWAY PROJECT

TABLE OF CONTENTS	i
LIST OF ACRONYMS	ii
I. EXECUTIVE SUMMARY	1
A. PROJECT DESCRIPTION	1
B. PROJECT STATUS	1
C. SCHEDULE.....	2
D. COST DATA FOR PHASE 1	3
E. TECHNICAL CAPACITY REVIEW	4
F. SYSTEM SAFETY REVIEW.....	4
G. MAJOR ISSUES/PROBLEMS	4
ATTACHMENT A - SAFETY CHECKLIST - SECOND AVENUE SUBWAY	5
II. ACTION ITEMS – ITEMS FOR GRANTEE ACTION	8
III. OBSERVATIONS AND CURRENT ISSUES.....	14
ATTACHMENT B - SUMMARY OF CONCERNS AND RECOMMENDATIONS	26

OST Project Status Report – separate submittal to CO, COTR and TOM via e-mail

LIST OF ACRONYMS

AFI	Allowance for Indeterminates
AWO	Additional Work Order
CCM	Consultant Construction Manager
CPM	Critical Path Method
DHA	DMJM+Harris and ARUP
FD	Final Design
FEIS	Final Environmental Impact Statement
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
HLRP	Housing of Last Resort Plan
MEP	Mechanical, Electrical, Plumbing
MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
N/A	Not Applicable
NYCDEP	New York City Department of Environmental Protection
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	Revenue Operations Date
TIA	Time Impact Analyses
S3	Skanska, Schiavone and Shea
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 SAS project is trending behind schedule. The current Estimate at Completion (EAC) is significantly above the FFGA Baseline Cost Estimate.
- The FFGA schedule has a Revenue Operations Date (ROD) of June 30, 2014. The PMOC is aware of a slippage of 15 months to the Tunnel Boring Contract in the actual work being performed. The contractor was to have begun constructing the Launch Box slurry walls on the east side of Second Avenue on January 25, 2008. Currently, the contractor is forecasting this work to begin in April 2009. This is a slippage of 14+ months. The PMOC anticipates the schedule to trend even later, with the additional time caused by the revised contract Repackaging Plan;

- The Grantee indicated a new cost estimate forecasts a greater cost to complete the project than previously reported but to date has not provided documentation to justify the increase.

C. Schedule

- **Preliminary Engineering (PE):** Entry into PE was approved by FTA on December 20, 2001; PE completed April 17, 2006.
- **Record of Decision:** 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. *Through April 30, 2009, construction is 4.79% complete based on total expenditures of Contract 1 versus total projected construction cost (all contracts) at completion.*
- **Project Complete:** *Through April 30, 2009, total Phase 1 Project percent complete is 15.70% (based on total expenditures versus Phase 1 projected cost at completion).* Financing not included (see Section D note 2). Percent complete will be reduced when financing is included.
- **Revenue Operations Date:**

Phase 1 (MOS)

FFGA	Proposed FFGA as Amended	Forecast Completion		Actual Completion
		Grantee	PMO	
June 30, 2014	N/A	June 30, 2015 ⁽¹⁾	September 15, 2015 ⁽²⁾	TBD

(1) SAS Phase 1 Integrated Construction Schedule, Revision 2.6, Update #23-3.5 dated July 22, 2008

(2) Based on the status of Contract 1, which is about 15 months late, additional time for the procurement process and testing and commissioning.

- **Other:** The Environmental Impact Statement was approved on April 8, 2004.
- **Next Quarterly Review Meeting:** *May 7, 2009*

D. Cost Data for Phase 1

	FFGA			FFGA Amendments	Current Costs Estimate at Completion		Expenditures Thru <i>April 30, 2009</i>	
	(\$ Millions) (1)	(%)	Obligated		(\$ Millions) (2)	(%)	(\$ Millions)	Percent of Total Project Cost
Grand Total Cost:	\$4,866.614	100		N/A	\$5,163.614	100	682.358	13.22
Financing Cost	816.614	16.78			816.614	15.81		
Total Project Cost:	4,050.000	83.22			4,347.000	84.19		
Total Federal share:	1,350.692	27.75			1,350.692	26.16	166.152	3.22
Total FTA share:	1,300.000	96.25			1,300.000	96.25	158.712	3.07
5309 New Starts share	1,300.000	100			1,300.000	96.25	158.712	3.07
Total FHWA share:	50.692	3.75			50.692	3.75	7.440	0.15
CMAQ	48.233	95.15			48.233	95.15	4.981	0.10
Special Highway Appropriation	2.459	4.85			2.459	4.85	2.459	0.05
Total Local share:	2,699.308	55.47			2,996.308	58.03	516.206	10.00
State share:	450.000	16.67			450.000	15.02		
Agency share:	2,249.308	83.33			2,546.308	84.98		
City share:	0	0			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 (allocated and unallocated). The contingency is distributed as follows:

- AFI's and AWO's (Design, Pre-bid and Construction) \$395 million (unallocated)
- Executive Reserve (previously Project Reserve) \$160 million (unallocated)
- Real Estate \$17 million (allocated)
- Rolling Stock \$11 million (allocated)
- Design/Force Account \$46 million (allocated)

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. Updated PMP (Revision 6) was submitted to FTA in March 2008.
- Project Quality Manual (PQM): 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 accepted by the FTA on April 24, 2007. Update of the RFMP is pending the decision whether to utilize 60 foot or 75 foot rail cars.

F. System Safety Review

- The New York State Public Transportation Safety Board (PTSB) is the State Safety Oversight Agency (SSOA). Biennial re-certification of NYCT's System Safety Program Plan (SSPP) was completed in July 2008.

G. Major Issues/Problems

- *The MTA Executive Director/CEO will resign effective May 2009. The ramifications of this event are unknown, but it could have an impact on the MTACC and this project.*
- Real Estate concerns threaten to delay the work of building demolition that must occur prior to commencing the 72nd Street Station cavern excavation contract. Demolition is currently planned for April 2010, but several administrative tasks must be completed before the building tenants can be relocated, and some of the tasks could take several months to complete. The first task is resolving the Housing of Last Resorts Plan (HLRP) portion of the Second Avenue Subway Relocation Plan.

In the HLRP being reviewed by the FTA, the MTA proposed an increase to the amount of assistance that will be provided to the 51 displaced tenants. The proposed revision will improve MTA's ability to identify appropriate housing for them.

Once the HLRP issue is resolved, the MTA estimates it will take 3-4 months to complete its legal process to relocate the tenants affected. If there is a legal challenge, the process could take much longer and delay the critical path cavern contract that in-turn would delay the entire program.

MTA is taking appropriate action to resolve this matter and is maintaining it as a high-profile issue until it is fully resolved.

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.(PTSB)
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 CFR Part 659.
Has the SSOA received, reviewed, and approved the Grantee's System Safety Program Plan (SSPP)?	Y	Biennial re-certification was completed in July 2008 by the PTSB.
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

Attachment A - Safety Checklist - Second Avenue Subway

Areas of Focus	Y/N	Status
Do the Grantee's PMP and associated Safety Program specify staffing requirements, procedures and authority for the safety activities?	Y	See PMP Section 3
Do the Grantee's PMP and associated Safety Program include a formal Safety Certification Program (SCP)?	Y	See PMP 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 (DCM) 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	Biennial re-certification was completed in July 2008 by the PTSB.
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	CSP is on-going. Toolbox meetings are held to acquaint personnel with the safety requirements as defined in the General Specification. MTACC and contractor's safety personnel and the OCIP representative continue to monitor the site for compliance. Safety is discussed at each Job Progress Meeting.

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?	-	The recordable incidents for the project (through February 2009) continue to trend below the national average (2.21 vs. 5.89). Lost time accidents (through February 2009) are below the national average (1.47 vs. 2.27). Retraining and safety meetings are ongoing.
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 the Federal Railroad Administration (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		
2	CLIN 003 Sub Task 12.a SAS-A01-1007	Rent Stabilization Plan	FTA/PMOC has no information for MTA's Plan for Rent Stabilization.	Y	Y	N	On April 16, 2008, MTA's SAS Relocation Plan was submitted for FTA review and approval. Section 3.3 of the plan addresses the loss of rent regulated apartments. On October 8, 2008, the MTA published the Housing of Last Resort Plan (HLRP), which describes how they propose to provide assistance to dislocated residential tenants of the SAS project beyond the threshold set in the Uniform Act. This plan is an amendment to Section 3.3 of the Relocation Plan. FTA/PMOC completed its review and provided comments to MTA. On December 1, 2008, the MTA issued the final draft of the SAS Relocation Plan, which includes the HLRP (Section 3.3), for FTA approval. PMOC comments were provided to the FTA on the final draft. FTA finalized its position and forwarded a letter to MTACC's management on March 4, 2009. Update of the Relocation Plan must address	R

Pr	Item	Identification	Nature of Problem	Grantee Action			Comments	Status
				D	A	I		
							three concerns as noted in the March 4, 2009 letter. <i>In April 2009, the Relocation Plan (Rev. 23) was updated and submitted for FTA/PMOC review. The review is anticipated to be completed in May 2009.</i>	
	CLIN 003 Sub Task 12.a SAS-A02-0208	Real estate challenges associated with entrance 3 at 72 nd Street Station	Two challenges were filed (State and Federal courts) with regard to the proposed relocation of entrance 3 of the 72 nd Street Station. The challenge filed in State Court has been dismissed. The challenge filed in Federal Court continues.	Y	N	N	The FEIS identified the location of entrance 3 within a building. The proposed location is on the sidewalk of the northeast corner of 72 nd Street. MTA's Real Estate is coordinating efforts with legal representatives of FTA Region 2 to resolve this issue. An alternative to the sidewalk entrance is being investigated. On July 18, 2008, MTA advised FTA that an Environmental Assessment will be prepared for entrances options at East 72 nd and 86 th streets. On September 12, 2008 a draft Environmental Assessment Schedule was presented to the FTA Regional Office for review. <i>On March 31, 2009 FTA provided comments to MTACC on the revised Environmental Assessment. MTACC</i>	R

Pr	Item	Identification	Nature of Problem	Grantee Action			Comments	Status
				D	A	I		
							<i>subsequently responded to the FTA on April 7, 2009. Planning is monitoring the progress.</i>	
2	CLIN 003 Sub Task 12a. SAS-A11-0808	Recovery Plan	MTACC needs to submit a Recovery Plan, pursuant to FFGA requirements, for FTA review and approval. Need to track the current budget against the FFGA budget and add financing costs as a line item to the Current Budget Summary.	Y	N	N	<i>The project's budget and schedule performance is now being reported in comparison to the Baseline Cost Estimate and Schedule in the FFGA. MTACC has agreed to submit a Recovery Plan once consensus is reached from the Risk Assessment.</i>	R
2	CLIN 003 Sub Task 12a. SAS-A13-0808	Increase in cost estimate and Contract Packaging Plan	Reasons/justifications for the budget increase of \$297 million from \$4.05 billion to \$4.347 billion must be provided to the FTA. What was it due to? What are the benefits resulting from adding \$297 million more to the budget and breaking into 12 contracts. Revised cost estimate in the Standard Cost Categories must be provided.	Y	N	N	<i>The PMOC received the cost estimate in the Standard Cost Categories. As part of the Risk Assessment, each cost category is being evaluated with high and low dollar ranges being established based on the perceived risk. Workshops will be held with MTACC during May 2009 to advise them of the process and reach consensus on the cost estimate.</i>	R

Pr	Item	Identification	Nature of Problem	Grantee Action			Comments	Status
				D	A	I		
3	CLIN 003 Sub Task 12a. SAS-A14-0808	Track Alignment	Provide the FTA with estimated savings on going from 3 tracks to 2 tracks at 72nd Street and on the revised alignment.	Y	Y	Y	A cost saving of \$89,684,000 is projected by changing from 3 tracks to 2 tracks.	C
			The Rail Fleet Management Plan should be updated.	N	N	N	The Rail Fleet Management Plan will be updated once a decision is made on the length of the rail car (75 foot or 60 foot) to be use.	R
2	CLIN 003 Sub Task 12a. SAS-A16-0808	Risk Assessment	Risk Assessment Workshop needs to be scheduled.	Y	N	N	The Risk Assessment process has been finalized and various interviews have been conducted. <i>Budget and Cost workshops have been scheduled for May 2009.</i>	R
2	CLIN 003 Sub Task 12a. SAS-A17-0808	Rolling Stock Procurement	The decision to utilize 75 foot rail cars vs. 60 foot rail cars is being re-evaluated. MTACC should include the status of the procurement of rolling stock in its monthly reports and as an agenda item for future quarterly meetings.	N	N	N	<i>As of April 2009, the decision on the length of the rail car to be utilized has not been made. This item will be discussed during the Quarterly Meeting scheduled for May 7, 2009.</i>	R
2	CLIN 003 Sub Task 12a. SAS-A18-0808	Contingency Drawdown Curve	The change in the Contingency Drawdown Curve, particularly the latent contingency, needs to be clarified. Why \$80 million?	Y	N	N	<i>A revised Contingency Drawdown Curve will be developed based on the revised budget, schedule and contract Packaging Plan. See action item SAS-A13-0808.</i>	R

.

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 SAS project is trending behind schedule. The current Estimate at Completion (EAC) is significantly above the FFGA Baseline Cost Estimate. *The PMOC received the revised cost estimate in the Standard Cost Categories, and Integrated Project Schedule. As part of the Risk Assessment, each cost category is being evaluated with high and low dollar ranges being established based on the perceived risk. Production rates, procurement processes, and hand off float from contractor to contractor are being evaluated with regards to the schedule. Workshops will be held with MTACC during May 2009 to advise them of the process and reach consensus on the cost estimate and schedule.*

B. BUDGET/COST STATUS

The MTACC updated the SAS Project Phase 1 cost estimate to address the concerns noted during the 2007 Risk Assessment process. Adjustments were 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. This effort was based on having 6 contract packages. Total project cost was \$4,866,614,000 and was broken down into the SCC as shown in the chart on the following page.

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 in the Transportation Electronic Award Management system with respective appropriated and obligated amounts as of *April 30, 2009*.

Grant Number	Amount	Obligated (\$)	Disbursement (\$) thru <i>April 30, 2009</i>
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	\$130,273,881
NY-17-X001-00	\$2,459,821	\$2,459,821	\$2,459,821
NY-95-X009-00	\$25,633,000	\$25,633,000	0
Total	\$229,321,170.00	\$229,321,170.00	\$166,151,751.00

Project Expenditures and Commitments: A total of \$682.358 million has been expended on the project through *April 30, 2009* including \$5.455 million on the Manhattan East Side Access (ESA) study and related FEIS work during the 1995-1999 Capital Program. (See Cost and Schedule Summary before Attachment “B”)

Project Cost Management and Control: MTACC’s work breakdown structure allows for effective monitoring, control, and reporting of project costs and expenditures. The PMOC will continue monitoring MTACC’s budget control system during the final design, construction, and test phases.

Change Orders: Utilizing MTACC’s Additional Work Order Status Log, the PMOC monitors the change order process monthly. The table below shows the status of change orders for professional service and construction contracts approved *and negotiated as of April 30, 2009*.

Professional Service/Construction	Total # of Approved and Negotiated Change Orders	\$ Value	% of Award Value
DHA (Contract Mod.)	3	\$33,459,986	23.3%
Contract C 26002	50 (3 credits)	\$10,304,812	3.1%

C. PROJECT SCHEDULE STATUS

On April 15, 2009, SAS held a Kick-off Meeting for Monthly Project Schedule Meetings. The PMOC had requested this meeting for several months and then set the date. As a result, the Grantee filled the vacant Schedule Manager’s position on their Organization Chart.

Revision 3 updates 29 (dated January 13, 2009) of the SAS Phase 1 Integrated Construction Schedule was issued on January 14, 2009. This schedule reflects a revised contract packaging plan of eleven construction contracts (previously twelve) and a delay of the Revenue Operations Date to December 30, 2016. It must be noted that the December 30, 2016 Revenue Operations Date is approximately 30 months past the Baseline Revenue Operations Date of June 30, 2014 noted in FFGA (Attachment 4). Various activities were identified as having an impact on the Revenue Operations Date such as: increase in time for the procurement process; additional hand-off float from contractor to contractor; and change in the integrated testing and commissioning methodology. As part of the Risk Assessment, the PMOC started a detailed review of the revised schedule in accordance with FTA guidelines. *During April 2009 the PMOC continued its analysis of the schedule, running various models with different assumptions to evaluate the impact on the critical path. The results are being reviewed with MTACC’s project schedulers.*

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). Three modifications to DHA’s contract valued at \$33,459,986 have been approved. DHA’s current final design contract is valued at \$176,944,986.

Final design is forecast to be completed on December 31, 2009 and *is reported at 88.0% complete as of March 2009*. Construction support services will continue through the completion of construction. Working Group meetings are ongoing to support the final design of the outstanding contract packages. Details of each contract package are presented below with final design completion dates as indicated in DHA's Integrated Design Schedule Update:

- Contract 1 - C 26002 (TBM Tunnels from 92nd St. to 63rd ST.) FD was completed in June 2006 (TBM Tunnels)
- Contract 2A - C 26005 (96th Street Station Structure and Heavy Civil) FD was completed in February 2008.
- Contract 2B - C 26010 (96th Street Station: utility restoration, construction of the above ground structure of the entrances and ancillary facilities, remaining invert slab, street, sidewalk and tree restoration finishes and installation of mechanical, electrical and plumbing equipment). FD is scheduled to be completed May 31, 2009. *As of April 2009, the design is reported at 95% complete. The 95% complete design package was submitted to the CCM and NYCT for review. Comments from the CCM and NYCT will be incorporated to establish the 100% FD submittal.*
- Contract 3 - C 26006 (63rd Street Station: upgrade involving open-cut excavation for the construction of entrance and ancillary facilities, removal and upgrade of the structural elements within the existing tunnel, and traction power connection to the Lexington Avenue Station on the Q Line). FD is scheduled to be completed on December 4, 2009.
- Contract 4A - C 26014 (72nd Street Station: demolition of existing building and relocation of utilities that will prepare the site for construction). FD is scheduled to be completed on June 5, 2009.
- Contract 4B - C 26007 (72nd Street Station: construction of the cavern and the G3/G4 tunnels to the existing 63rd St. /Lexington Avenue Station). FD is scheduled to be completed on July 20, 2009.
- Contract 4C - C 26011 (72nd Street Station: construction of ancillary finishes, installation of station finishes and mechanical, electrical and plumbing equipment). FD is scheduled to be completed on December 30, 2009.
- Contract 5A - C 26013 (86th Street Station: utility relocation, open excavation and road decking that will prepare the site for construction). FD was completed in February 2009.
- Contract 5B - C 26008 (86th Street Station: construction of the station cavern, entrances and access shafts). FD is scheduled to be completed on November 24, 2009.
- Contract 5C - C 26012 (86th Street Station: construction of the ancillary facilities and the installation of station finishes and the mechanical, electrical, and plumbing equipment). FD is scheduled to be completed on November 24, 2009.
- Contract 6 - C 26009 (Systems, Power, Signals and Communications; includes the installation of the low-vibration track, aluminum rail, way-side signals, and all communication components, integration of the communication network with the NEP

SCADA system and commissioning the system for revenue service). FD is scheduled to be completed on December 31, 2009.

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 America will provide services for 91 months with a not-to-exceed value of \$80.9 million. PB's budget was subsequently increased to \$91 million to support the 11 Contract Packaging Plan and various constructability reviews. *Total expenditure to date is \$7,158,919.*

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. *During April 2009, the CCM started the review of the 95% FD submittal for Contract 2B.*

Tunnels from 92nd to 63rd Streets

Description: Contract 1 -C 26002 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. Contract C 26002 was awarded to S3 Tunnel Contractors (a joint venture of Skanska, Schiavone and Shea) on March 20, 2007 for \$337,025,000.

Schedule: Notice-to-Proceed was issued on March 20, 2007, with a July 20, 2010 completion date (duration 40 months). *As of April 2009, the S3 is trending approximately 15 months behind schedule. Time extensions totaling 7.5 months have been granted to S3 because of Additional Work Orders (AWOs) associated with new requirements from Con Ed and New York City Department of Environmental Protection (NYCDEP), and removal of utilities and a large sub-surface wall which were not on the plans. The remaining 7.5 months of delay is due to S3's marginal performance. S3 is looking at ways to recover the lost time. MTACC has requested a recovery plan.*

Construction Progress: *During April 2009, the contractor completed the installation of the 36-inch water main under the decking on the west side of 2nd Avenue and started the installation of the permanent pipe saddle supports. Work continued on the east side of 2nd Avenue. To date, 12 of 24 slurry wall panels and 81 of the 114 secant piles have been installed. Fabrication of the rebar cages required for the slurry panels continued at the 102nd St. yard. Excavation at the south bulkhead was started for the installation of the deck beams on the east side of 2nd Avenue. Work at the vertical shaft sites (69th and 72nd Street) continued with excavation for the electric, gas, and steam utilities. Asbestos abatement of the electrical manholes by Con Ed is ongoing.*

Budget: The budget for Contract (1) C 26002 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 AWOs. *Total expenditure through April 2009 is \$6,651,030. Fifty AWOs*

have been negotiated and approved for a total value of \$10,304,812. The contract is within budget with an estimate at completion (EAC) of \$347,329,812 (bid price plus negotiated and approved AWOs).

Quality: During *April 2009*, S3's quality personnel continued to support the project by performing inspection and test activities associated with: slurry wall installation; material delivery of water line pipe, deck beams, panels, utility relocations; and control of nonconforming material.

Safety: S3 safety personnel and the OCIP representative continue to monitor the site for compliance. Safety meetings are ongoing. During *April 2009*, the contractor continued the implementation of its safety program. Safety meetings were held focusing on the slurry wall and secant pile excavation processes. The recordable incidents for the project (*through March 2009*) continue to trend below the national average (2.21 vs. 5.89). Lost time accidents (*through March 2009*) are below the national average (1.47 vs. 2.27).

96th Street Station

Description: Contracts (2A) C 26005 and (2B) C 26010 provide for the construction of a new station at 96th Street and 2nd Avenue.

Schedule: Award Contract; 2A was advertised on March 10, 2008. On July 31, 2008, four proposers responded with technical and cost proposals. Reviews of the technical proposals were held on August 13 and 15, 2008. Negotiations continued through November 2008 with Perini/Tutor Saliba subsequently being identified as the most responsive contractor. Selection Committee approval and award of the contract was anticipated by January 30, 2009. Because of concerns of the Board with Perini performance on several other contracts, procurement re-opened discussions with two of the other proposers. Negotiations continued thru February 2009. During March 2009, the Selection Committee identified EE Cruz/Tully Construction Co. JV as the more qualified proposer and the MTA Board subsequently approved the award. *Review/approval of Cruz/Tully's financial condition, insurance bonding, and DBE submissions continued during April 2009. The Notice of Award is anticipated in May 2009.*

Schedule: Award Contract (2B) March 31, 2011.

Construction Progress: N/A

Budget: N/A

Quality: N/A

Safety: N/A

63rd Street Station Rehabilitation

Description: Contract (3) C 26006 provides for the rehabilitation of the existing Lexington Avenue/63rd Street Station to accommodate the connection to the SAS Line.

Schedule: Award Contract (3) July 30, 2010.

Construction Progress: N/A

Budget: N/A

Quality: N/A

Safety: N/A

72nd Street Station

Description: Contracts (4A) C 26014, (4B) C 26007, and (4C) C 26011 provide for the construction of a new station at 72nd Street and 2nd Avenue.

Schedule: Award Contract (4A) November 30, 2009, Contract (4B) June 30, 2010, and Contract (4C) November 30, 2012

Construction Progress: N/A

Budget: N/A

Quality: N/A

Safety: N/A

86th Street Station

Description: Contracts (5A) C 26008, Contract (5B) C 26012 and Contract (5C) C 26013 provide for the construction of a new station at 86th Street and 2nd Avenue.

Schedule: Award Contract (5A) June 15, 2009 (*This contract was advertised on March 12, 2009 and a pre-bid tour and conference was held on April 1, 2009*), Contract (5B) January 31, 2011 and Contract (5C) October 2, 2013.

Construction Progress: N/A

Budget: N/A

Quality: N/A

Safety: N/A

Systems, Power, Signals, and Communication

Description: Contract (6) C 26009 provides for the construction of the tracks, signals, traction power and communication network and equipment for the SAS Phase 1 stations. Also included is the integration of the communication network with the MEP SCADA system and commissioning the system for revenue service.

Schedule: Award Contract (6) March 30, 2011.

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 was then reallocated into 9 contracts as previously enumerated, but further divided into 12 packages as part of the MTA's latest Packaging Plan. MTACC took this action because contractors were having difficulty

getting bonding on contracts valued greater than \$400 million. Contracts 2, 4 and 5 exceeded the \$400 million level. In February 2008, the PMOC was informed that MTACC was investigating the feasibility of reallocating the project scope into additional construction packages (value not to exceed \$300 million).

On March 21 and 22, MTACC held a Peer Review Workshop made up of senior construction personnel from both the SAS Team and outside industry. The purpose was to compare the 9 contract plan against a 13 contract plan that had been developed in February and March 2008, and determine the optimum number of contracts to minimize both market risk and construction risk. Although the workshop presented a 9 or 10 package plan to MTACC's upper management, it was not accepted. Based on MTACC's recent experience on other projects, a further reduction in contract package size was requested as a means of increasing competition and addressing the market risks during the Risk Assessment process. The SAS Team agreed on a 12 contract packaging plan, which was approved by MTACC upper management and submitted to the FTA in July 2008. At the FTA's Quarterly Meeting held on August 12, 2008, MTACC accepted the action item to provide the FTA the benefits of breaking the scope into 12 contract packages [Ref: SAS-A13-0808]. During November 2008, the PMOC learned that MTACC was re-evaluating the splitting of the 96th Street Station into three contract packages (2A, 2B, and 2C). Two packages (2A and 2B) were being considered. MTACC subsequently decided on two contracts for the 96th Street Station.

The PMOC has expressed its concerns regarding the additional coordination required as more contractors are brought on board, the number of contractors who would be required to work in the limited space and the possibility of additional claims if work areas are not available for follow-on contractors when scheduled. Revision 3 Update 29 of the SAS Phase 1 Integrated Construction Schedule addresses the PMOC concerns in that additional hand-off float from contractor to contractor has been added. The packaging plan is being reevaluated as part of the PMOC's Risk Assessment.

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) and the SAS Relocation Plan. The FTA gave conditional approval of the RAMP (dated May 2007) on November 15, 2007. Of concern were the issues of Just Compensation and Fixtures. The MTA submitted the revised RAMP at the beginning of March 2008 and FTA approved it with the understanding that it would be revised to reflect minor clarifications noted in FTA's letter dated March 20, 2008. On April 16, 2008, MTA's SAS Relocation Plan was submitted for FTA review and approval. Section 3.3 of the plan addresses the loss of rent regulated apartments. On October 8, 2008, the MTA published the Housing of Last Resort Plan (HLRP), which describes how MTA proposes to provide assistance to dislocated residential tenants of the SAS project beyond the threshold set in the Uniform Act. This plan is an amendment to section 3.3 of the Relocation Plan. FTA/PMOC completed its review and provided comments to MTA. On December 1, 2008, the MTA issued the final draft of the SAS Relocation Plan, which includes the HLRP (section 3.3), for FTA approval. On December 12, 2008, PMOC provided comments to the FTA on the final draft. FTA finalized its comments and issued a letter to the MTA on March 4, 2009 [Ref: SAS-A01-1007]. The FTA concurred that MTA demonstrated the need to provide housing of last resort. FTA participation, however, will be limited to payments calculated based on a 42-month period as noted in the

Uniform Relocation Act. Also, the Relocation Plan has to be updated to provide evidence of a direct correlation of the available residential market versus the needs of the displaced residents; identify similar neighborhoods that will be considered in providing comparable replacement dwellings, even if such units are located outside the project area; and identify any type of payment controls (installments, annuities, etc.) that MTA will use to provide large lump-sum supplemental payments. *MTA Real Estate updated the HLRP and submitted it for FTA/PMOC comments on April 7, 2009. FTA/PMOC review is in progress and is anticipated to be completed in May 2009.*

Real Estate concerns threaten to delay the work of building demolition prior to the commencing the 72nd Street Station cavern excavation contract. Demolition is currently planned for April 2010, but several administrative tasks must be completed before the building tenants can be relocated; and some of the tasks could take several months to complete. MTA estimates it will take 3-4 months to complete its legal process to relocate the 51 tenants affected. If there is a legal challenge, the process could take much longer and delay the critical path cavern contract that in-turn would delay the entire program. MTA is taking appropriate action to resolve this matter and is maintaining it as a high-profile issue until it is fully resolved.

At the February 7, 2008, Quarterly Meeting FTA was also informed that two challenges were filed (State and Federal courts) with regard to the proposed relocation of entrance 3 of the 72nd Street Station. The State Court dismissed the state challenge in May 2008. The challenge filed in Federal Court is under NEPA and names FTA, MTA, and DHA. The FEIS identified the location of entrance 3 within a building; the proposed location is on the sidewalk of the northeast corner of 72nd Street. MTA's Real Estate is coordinating efforts with legal representatives of FTA Region 2 to resolve this issue. Subsequent investigation by DHA has identified an option which would eliminate the need to locate entrance 3 on the sidewalk. A bank of elevators in a building is being considered. This option was presented at a community board (Community Board 8) meeting in August 2008 and was favorably received. Environmental Assessment will be conducted for the location. On September 12, 2008, a draft Environmental Assessment Schedule was presented to the FTA Regional Office for review. *On March 31, 2009, FTA provided comments to MTACC on the revised Environmental Assessment. MTACC subsequently responded to the FTA on April 7, 2009.* Planning is monitoring the progress. [Ref: SAS-A02-0208]

Rolling Stock: The evaluation is on-going to determine which rail car length (75 foot or 60 foot) is to be utilized. [Ref: SAS-A17-0808]

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. Bi-weekly utility coordination meetings at the construction field office of Contract C 26002 are being held. 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 June 30, 2008, MTACC hired a field Security Manager for its East Side Access Project. This person will also work on SAS until both projects are active enough to justify a separate Manager for SAS. The Safety and Security Manager position is shown on the latest SAS Organization Chart as a matrixed resource from MTACC's VP, Program Control, Quality, Safety and Site Security's office.

On the SAS project, DHA's System Safety Manager is supporting the design efforts and CCM PB Americas Safety Manager is supporting construction efforts under the supervision of MTACC Chief-Quality and Safety. 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 MTACC updated the PMP in February 2008, and sent an informal draft to the PMOC. A formal submission was made in March 2008.

The Risk Assessment resumed in September 2008. The FTA Regional Office and the PMOC has held a series of meetings to finalize the strategy that will be utilized for the SAS Risk Assessment. Task assignments with associated budgets were established. Administrative, design, and quality procedures utilized by the SAS project were accumulated and made available to the Risk Assessment team. During January 2009, the PMOC was provided with the Integrated Construction Schedule which will be utilized during the Risk Assessment. *During April 2009, the Risk Assessment process continued with the schedule and cost inputs being modeled under various assumptions. Results of the model will be reviewed with the MTACC project team during workshops that will be held in May 2009.*

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 Contractors', Subcontractors' and Suppliers' Quality programs. In addition, Contract C 26002'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. Representatives from each quality organization meet every other week to address any quality concerns. *The Quality Program continues to be proactive and is providing 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. Weekly meetings are being held with business owners regarding opportunities to mitigate construction impacts and address any concerns. To keep the residents and merchants informed of the construction activity in the area of the vertical shafts (69th and 72nd), messages about the project are being posted in a local merchant's window.

TABLE 2 - COST AND SCHEDULE SUMMARY

Project	Cost (in Dollars)					Schedule				
	Original Budget	Latest Estimate at Completion (EAC)	Percent (%) Difference (+ or -)**	Spent Through 4/30/09 (Funding Report)	Percent (%) Complete Planned Actual	Award/NTP Date	Original Completion Date*	Actual Forecasted Completion	Original Duration (Months)	
Contract 1 - Tunnel Boring S3 Joint Venture (Skanska/Schiavone/Shea)	\$337,025,000	\$337,025,000		\$135,155,505		40 1%	3/20/2007	9/20/2010	1/24/2011	40 months
Contract 2 - 96th Street Station Name of Contractor	N/A									
Contract 3 - 63rd Street Station Name of Contractor	N/A									
Contract 4 - 72nd Street Station Name of Contractor	N/A									
Contract 5 - 86th Street Station Name of Contractor	N/A									
Contract 6 - Track and Systems Name of Contractor	N/A									
Contracts to Be Bid	\$2,231,975,000	\$2,483,975,000	252,000,000 0							
Total Construction	\$2,569,000,000	\$2,821,000,000								
OCIP (Insurance)	\$160,000,000	\$169,000,000	9,000,000 0	\$126,066,794		74 6%				
TA Labor	\$28,000,000	\$28,000,000		\$14,709		0 1%				
Engrg Force Account	\$42,000,000	\$52,000,000	10,000,000 0	\$1,903,481		3 7%				
3rd Party Reimbursement	\$58,000,000	\$61,000,000	3,000,000 0	\$2,791,870		4 6%				
Artwork Allowance	\$6,000,000	\$6,000,000								
Preliminary Engr & EIS	240,814,507	\$240,518,909	-295,597 8	\$238,315,164		99 1%				
Final Design	\$169,185,493	\$204,481,091	35,295,598 0	\$119,205,267		58 3%	4/18/2006	4/18/2009	12/18/2009	36 months
Construction Mgmt	\$86,000,000	\$91,000,000	5,000,000 0	\$7,158,919		7 9%	5/31/2007			
Rolling Stock	\$157,000,000	\$157,000,000								
Property Acquisition	\$245,000,000	\$245,000,000		\$45,095,561		18 4%				
Contingency	\$129,000,000	\$141,000,000	12,000,000 0	\$6,651,030		4 7%				
Project Reserve		\$6,000,000	6,000,000 0							
Executive Reserve	\$160,000,000	\$125,000,000	-35,000,000 0							
Subtotal	4,050,000,000	4,347,000,000	297,000,000 2	682,358,300		15 7%				
Financing	816,614,000	-								
Totals	4,866,614,000	4,347,000,000	297000000 2	682,358,300		15 7%				
SAY		4,347,000,000								

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 (D A I)	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			Comments	Status
						D	A	I		
2	CLIN 0003 SubTask 12.a SAS-02-0309	MTA Award of Contract 2A	S2	MTA Board Approval was received on March 24, 2009. The SAS Program Office had stipulated that they would award the contract immediately and this was not done	Expedite award to preclude delaying the work.	Y	Y	N	Each day of delay shortens the construction season for the contractor.	R
2	CLIN 0003 SubTask 12.a SAS-03-0309	Rolling Stock Procurement	B S2	The decision to utilize 75 foot rail cars vs. 60 foot rail cars is being re-evaluated.	MTA should immediately choose the car length most adaptable for them.	N	N	N	A decision is needed to finalize the Cost Estimate.	R