

## **PMOC COMPREHENSIVE MONTHLY REPORT**

**East Side Access (MTACC-ESA) Project**  
Metropolitan Transportation Authority  
New York, New York

Report Period March 1 to March 31, 2012



**PMOC Contract No.DTFT60-09-D-00007**

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

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

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## **THIRD PARTY DISCLAIMER**

This report and all subsidiary reports are prepared solely for the Federal Transit Administration (FTA). This report should not be relied upon by any party, except FTA or the project sponsor, in accordance with the purposes as described below.

For projects funded through FTA Full Funding Grant Agreements (FFGAs) program, FTA and its Project Management Oversight Contractor (PMOC) use a risk-based assessment process to review and validate a project sponsor's budget and schedule. This risk-based assessment process is a tool for analyzing project development and management. Moreover, the assessment process is iterative in nature; any results of an FTA or PMOC risk-based assessment represent a "snapshot in time" for a particular project under the conditions known at that same point in time. The status of any assessment may be altered at any time by new information, changes in circumstances, or further developments in the project, including any specific measures a sponsor may take to mitigate the risks to project costs, budget, and schedule, or the strategy a sponsor may develop for project execution. Therefore, the information in the monthly reports will change from month to month, based on relevant factors for the month and/or previous months.

## **REPORT FORMAT AND FOCUS**

This report is submitted in compliance with the terms of the Federal Transit Administration (FTA) Contract No. DTFT60-09-D-00007, Task Order No. 002. Its purpose is to provide information and data to assist the FTA as it continually monitors the grantee's technical capability and capacity to execute a project efficiently and effectively, and hence, whether the grantee continues to be ready to receive federal funds for further project development.

This report covers the project *and quality* management activities on the East Side Access (ESA) Mega-Project managed by MTA Capital Construction (MTACC) with MTA as the grantee and financed by the FTA FFGA.

## **MONITORING REPORT**

### **EXECUTIVE SUMMARY**

#### **1. PROJECT DESCRIPTION**

The East River tunnels in Manhattan are at capacity. The ESA project is anticipated to improve LIRR tunnel capacity constraints and enable the growth of the overall system. The project comprises a 3.5 mile commuter rail extension of the Long Island Rail Road (LIRR) service from Sunnyside, Queens to Grand Central Terminal (GCT), Manhattan, utilizing the existing 63rd St. Tunnel under the East River and new tunnels in Manhattan and Queens, including new power and ventilation facilities. The project includes a new 8 track terminal constructed below the existing GCT and a new surface rail yard in Queens for daytime train storage. Ridership forecast is 162,000 daily riders (27,300 new riders) in 2020. The project will provide increased capacity for the commuter rail lines of the LIRR and direct access between suburban Long Island and Queens and a new passenger terminal in Grand Central Terminal (GCT) in east Midtown Manhattan, in addition to the current connection to Penn Station in Manhattan.

## 2. CHANGES DURING 1<sup>st</sup> Quarter 2012

### a. Engineering/Design Progress

*The ESA Project Management Team (PMT) reported the design effort progressed to 95.9% completion vs. 100% planned for February 29, 2012, based on the current revised General Engineering Consultant (GEC) design schedule. The Stage 2 – 90% catenary design package was submitted to Amtrak for review on March 12, 2012. Amtrak approval for this package is forecast for April 18, 2012.*

### b. New Contract Procurements


*Bids for the CM013A (55<sup>th</sup> Street Vent Plant) were opened on March 27, 2012, and preparation for award to the apparent low bidder is underway. (Note: A bid protest was filed, but MTACC is proceeding with processing of award while investigating the protest).*

### c. Construction Progress

*MTACC reported in the ESA February 2012 Monthly Progress Report that the construction effort reached 44.8% completion vs. 65.6% planned for this period. In their January 2012 report, MTACC noted that the construction effort reached 44.2% complete vs. 64.0% planned. The overall construction progress continues to trend behind plan.*

### d. Continuing and Unresolved Issues

The following issues continue to be PMOC major concerns:

- 
- *The MTACC's progress to implement its revised ESA project procedures did not occur in accordance with the original schedule to which it committed. As of March 31, 2012, the MTACC has implemented a total of 76 revised procedures, and the PMOC is aware that at least 4 additional procedures remain in development. One of those, AD.15, Program Change Control, is critical to the manner in which the MTACC is managing the ESA Program and should be implemented as soon as possible.*
- *Since the approval of the FFGA in 2006, the average monthly construction progress rate has increased from 0.16% per month through 2009 to 1.0% for the last 12 months. The overall construction progress through February 2012 was 44.8%, which falls short of the 65.6% of completed construction planned for this period based on the plan established in September 2009.*

### e. New Cost and Schedule Issues

*The ESA-PMT is still in the process of finalizing its revised baseline schedule. The decision to revise the baseline schedule resulted from an acknowledgement by the MTACC in 2011 that the current Revenue Service Date (RSD) of September 2016 is not achievable given the current status of the project progress and the projected impacts due to Amtrak's East River Tunnels (ERT) project. A series of workshops for each of the major program areas (Manhattan, Queens, Harold Interlocking, and Systems) were held from October 2011 through December 2011. The original goal was to have a revised baseline schedule finalized by the end of 2011 for presentation to the MTA Capital Program Oversight Committee (CPOC) in February 2012. MTACC informed the FTA Region II Office and the PMOC at the January 2012 FTA/MTACC Executive Meeting that it*

would not be ready to present the revised baseline project schedule to the MTA CPOC in February 2012 as originally planned. The ESA-PMT distributed a schedule of current status cost/schedule re-baseline development on February 17, 2012. This schedule indicated that the Schedule/Cost baselines would be finalized by February 27, 2012, and a risk assessment of the new schedule and cost baselines would begin in March 2012. *As of this report, neither the schedule or cost re-baselines have been finalized. The PMOC received a draft copy of the new cost baseline on March 28, 2012. The risk assessment workshops were held from March 13, 2012 through March 22, 2012. The results of the risk assessment are planned to be finalized in April 2012 and are planned to be presented to the MTA CPOC in May 2012.*

### **3 PROJECT STATUS SUMMARY AND PMOC ASSESSMENT**

#### **a. Grantee Technical Capacity and Capability**

The PMOC completed its review (based on Candidate Revisions) of the ESA PMP Revision 8.0 and forwarded its findings to the FTA Region 2 Office. *The PMOC met with the FTA Region 2 Office to review its findings. The next step will be to meet with the grantee in April 2012 to review the findings.*

#### **b. Real Estate Acquisition**

[REDACTED]

*The ESA Project has gained access to 335 Madison Avenue to further designs for the easements associated with the construction and operation of 1) an employee elevator that will connect the ESA/LIRR Station Master's Office on the ESA concourse level to the GCT Terminal Management Center on the GCT concourse level and 2) the public elevator in the Biltmore room. However, the designs are still too preliminary for appraisal purposes. Once funding for the elevators has been secured by the Project, MTA Real Estate will advise a suitable timeframe for the public hearing.*

[REDACTED]

#### **c. Engineering/Design**

*As of February 29, 2012, the design activities were reported to be 95.9% completed vs. 100% completed planned for this period. Progress was made in advancing the ET design work during the month of March 2012, with the Stage 2 – 90% catenary design package submitted to Amtrak for review on March 12, 2012. Amtrak approval for this package is forecast for April 18, 2012 and the 100% ET design package is forecast for submittal to Amtrak by April 27, 2012.*

For CH057 Contract (Harold Structures 3A), all design efforts except the catenary are completed. The catenary design cannot be completed and incorporated into the final design package until Amtrak approval is obtained. *As stated above, the 90% ET design package is with Amtrak for*

*review and the 100% ET design packages is pending submittal to Amtrak (note: Amtrak cannot review 100% design until 90% has been reviewed and approved). The ESA PMT is planning to advertise the CH057 Package by June 1, 2012 (It is important to note that the catenary installation is on the critical path for the Harold work, and is on the near critical path for the project schedule).*

*Preliminary design efforts for the 48<sup>th</sup> Street entrance to GCT (CM015) continued in March 2012. The ESA PMT has finalized scope for the GEC for the preparation of two contracts: CM015A, which entails clearing the spaces which will be retained by the building owner; and CM015, which entails the build out of the entrance. The design costs have been negotiated with the GEC and, once ratified by the major sub-consultants, MTACC plans to submit it to the April 2012 MTA Board meeting for approval.*

*The on-board review with LIRR for the 60% design of the mid-day storage yard (CQ033) was held and comments from the review are being addressed. LIRR has requested that the package include a bid option to remove the Montauk cutoff and build an alternative track configuration between the mid-day storage yard and the Arch Street Shop. A contract modification to add this scope to the GEC contract is being processed,*

The ESA-PMT issued a Notice-to-Proceed (NTP) to the GEC to begin developing the bid documents for the CM014B Contract (GCT Concourse/Cavern Finishes) in January 2012. The NTP includes pending scope revisions to access at 44<sup>th</sup> and 50<sup>th</sup> streets; blast resistance of critical columns; and other miscellaneous revisions. *The current ESA schedule forecasts completion of 100% design by July 1, 2012.*

#### **d. Procurement**

As of February 29, 2012, the total procurement activity on the project was reported to be 60.4% complete, with \$4.703 billion in contracts awarded out of the \$7.791B budget.

*The procurement process for CS179, CM012 and CM014B contract packages, which are high-dollar value contracts with long durations, continues to trend significantly behind schedule, due in large part to continuing scope shifts, volume of questions from bidders and proposers, and the issuing of bid addenda needed to address them.*

The CM012 solicitation was cancelled in November 2011 after the ESA-PMT was informed by several potential bidders that it would be difficult, if not impossible, to submit a reasonable bid given the requirements in the bid package. *The solicitation was reissued on March 12, 2012, with modifications to the contract bid package based upon discussions with perspective bidders since the cancellation of the previous solicitation. Bids were previously due on May 8, 2012; however, this date has been changed to May 22, 2012.* The ESA-PMT is still forecasting the NTP to be August 2012, with construction to begin in January 2013. The PMOC believes that it will be difficult to start construction on this contract in January 2013 given the significant procurement delay.

Of particular concern is the continuing slippage of the proposal due date for the CS179 package. The ESA-PMT transferred a significant amount of work (by addenda) that is not systems-related, into the CS179 package including the tunnel bench walk, the 63<sup>rd</sup> Street tunnel rehabilitation work, and various scope items in the Manhattan running tunnels. To address this delay, the ESA PMT separated the due dates for the Technical proposals and Cost and Schedule proposals. *The Technical proposals were received on March 7, 2012, a delay of five weeks since the forecast in January 2012. Schedule and cost proposal due dates have slipped to April 24, 2012, and May 1,*



2012 respectively (previous forecast for both was April 17, 2012). Based on the delays mentioned above, and the time involved in a negotiated procurement (RFP), the PMOC believes that there is insufficient time to issue the NTP in August 2012 (as the currently forecast).

The current ESA forecast has the 100% design being completed in July 2012; with a plan to advertise by August 2012, and award in October 2012.

Bids for the CM013A (55<sup>th</sup> Street Vent Plant) were opened on March 27, 2012, and preparation for award to the apparent low bidder is underway. [REDACTED]

**e. Railroad Force Account (Support and Construction)**

[REDACTED]

[REDACTED]

[REDACTED]

**f. Third-Party Construction**

**Manhattan: CM009/CM019 Contracts – Manhattan Tunnels Excavation/Structures Part 1,** CM009/019 construction has improved over the last six months to the point that it has kept pace with their respective monthly schedules. Nonetheless, they have not been able to recover any overall project schedule that had previously been lost. In August 2011, the MTACC realized that no recovery would be possible and that it should incorporate the accumulated project slippage into a re-baselined schedule that would project revised Substantial (SC) and Final Completion (FC) dates. Although the re-baselined schedule has not been approved by the MTA Board yet, as of March 2012, the MTACC has projected the SC for CM009/019 to be August 16, 2013. Based on the PMOC's observations of the contractor's improved production during the past six months, the PMOC believes that SC is attainable by this date.

As of March 31, 2012, the contractor completed 19 (of 23) archway concrete pours in the Eastbound Cavern, concrete pours in TT2 and TT3, archway concrete pour in tail track L302, excavation in GCT4 West Wye, GCT3 crossover, and Escalator Way #1, and cheek excavation in

tunnels T402 and T401. The contractor continued bench excavation between the upper and lower levels in both the East- and Westbound Caverns, and shotcrete application in GCT3 West Wye and wellways #3 and #4. The contractor began Phase I excavation in the crossflue and shotcrete application on the archway of Escalator Way #2.

In an effort to regain overall project schedule the MTACC and the CM009/CM019 contractor have also jointly developed work plans that will allow follow-on contracts access to work sites earlier than previously planned. These work plans will be reflected in the universal settlement that will result from the finalized ESA re-baselined schedule. Unfortunately, they will also place additional risk on the MTACC in the form of construction coordination among the different contracts.

**Queens:** On the **CQ031 contract (Queens Bored Tunnels and Structures)**, the ESA-CM has worked closely with the contractor to prioritize work in the TBM Launch Area to prevent delay in achieving the milestone for starting the TBM mining. To date, the contractor has mitigated most of the schedule delays caused by the late start of the open-cut excavation and the additional delays due to necessary slurry wall repairs. TBM mining of the Yard Lead Tunnel commenced on May 17, 2011 and was completed on February 9, 2012. TBM mining of the Track A Tunnel commenced on August 9, 2011 and was completed on December 22, 2011. TBM mining of the Track D Tunnel commenced on March 29, 2012. Late completion of required CH053 work and CH054A work initially delayed a number of critical interface points with the CQ031 work. Based on work-around plans and deletion of two tunnel emergency exit/ventilation plant facilities, there remains only one critical interface point of the 8 identified in Q3-2010: TBM mining for the Track B/C Tunnel beneath the existing, operational LIRR GO2 Substation. [REDACTED]

[REDACTED] Resolution of these new conflicts will require a high level of coordination by the ESA Construction Managers and will create some contractor inefficiencies resulting in schedule delays and extra costs. Maintenance of the proposed TBM mining schedule has been and continues to be the primary focus and goal of all construction management efforts and decisions for the Queens Construction site. See Section 2.1.3 under sub-heading "Queens Third-Party Contracts" for a more detailed discussion.

On the **CQ039 (Northern Boulevard Crossing) contract**, as of February 29, 2012, based on the latest data available from the grantee, the cumulative actual percent complete is 51.2% versus planned 72.3% on a cost invoiced basis, and 83% of the current approved contract time to Substantial Completion has elapsed. In July 2011, MTA approved a global settlement for project delays up to April 30, 2011. The settlement provided for a contract time extension of 300 CDs, inclusive of the previously approved 64 calendar days (CD) extension, and compensation of \$6.5 million. The PMOC believes that this complex and challenging contract will continue to experience delays that may adversely impact the project critical path. Some of these anticipated additional delays have already materialized, e.g., encountering bedrock at a lower elevation than anticipated, which resulted in installation of additional freeze pipes and several weeks of delay. Also, achieving adequate ground freeze has required a longer period than expected, causing an additional ten-week delay, and the issue is still unresolved as of March 31, 2012. The PMOC does not believe that the contractor will be able to improve the rate of construction progress based on the particular characteristics of this contract including: very limited site access; labor intensive excavation/construction work; NYCT oversight of the construction work; and a high probability of encountering unforeseen field conditions during tunnel excavation that will result in re-design and a change in the construction means and methods. [REDACTED]

[REDACTED] See Section 2.1.3 under sub-heading “Queens Third-Party Contracts” for a more detailed discussion.

**Harold Interlocking:** ESA-PMT had previously approved the contractor’s re-baselined schedule for **Contract CH053 (Harold Interlocking, Part 1 and G.O.2 Substation)**, which showed a Substantial Completion date of January 2012, 20 months later than the original date of May 2010. *The forecast Substantial Completion date recovered three months from January 2014 to November 2013, 22 months later than the current approved plan and 42 months later than the original plan. For this reporting period, based on the latest data available from the grantee, cumulative actual percent complete is 64.5% versus planned 100% on a cost invoiced basis, and 100% of the revised contract time to Substantial Completion has elapsed. For the February 2012 period, the actual percent complete was 1.3%, versus an unspecified planned target. Given that continuing major problems remain unresolved and additional problems, such as the Amtrak labor unions claim to CH053 work (in March 2011) continue to arise, the PMOC does not believe that any schedule recovery is possible on this contract.*

[REDACTED] The PMOC continues to recommend that ESA prioritize the GEC construction support to this contract, expedite resolution of utility interferences, and prioritize the contractor’s requests for track outages and force account support.

[REDACTED] This issue is still not resolved as of this report, although discussions between MTACC and Amtrak continue.

During March 2012, ESA-PMT noted a significant improvement in Amtrak’s support for the project. ESA said that Amtrak approved three pending ET designs on February 29, 2012. ESA further noted that the Amtrak ET design director is now accepting the design reviews performed by an independent engineering firm performing Quality Control reviews of the design (at the request of Amtrak) without having to review the packages himself (which was the reason for bringing that firm on board in the first place). The PMOC notes that additional positive changes included: new Director and ET Supervisor at the project (ESA) level; elevating the track outage/usage management from the Amtrak division level to the Amtrak corporate level; and force account labor changes involving crew assignments and lengthening shifts to 10 hours to better support the ESA

*third-party contractors. These favorable changes, if sustainable, should assist the CH053/054A contractor to increase his productivity.*

#### **g. Vehicles**

In a report to the MTA Board, ESA represented that the funds dedicated to rail car procurement will be reassigned to contingency. FTA Region 2 Office informed the PMOC in early 2011 that the MTA has to put back the original funding allocated for the purchase of rail vehicles and abide by the federal procurement rules and regulations to purchase the vehicles. *As of the end of March 2012, this has not occurred. During the risk assessment workshops conducted in March 2012, ESA-PMT provided details of their schedule for Federal procurement of 160 vehicles for the Project.*

#### **h. Commissioning and Start-Up**

The ESA Operational Readiness Group produced a preliminary schedule for commissioning and start-up activities, which they provided to the ESA Project Controls Group in the 4<sup>th</sup> Quarter of 2011. This schedule has been incorporated into the new ESA baseline schedule. *The Operational Readiness Group continues to refine the definition of roles and responsibilities of stakeholders during the commissioning and start-up phase of the project.*

#### **i. Project Schedule**

**Table 1: Project Schedule**

	FFGA	Forecast Completion (F), Actual Start (A)	
		Grantee	FTA*
Begin Construction	September 2001	September 2001 (A)	September 2001 (A)
Construction Complete	December 2013	TBD	██████████
Revenue Service	December 2013	TBD	██████████

\*Source – ELPEP forecast.

#### **j. Project Budget/Cost**

The table below lists the FFGA total project cost along with the federal and local shares with corresponding obligated amounts, and compares it with the Current Working Budget (CWB) and lists the latest federal and local expenditures.

**Table 2: Project Budget/Cost Table** 

	FFGA (as of December 18, 2006)			Proposed FFGA Amendments	MTA's Current Working Budget (CWB)		Expenditures as of <i>February 29, 2012</i>	
	(\$ Millions)	(% of Grand Total Cost)	Obligated (Millions)	TBD	(\$ Millions)	(% of Grand Total Cost)	(\$ Millions)	(% of CWB)
<b>Grand Total Cost</b>	<b>\$7,386</b>	<b>100</b>			<b>\$8,827</b>	<b>100</b>	\$3,497.9	39.6
Financing Cost	\$1,036	14.0			\$1,036 (FFGA est.)	11.7		
Total Project Cost	\$6,350	86.0	\$4,107		\$7,791*	88.3	\$3,497.9	44.9
<b>Federal Share</b>	\$2,683	36.3	\$1,148		\$2,699	30.6	\$1,645.8	21.1
5309 New Starts share	\$2,632	35.6	\$1,098		\$2,436.6	27.6	\$1,400.0	18.0
Non New Starts grants	\$51	0.7	\$50		\$67	0.8	\$50.4	0.6
ARRA	0	0	0		\$195.4	2.2	195.4	2.5
<b>Local Share</b>	\$3,667	49.6	\$2,959		\$5,092	57.7	\$1,852.1	23.8

\* CWB represents MTA Board approved \$7,328 million budget and additional \$463 million reserve for a total of \$7,791 million budget exclusive of financing cost (September 2009).

**k. Project Risk**

In January 2010, the PMOC and the FTA worked with MTACC and ESA staff to finalize the Enterprise Level Project Execution Plan (ELPEP) that focuses on cost and schedule contingencies as part of a comprehensive risk management plan. Cost contingency and secondary schedule mitigations have been adjusted based on discussions between the FTA Administrator and MTA Chairman. Details of the ELPEP status are discussed below.

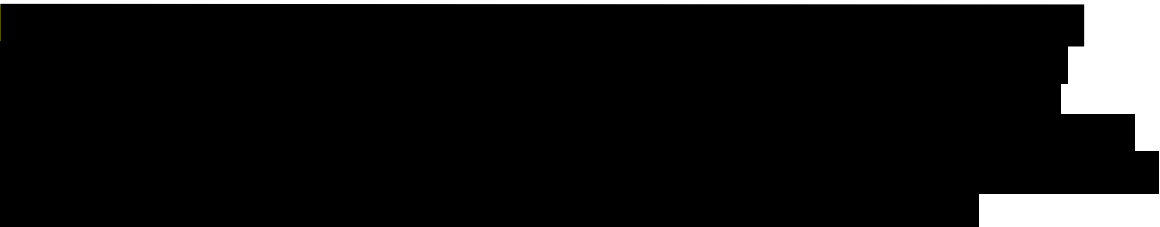
*During March 2012, MTACC and ESA conducted a seven-day risk workshop in support of the ongoing programmatic cost and schedule re-baselining effort for the entire project. The workshop was facilitated by an independent outside consultant who will be developing a “risk-informed” project cost and schedule. For more details, see Section 6.2, “Current Risk Update.”*

**MONTHLY UPDATE**

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

**ELPEP SUMMARY**

*No ELPEP meetings were held during the 1<sup>st</sup> Quarter of 2012. The current status of each of the main ELPEP components as discussed and updated during the 1<sup>st</sup> Quarter of 2012 is summarized as follows:*

- **Technical Capacity and Capability (TCC):** *The PMOC has completed its review of the Candidate Revisions for the ESA-PMP and has discussed them with the FTA Region 2 Office. The PMOC and FTA will meet with the grantee to discuss its review in April 2012. Also related to TCC compliance are two outstanding issues requiring MTACC action: MTACC completion of the final sub-plan elements, discussed above, and the need for MTACC to develop and implement the PMP training process.*
- **Schedule Management Plan (SMP):** *On November 3, 2011, the FTA confirmed that MTACC has responded to the Candidate Revisions identified in FTA's conditional approval letter, dated October 26, 2010, and that the SMP is fully approved. The PMOC continues to verify SAS substantial compliance with the SMP since August 2010. There were no additional updates during this period.*
- **Cost Management Plan (CMP):** *FTA conditional approval of the Cost Management Plan, including five (5) Candidate Revisions was received on September 1, 2011. MTACC has submitted its final revisions to the CMP, which incorporate its responses to those Candidate Revisions.*
- 
- **Conformance and Compliance:** *MTA's final conformance and compliance documentation is being prepared for submittal.*

Observation:

Although overall implementation of the ELPEP is behind schedule, the MTACC has begun implementation of schedule, cost and risk management plans. Both projects have updated their PMPs to support these management documents and processes based upon agreed upon Candidate Revisions.

Concerns and Recommendations:

Development of formal implementation verification and reporting process for each of these ELPEP elements should be given priority. The verification process will help ensure that all benefits associated with the ELPEP are realized to the greatest extent possible.

## **1.0 GRANTEE'S CAPABILITIES AND APPROACH**

### **1.1 Technical Capacity and Capability**

#### **1.1.1 Organization, Personnel Qualifications and Experience**

Status:

The ESA Organization Document (including position descriptions, organization charts and resumes) has not been formally updated since December 2008. The PMOC was told by the ESA Project Executive in December 2010 that they are not planning to update this document but will update the PMP accordingly.

Observation:

ESA provides periodic organizational chart updates and has committed to updating the PMP appropriately. The PMOC reviewed the relevant section of Rev. 8 of the PMP and has found that it does not adequately replace the function of the ESA Organization document.

Concerns and Recommendations:

Given that the PMP does not fully replace the function of the ESA Organization document, the PMOC *continues* to recommend that ESA reinstate the practice of periodically updating the Organization document and forward it to the PMOC for review.

#### **a) Staff Qualifications**

*At present, the PMOC has not observed any issues related to qualifications of personnel in management positions on the project.*

#### **b) Grantee Staffing Plan**

Status:

The ESA Quality Manager was given authority to hire two additional Quality staff. A new Quality Engineer started in early December 2011, and was assigned to the CM009/019 contracts. A second Quality Engineer began work on January 30, 2012. *However, in March 2012, the second Quality Engineer was transferred within the Project to Geotechnical Engineer in order to make better use of his skills and to replace the incumbent who resigned.*

Observation:

*Another ESA Quality Engineer will be taking a three-month leave of absence in several months. This issue, that was closed last month after the second Quality staff position was filled, will be reopened.*

Concerns and Recommendations:

[REDACTED]

### c) History of Performance, Adequacy of Management Systems

#### Status:

*The East Side Access FFGA anticipated a seven-year project that would cost \$6.350 billion (not including finance cost) and that would have a Revenue Service Date (RSD) of December 31, 2013. As of February 29, 2012, the project cost estimate approved in 2009 by the MTA Board of Directors is \$7.791 billion (not including financing cost), with a forecasted RSD of September 2016. A new project cost estimate and schedule will be determined at the conclusion of the project schedule re-baseline effort. See Sections 4.1 and 5.1 of this report for further project schedule and budget details.*

*The average monthly construction progress rate has increased from 0.16% per month through 2009 to an average of 1.0% for the last 12 months. MTACC reported in its February 2012 Monthly Progress Report that the actual project construction progress increased only by 0.6 % since January 2012, and reached 44.8% completion, which falls short of the planned 65.6% construction progress planned for this period.*

#### Observation:

Since the FFGA was signed in December 2006, the MTA Board approved a revised project estimated cost of \$7.791 billion that is \$1.441 billion more than the FFGA amount, and approved an extension of the RSD that is 33 months later than the date established by the FFGA.

*Continuing project delays and the Amtrak East River Tunnels (ERT) work have resulted in the ESA-PMT developing a revised baseline schedule, which was set to be finalized in 1Q12. This date has slipped to 2Q-2012. This 2012 re-baseline will result in a Revenue Service Date that is later than September 2016.*

*The construction progress decreased this reporting period (from 0.7% to 0.6%) instead of increasing to close the gap between the planned and the actual completion. As shown in Graph 1.1 of Section 1.2.4 of this report, the gap between planned and actual construction progress has continually increased over time.*

*A project cost re-baseline is being developed alongside the project schedule re-baseline. The re-baseline of the project schedule and cost were originally forecasted to be completed by December 31, 2011. The current project was to have both the cost and schedule baselines finalized in Q1 2012. These dates have slipped to 2Q-2012.*

#### Concerns and Recommendations:

*The PMOC is concerned that the lag between actual and planned construction progress continues to increase over time, and currently there are no indications of how or when the construction progress will improve. If this trend of not meeting planned progress continues, it is likely that milestones in the new baseline schedule will not be met.*

*The PMOC is also concerned that finalization of the new cost and schedule baselines continue to trend behind schedule. Although the PMOC has received three revisions of the schedule re-baseline since the beginning of the year, the ESA-PMT did not provide the revised cost information until March 28, 2012 despite several requests by the PMOC to obtain the information. The PMOC will review the cost data and meet with the ESA-PMT in April 2012 to discuss.*



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

#### a) Adequacy of Project Management Plan and Project Controls)

##### Status:

*As of March 31, 2012, the MTACC adopted a total of 76 revised project procedures. The revised procedures will be used to determine the overall quality with which the MTACC administers the ESA program. The MTACC has indicated that there are an additional four procedures under development. There is no specific timetable for the adoption of these procedures. In the PMOC's opinion, one of these procedures, AD.15 – Program Change Control, is critical to the manner in which the MTACC manages the ESA program and should be implemented as soon as possible.*

##### Observation:

*The MTACC was not able to complete the procedure revision process by the date it had originally committed, April 12, 2010. One of the remaining procedures, AD.15 – Program Change Control, is critical to program management. It has been under development for a considerable length of time and should be implemented as soon as possible.*

##### Concerns and Recommendations:

*The PMOC remains concerned about the length of time it has taken the MTACC to develop and implement all of its revised procedures. The PMOC recommends that the MTACC direct its Contract Construction Manager in charge of procedure development to complete the remaining four procedures as soon as possible, preferably by April 30, 2012. (This is also referenced in Section 3.3 of this report). In addition, the PMOC is concerned that training to some of the new procedures that was scheduled to be given to ESA Quality and Construction Management personnel by MTACC months ago, has still not been given. It is important that when new procedures are issued, the personnel who are responsible for implementing their requirements be trained.*

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

##### Status:

MTACC-ESA did not initially provide a Recovery Plan as required in the Full Funding Grant Agreement upon recognizing in October 2007 and February 2008 that the schedule and cost commitments, respectively, would not be met. MTACC submitted three drafts of their Recovery Plans to the FTA. The final Recovery Plan, submitted on June 29, 2011, was approved by the FTA on August 11, 2011.

During the week of September 26, 2011, MTACC announced publicly at a Capital Program Oversight Committee (CPOC) meeting that it had begun the process of re-baselining its schedule, with a goal of finalizing the new baseline by the end of 2011. ESA did not meet its initial goal of finalizing the new baseline by the end of 2011, nor did it meet its revised completion date of January 31, 2012. *Only a preliminary version of the new schedule baseline was provided to the FTA and the PMOC in January 2012, with two subsequent revisions to the re-baselined IPS issued through March 23, 2012. The re-baselined total project cost estimate was issued on March 28, 2012 but did not include critical back-up documentation, or the Standard Cost Category breakdown and changes.*

At the January 26, 2012 executive

level meeting with MTACC, the grantee said that a risk-informed schedule will be presented to the MTA Board at its May 2012 meeting.

Observations:

*ESA did not achieve its goal of finalizing the schedule baseline by the end of 2011 and the re-baselined IPS and Cost Estimate were not yet finalized as of March 31, 2012. Both the FTA-approved MTACC Recovery Plan and the ELPEP will need to be revised to reflect the re-baselined IPS and Cost Estimate.*

Concerns and Recommendations:



**c) Grantee's Approach to Force Account**

Status/Observation:

The MTACC released its final draft Force Account Management Plan (FAMP), dated December 2010, on March 16, 2011, for review. The PMOC completed its review of the MTACC FAMP and forwarded a copy of its comments to the FTA and the MTACC on June 17, 2011. The MTACC stated that it will consider the comments and follow up with the PMOC. *MTACC has not provided a response to these comments as of this report.*

Concerns and Recommendations:

*The PMOC provided its comments about the FAMP to the MTACC nine months ago and recommends that these comments be addressed as soon as possible. While the PMOC review did not uncover any serious problems, nonetheless, this Plan should be finalized and put to use as soon as possible.*

**d) Grantee's Approach to Safety and Security**

Status:

*The contractor's safety performance statistics for the CM009/019 (Manhattan Tunnels Excavation/Structures Part 1) contracts continue to be poorer than the industry norm, despite senior management involvement from both the contractor and the MTACC. For February 2012 (the latest up-to-date report available), the injury ratio for CM009 was 3.19 lost time accidents, for CM019 it was 2.73 lost time accidents, and for CQ039 it was 5.52 lost time accidents per 200,000 hours worked. These contracts continue to trend above both the overall project rate of 2.54 lost time accidents; and national industry average of 2.20 lost time accidents per 200,000 hours worked (based on the Bureau of Labor Statistics). In March 2012, OSHA announced that it would issue \$48,000 in fines to the CM009/019 contractor for the runaway mine car incident resulting in injuries to two workers in the fall of 2011 (October). The OSHA investigation resulted in 11 safety findings of various kinds. The mine car incident was finding #10 and carries a suggested fine of \$7,000. The reason the fine would be levied was shown as, "stored rail cars not properly chocked". The total amount of all 11 fines, if not appealed, would be \$48,000. The Contractor has instituted a new procedure for the storage of mine cars which is intended to eliminate any future problems similar to the one that led to the mine car incident. The procedure*

*requires the installation and use of temporary derails at various locations (based on storage locations and grade) throughout the CM009/019 worksites. The Contractor has the right to appeal the findings and will do so in April 2012. OSHA's final report, including fines levied, will be completed after the appeal meeting is held, and will not be available until sometime in the future.*

MTACC completed its Q4 2011 Safety Audit for all active construction contracts on ESA. ESA Safety will continue to monitor the CM009/019 management training plan and provide assistance when requested to improve the hazard recognition and control skills of field management and supervision personnel in response to the fatality that occurred on the project in November 2011.

Observation:

*While there was a slight improvement in the number of lost time accidents on the CM019 Contract (2.73 vs. 3.0 per 200,000 hours last month), the statistics continue to be higher than the project and national averages. No improvements in terms of lost time statistics were realized on the CM009 Contract or the CQ039 Contract, both of which continue to trend above overall project statistics and national average.*

Concerns and Recommendations:

*Although the ESA-PMT has made an effort to improve the safety performance on the project, the statistics remain above the national average. ESA should continue its efforts to improve overall project safety performance.*

**e) Grantee's Approach to Asset Management**

Status:

Details on the status of Asset Management related activities on ESA are presented in Section 2.1.5 (Operational Readiness) in this report.

Observation:

*The ESA Operational Readiness Group, working in conjunction with LIRR, continues to develop and refine a well thought out Asset Management Plan that will ultimately be used as a model for LIRR throughout its entire system.*

Concerns and Recommendations:

There are no significant concerns or recommendations at this time.

**f) Grantee's Approach to Community Relations**

The PMOC believes that the ESA Community Relations staff is reaching out appropriately to inform the community of upcoming and current changes, and has properly handled concerns and complaints from the community. See Section 2.6 for a detailed discussion.

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

**a) Federal Requirements**

Status:

During the week of September 26, 2011, MTACC announced that it is in the process of re-baselining its schedule, which will be developed and finalized in the 4<sup>th</sup> Quarter 2011 to account

for the impact of Amtrak's four-year plan for extensive track/tunnel rehabilitation for all 4 East River Tunnels (ERTs). *A preliminary version of the new schedule baseline was provided to the FTA and PMOC in January 2012; and two subsequent revisions were issued through March 2012. A preliminary cost re-baseline was issued to the PMOC on March 28, 2012.* [REDACTED]

Observation:

[REDACTED]

Concerns and Recommendations:

The PMOC recommends that MTACC develop "risk informed" cost and schedule baselines that accurately portray both realized and potential future delay costs.

**b) Uniform Property Acquisition and Relocation Act of 1970**

Status:

Some of the MTA Real Estate files lack final appraisals, negotiation logs, administrative settlements, and payment records. There has been no resolution from MTA regarding the historical files that included global settlement awards in condemnation actions.

Observation:

The MTA continues to proceed at a slow pace to remedy the above-mentioned items. The PMOC has requested these historical files, but the MTA has not supplied them. Without being supplied with these files, it is not possible to determine whether the MTA is in compliance with the federal regulations for reimbursement.

Concerns and Recommendations:

[REDACTED]

*The PMOC recommends a file audit of the MTA by its real estate consultant to verify compliance with federal regulations for reimbursement.*

**c.) Local Funding Agreements**

Status:

The NYS Capital Program Review Board (CPRB) approved MTA's Capital Program Amendment request in May 2010. Funding for ESA was increased by \$915 million to a total of \$5.56 billion. Commitments to date total \$4.52 billion or 81.2%. In May 2011 the USDOT announced the allocation of \$294.8 million in Federal High Speed Rail funds for improvements to the Harold Interlocking as part of the Northeast Corridor. These funds will be allocated to a number of Regional Investment projects and progressed concurrently with the ESA project. In October 2009, the total ESA project cost approved by the MTA Board was \$7.328 billion, \$0.978 billion higher than FFGA Baseline Cost Estimate (BCE) of \$6.350 billion. The ESA Current Working Budget

(CWB) is \$7.791 billion, which is a \$1.441 billion increase over the FFGA BCE. [Note: Figures do not include financing costs.]

*\$770 million was appropriated in the New York State Budget in March 2012 to fund the MTA Capital Program.*

Observation:

*Allocation of \$770 million in the NYS budget for the MTA Capital Program is a positive action. It remains to be seen if the allocation of funds to the ESA Program is adequate to allow for award of major upcoming procurements by the Project in 2012.*

Concerns and Recommendations:

*Award of CM012; CM014B, and CS 179 is contingent upon the amount of funding to be apportioned to the Project.*

## **1.2 Project Controls**

### **1.2.1 Scope Definition and Control**

Status:

*In response to critical issues and delays evolving on contracts in construction, the ESA-PMT transferred scope during the Q4- 2011 in existing contracts and contracts not yet awarded to mitigate risks as they occur, as well as to try to optimize the project schedule during the schedule re-baselining process.*

*These proposed scope shifts were presented to the Change Control Committee (CCC) in October 2011 in a non-voting session and, as of this report, the PMOC has not received any documentation confirming the current status of the proposed scope shifts. A voting session of the CCC is scheduled for April 6, 2012, at which time the committee will vote on these scope transfers.*

Observation:

The PMOC understands ESA's rationale for scope transfer as a method to mitigate risk; however, transfer of large amounts of scope needs to be carefully managed and the cost/schedule impact evaluated in order to avoid new sets of risks resulting from such transfer.

Concerns and Recommendations:

The PMOC continues to recommend that any new risks incurred resulting from these transfers be carefully analyzed and documented and compared against the benefits of mitigating existing risks to achieve a better overall "risk profile" as set forth in the "ESA Design and Construction Risk Management Plan". ESA has not demonstrated as of this report that the potential risks of these scope moves have been thoroughly analyzed. The large amount of scope transfer between the Manhattan contracts will mean that multiple contractors will be working in the same general area

simultaneously. This will require careful coordination and on-site management in order to be successful.

### **1.2.2 Quality**

#### **a) ESA Quality Audit of the GEC**

Status:

The ESA Quality Manager conducted an audit of the GEC Quality function on June 6, 2011. *As of the end of March 2012, the audit report has still not been issued.*

Observation:

Prior to June 6, 2011, the PMOC had requested for many months that the ESA Quality Manager audit the GEC, as a part of his audit responsibility outlined in Section 14 of the ESA Project Quality Manual (PQM), Rev.6, from February 2009.

Since the audit, the PMOC has requested several times that the ESA Quality Manager issue his audit report, but the ESA Quality Manager has had difficulty finding the time, due to his functioning as the surveying expert for ESA, a physical move from Manhattan to Queens, and insufficient Quality Staff to cover all of the ESA contracts. Although the ESA Quality Manager had committed to issue his report in January and subsequently February 2012, following several more requests from the PMOC, the report has still not been issued.

Concerns and Recommendation:

*With much of the GEC activity transitioning into Construction Phase Services (CPS) support, the PMOC recommended that the ESA Quality Manager focus his attention on the GEC's CPS and conduct another audit of the GEC. The ESA Quality Manager agreed to conduct an audit of the GEC in April 2012 and will invite the PMOC to observe this audit.*

#### **b) Construction Work Plans (CWPs) and Quality Training**

Status:

This is an ongoing issue. Work had proceeded without CWPs being sent in for review or being followed up after comments were made by the ESA contract Quality Engineers. This occurred on new contracts, or when new staff was added to the project.

The MTACC Chief of Quality had committed to provide training to the ESA Quality and Construction Management since February 2011 and has postponed it each month. *The ESA Quality Manager stated that he will schedule a training session in April 2012.*

Observation:

[REDACTED]

Concerns and Recommendations:

[REDACTED]

**c) As-Builts**

Status:

Most of the ESA contractors have been delinquent in submitting as-builts in a timely manner. ESA Quality addressed the status of as-builts with each contractor during the Quarterly Quality Audits that were conducted in January 2012. Following the Quarterly Quality Audits, the ESA Quality Manager stated that a training workshop would be held for each contractor beginning on February 20, 2012. This did not occur. *He has committed to conduct a workshop in April for the most negligent contractor and will invite the PMOC to observe this training.*

Observation:

*During the Quarterly Quality Oversight on ESA contracts that the PMOC attended, it was observed that one contractor who has three separate contracts on this project (note: this is the contractor who will receive training from the ESA Quality Manager in April 2012), had inadequate document and submittal control on all three contracts. Training, Nonconformance Report, Corrective Action Request, and Construction Work Plan logs were either not current or missing entirely. Monthly Certified Reports were issued late or not at all. Construction Work Plans, dispositioned as Revise and Resubmit (R&R) by ESA months ago, have still not been re-submitted.*

Concerns and Recommendations:

*The PMOC is concerned that the ESA Quality Manager has not followed through on his commitment and recommends that he conduct the training workshop early in April 2012.*

**1.2.3 Project Schedule**

Status:

The ESA-PMT is in the process of finalizing a revised baseline schedule to account for the project delays to date, as well as the scope transfer among contracts, and the Amtrak East River Tunnel (ERT) project. A series of workshops for each of the major program areas (Manhattan, Queens, Harold Interlocking, and Systems) were held during October 2011 and November 2011, and concluded in December 2011. The finalized revised baseline schedule was forecast to be completed at the end of 2011 after the workshops were completed, and reforecast to be completed by the end of January 2012. *As of the end of March 2012, this baseline has not been finalized.*

Observation:

Finalization of the new schedule baseline is now three months behind the original schedule. This could impact the plan to present the new schedule to the MTA CPOC in May 2012.

Concerns and Recommendations:

*The PMOC is concerned about the length of time taken to finalize the schedule baseline and recommends that the ESA PMT “freeze” the new baseline as soon as possible. Continuing adjustments to the revised baseline schedule could also impact the results of the on-going programmatic risk assessment, which needs the baseline data in order to properly model schedule risks.*

**1.2.4 Project Budget and Cost**

Status:

*MTACC reported that, as of February 29, 2012, the overall project completion was 50.2%, based on the invoiced amount of \$3.677 billion in the MTA-Approved Working Budget of \$7.328 billion; however, the overall project completion continues to significantly lag behind the (September 2009) planned progress of 67.1%.*

*This amount represents 47.2% of the Current Working Budget (CWB) of \$7,791 million, approved in September 2009 by the MTA Board (excluding financing costs), representing a 0.6% progress increase since the January 2012 reporting period.*

Observation:

*As of February 29, 2012, the ESA-PMT reported that the project cumulative amount invoiced to date increased by \$39.6 million, to \$3,677.5 million representing a growth rate of 1.08% as compared with January 2012 growth rate of 1.5%. If the current growth rate continues, the PMOC estimates that the project will only reach 75.0% of planned expenditures by September 2016 (the current MTA-approved Revenue Service Date).*

Table 1.1 and Graph 1.1, below, illustrate the variance between planned and actual project completion percentage over time. Graph 1.1 shows the growth in the difference between planned and actual completion. From this graph, it appears as though the difference between planned and actual progress is not steady, but grows over time. Table 1.2 and Graph 1.2 below show awarded, invoiced and expenditure trends to date.

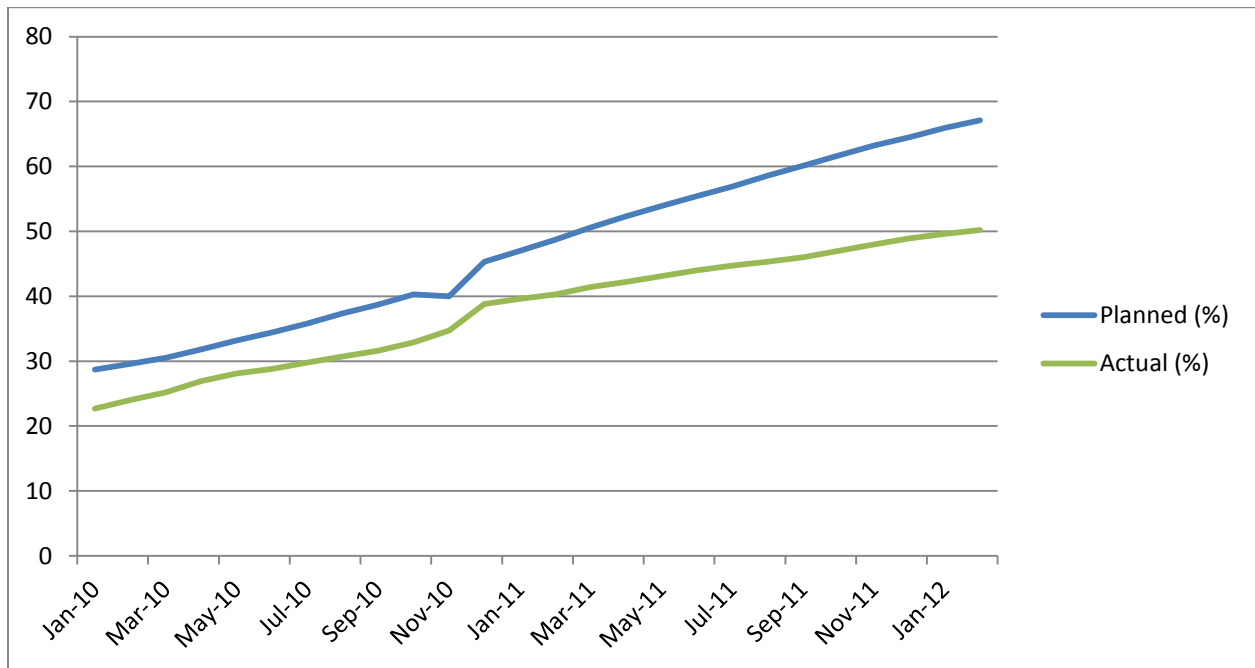
**Table 1.1: Project Overall Percent Complete Trend (Actual versus Planned)**

Period	Planned (%) (cumulative)	Actual (%) (cumulative)	Variance	Planned Growth	Actual Growth
Jun-10	34.40	28.80	5.60	1.2	0.7
Jul-10	35.80	29.80	6.00	1.4	1.0
Aug-10	37.40	30.70	6.70	1.6	0.9
Sep-10	38.70	31.60	7.10	1.3	0.9
Oct-10	40.30	32.90	7.40	1.6	1.3
Nov-10	40.00	34.70	5.30	-0.3	1.8



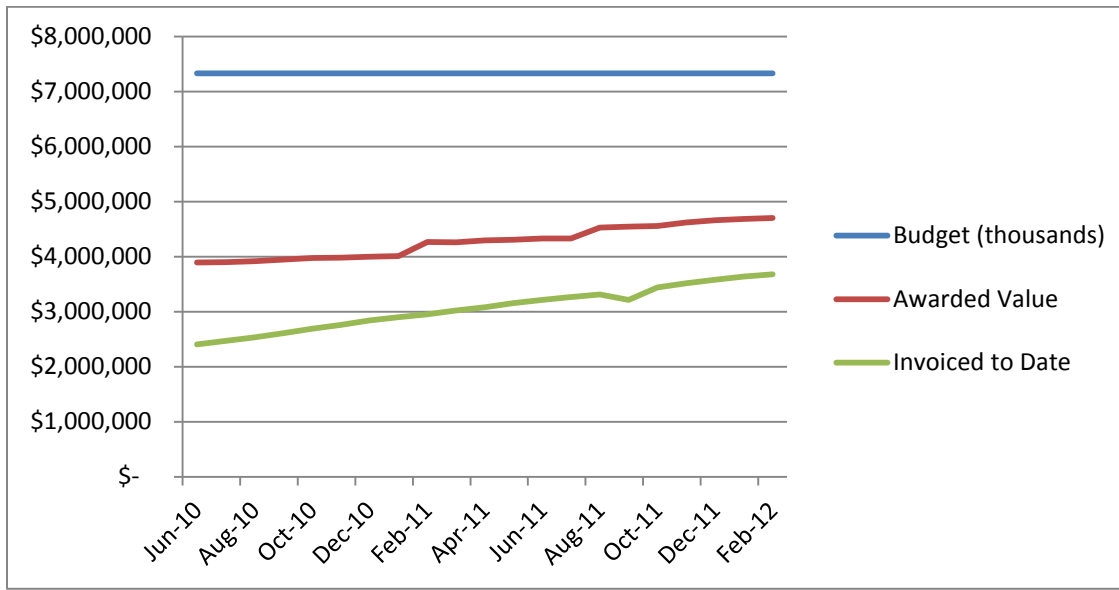
Period	Planned (%) (cumulative)	Actual (%) (cumulative)	Variance	Planned Growth	Actual Growth
Dec-10	45.30	38.80	6.50	5.3	4.1
Jan-11	47.00	39.60	7.40	1.7	0.8
Feb-11	48.70	40.30	8.40	1.7	0.7
Mar-11	50.60	41.40	9.20	1.9	1.1
Apr-11	52.30	42.20	10.10	1.7	0.8
May-11	53.90	43.10	10.80	1.6	0.9
Jun-11	55.40	44.00	11.40	1.5	0.9
Jul-11	56.90	44.70	12.20	1.5	0.7
Aug-11	58.60	45.30	13.30	1.7	0.6
Sep-11	60.10	46.00	14.10	1.5	0.7
Oct-11	61.70	47.00	14.70	1.6	1.0
Nov-11	63.20	48.00	15.20	1.5	1.0
Dec-11	64.50	48.90	15.60	1.3	0.9
Jan-12	65.90	49.60	16.30	1.4	0.7

**Graph 1.1: Project Overall Percent Complete Trend (Actual versus Planned)**



**Table 1.2: Awarded, Invoiced and Expenditure Trend**

Period	Budget (thousands)	Awarded Value (thousands)	Invoiced to Date (thousands)	Awarded Growth	Invoiced Growth
Jun-10	\$7,328,000	\$3,892,152	\$2,409,700	0.71%	2.98%
Jul-10	\$7,328,000	\$3,900,682	\$2,469,964	0.22%	2.44%
Aug-10	\$7,328,000	\$3,915,943	\$2,534,943	0.39%	2.56%
Sep-10	\$7,328,000	\$3,946,151	\$2,607,700	0.77%	2.79%
Oct-10	\$7,328,000	\$3,976,433	\$2,690,131	0.76%	3.06%
Nov-10	\$7,328,000	\$3,981,784	\$2,760,446	0.13%	2.55%
Dec-10	\$7,328,000	\$4,001,810	\$2,840,400	0.50%	2.81%
Jan-11	\$7,328,000	\$4,008,261	\$2,899,940	0.16%	2.05%
Feb-11	\$7,328,000	\$4,264,498	\$2,955,465	6.01%	1.88%
Mar-11	\$7,328,000	\$4,262,330	\$3,022,700	-0.05%	2.22%
Apr-11	\$7,328,000	\$4,296,884	\$3,079,920	0.80%	1.86%
May-11	\$7,328,000	\$4,307,279	\$3,154,023	0.24%	2.35%
Jun-11	\$7,328,000	\$4,328,649	\$3,215,700	0.49%	1.92%
Jul-11	\$7,328,000	\$4,329,440	\$3,264,945	0.02%	1.51%
Aug-11	\$7,328,000	\$4,527,369	\$3,316,075	4.37%	1.54%
Sep-11	\$7,328,000	\$4,547,586	\$3,215,700	0.44%	-3.12%
Oct-11	\$7,328,000	\$4,554,884	\$3,441,192	0.16%	6.55%
Nov-11	\$7,328,000	\$4,623,591	\$3,517,191	1.49%	2.16%
Dec-11	\$7,328,000	\$4,663,038	\$3,582,800	0.85%	1.83%
Jan-12	\$7,328,000	\$4,686,651	\$3,637,887	0.50%	1.51%

**Graph 1.2: Awarded, Invoiced and Expenditure Trend**Concerns and Recommendations:

More information is detailed in Section 5.1 – Budget/Cost.

**1.2.5 Project Risk Monitoring and Mitigation**Status:

Through March 2012, ESA-PMT has continued its efforts to identify and mitigate risks that may adversely affect the program's cost and schedule performance. Ongoing and significant new risk mitigation initiatives include the following:

- MTACC-ESA commenced the programmatic risk assessment of the re-baselined IPS and budget to develop new, risk-informed management baselines.
- In response to continued delays experienced on the Queens contracts to date, ESA-PMT and the associated ESA construction managers continue to manage all Queens area work to the critical CQ031 milestones related to TBM mining of the remaining two rail tunnels.
- ESA-PMT worked with LIRR, Amtrak and the ESA-CMs to evaluate the impacts that the Amtrak planned capital improvements for the East River Tunnels (ERT) will have on the track outages needed for the Harold Interlocking work. This effort continued into early 2012. However, Amtrak has experienced delays in their ERT program due to a broken rail situation and this has affected track outage coordination with the ESA project.

- [REDACTED]
- *ESA-PMT is utilizing 4D modeling for the CQ032 contract to identify potential “clashes” with work performed under other contracts.*
- [REDACTED]
- [REDACTED]

For a full discussion of the above cited mitigations, see Section 6.4.2 of this report.

Observation:

Since the signing of the FFGA in December 2006, MTACC has missed all but one of the basic annual mitigation milestones regarding design completion, contracts awarded, and construction completion (details are in Section 6.4.1 of this report). The ESA project has not met the cost and schedule commitments established in the FFGA. In applying the ESA-PMT’s strategies to halt continued delays in Queens, the ESA-CM continues to closely manage the single remaining critical interface between contracts CH053 and CQ031 in an effort to prevent delay to the CQ031 TBM mining, which commenced in May 2011. Seven of the original eight interfaces identified in Q3-2010 as critical between Contracts CH053 and CQ031 have been resolved. These efforts have generally been effective and have limited TBM mining schedule slippage to only about 4 weeks due solely to interface issues. *However, due to continuing construction delays on the CH053 contract through March 2012, new critical interfaces with CQ031 continue to develop.* The ESA-PMT has been working with the ESA-CMs to resolve critical CQ031/CH053 interface conflicts on a case-by-case basis. Similarly in Manhattan, the ESA-PMT has focused on schedule risk reduction by shifting work scope packages between contracts.

MTACC announced at the September 26, 2011 MTA Capital Program Oversight Committee (CPOC) meeting that they are analyzing the impact of the construction delays experienced on ESA to date as well as the anticipated delays caused by Amtrak’s 4-year program for major track replacement work in all four East River Tunnels. *During March 2012, ESA-PMT continued work on a re-baselined IPS that accounts for schedule delays experienced to date and all schedule accommodations between ESA and the Amtrak ERT program.* MTACC’s stated goal is to achieve a Revenue Service Date (RSD) that, at a minimum, meets the April 2018 FTA ELPEP date. At the January 26, 2012 executive meeting with the MTACC president, MTACC-ESA notified the FTA that it plans to complete a full risk assessment of the re-baselined project cost and schedule and plans to present its findings to the MTA Board in May 2012.

Concerns and Recommendations:

Starting in October 2009, the PMOC has been reporting that unmitigated risks identified in the 2008 ESA risk mitigation plan (based on the 2006 risk assessment) have caused MTACC to fail to achieve acceptable progress in support of the FFGA cost and schedule baselines. Subsequently, the PMOC expressed concern that continuing project cost and schedule trend, primarily caused by unmitigated risks, indicated that the ESA project will not be able to meet the revised project cost and schedule baselines approved by the MTA Board in 2009. In September 2011, ESA-PMT acknowledged that, as a result of these trends, they will not be able to complete the project in accordance with the 2009 cost and schedule baselines. *MTACC further acknowledged that the*

*poor cost and schedule trending were contributing factors for the decision, made in August 2011, to undertake a comprehensive cost and schedule re-baselining of the entire ESA project. The PMOC recommends that MTACC-ESA continue to completion its current re-baselining efforts to account for the delays and increased project cost experienced to date, and focus on better managing the schedule and cost risks going forward. The PMOC further recommends that MTACC-ESA expedite its detailed review of all new project risks that may be encountered due to Amtrak's 4-year ERT program and the associated cost and schedule impacts. The PMOC endorses MTACC's decision to complete a full risk assessment of the re-baselined IPS and recommends that the assessment include evaluation of the potential impacts to the revised baseline cost estimate.*

*The PMOC remains increasingly concerned that continued "schedule compression" required to meet MTACC's stated goal of an April 2018 RSD will force "contract stacking" in the many constricted work areas in Queens, Harold Interlocking and Manhattan, which will create new coordination risks for MTACC-ESA. These new risks may expose MTACC-ESA to adverse cost and schedule impacts as well as potential quality issues.*

See Section 6.0, Project Risk, for a more detailed discussion of these issues and concerns.

### **1.2.6 Project Safety and Security**

#### Status:

Details of project safety statistics are presented in Section 1.1.2, d, above.

*The following activities related to the safety certification process took place during the 1<sup>st</sup> Quarter of 2012:*

- *Presentations were made to the FDNY's Fire Prevention and Operations representatives regarding ventilation and smoke extraction capabilities for the tunnels and GCT station locations. Presentations were based on a computational fluid dynamics (CFD) analysis, and were scenario specific. Information imparted provided system capability and operational requirements associated with incident location. This series of presentations was the last of the life safety systems for FDNY review.*
- *An audit was conducted with the GEC to ensure that the number of system safety packages presented to the LIRR's certification committee matched the number of certification packages delivered to the MTA. The audit findings indicated that two packages are awaiting Committee approval.*
- *The MTACC Safety Director initiated dialogue with the LIRR regarding committee modifications as a result of the retirement of the Chairperson and a committee member departure.*
- *Continue dialogue with MTAPD and GEC to finalize communication and GCT precinct design to ensure that system and operational requirements are met. All required modifications are scheduled to be finalized by the end of May 2012.*

#### Observation:

*Issues related to the safety certification process continued to be progressed during the 1<sup>st</sup> Quarter of 2012.*

### Concerns and Recommendations:

Although issues related to Safety Certification are being progressed, the PMOC *continues to* recommend that the Safety and Security Certification Committee meet on a regular basis to keep the certification process moving. The PMOC also recommends that the MTACC Director of Safety and Security present an overview of the safety certification process to both the MTACC Executive level and to the ESA Safety and Security Certification Committee.

### **1.3 FTA Compliance**

*On August 11, 2011, FTA-RII approved the MTACC Recovery Plan submitted on June 29, 2011. However, due to the current comprehensive cost and schedule re-baselining, the Recovery Plan will need to be revised. Based on MTACC's forecast for completion of the re-baselining, the Recovery Plan cannot be revised until Q2-2012.*

#### **1.3.1 FTA Milestones Achieved**

*No new FTA milestones were achieved in this reporting period.*

#### **1.3.2 Readiness for Revenue Operations**

##### Status:

A detailed status of the operational readiness activities taking place during the *1<sup>st</sup> Quarter of 2012* is presented in Section 2.1.5 of this report.

##### Observation:

The Operational Readiness group continued to progress and refine the activities comprising ESA project commissioning and start-up during the *Q1- 2012*.

##### Concerns and Recommendations:

*The Operational Readiness Group has developed a comprehensive and well thought-out strategy for preparing the ESA project for revenue service. The challenge going forward will be to keep all of the stakeholder representatives who will be involved in commissioning and start-up activities fully engaged in the project until the RSD.*

## 2.0 PROJECT SCOPE

### 2.1 Status of Design/Procurement/Construction

*MTACC reported that as of February 29, 2012, the Engineering/Design increased from 95.4% to 95.9% completed due to an increase in the contract value for additional work but was planned to be 100% completed based on the 2009 MTA approved schedule. The total construction progress reached 44.8% complete vs. 65.6% planned, on a cost invoiced basis, in accordance with MTACC's re-baselined budget of September 2009.*

#### 2.1.1 Engineering and Design

##### Detailed Status:

*As of February 29, 2012, the design activities were reported to be 95.9% completed vs. 100% planned for this period. Progress was made in advancing the ET design work during the month of March 2012, with the Stage 2 – 90% catenary design package submitted to Amtrak for review on March 12, 2012. Amtrak approval for this package is forecast for April 18, 2012 and the 100% ET design package is forecast for submittal to Amtrak by April 27, 2012.*

For CH057 Contract (Harold Structures 3A), all design efforts except the catenary are completed. The catenary design cannot be completed and incorporated into the final design package until Amtrak approval is obtained. *As stated above, the 90% ET design package is with Amtrak for review and the 100% ET design packages is pending submittal to Amtrak (note: Amtrak cannot review 100% design until 90% has been reviewed and approved).* The ESA-PMT is planning to advertise the CH057 Package by June 1, 2012 (It is important to note that the catenary installation is on the critical path for the Harold work, and is on the near critical path for the project schedule).

*Preliminary design efforts for the 48<sup>th</sup> Street entrance to GCT (CM015) continued in March 2012. The ESA-PMT has finalized scope for the GEC for the preparation of two contracts: CM015A, which entails clearing the spaces which will be retained by the building owner; and CM015, which entails the build out of the entrance. The design costs have been negotiated with the GEC and once ratified by the major sub-consultants, is planned for submission to the April 2012 MTA Board for approval.*



The ESA-PMT issued a Notice-to-Proceed (NTP) to the GEC to begin development of the bid documents for CM014B Contract (GCT Concourse/Cavern Finishes) in January 2012. The NTP included pending scope revisions to access at 44<sup>th</sup> and 50<sup>th</sup> streets; blast resistance of critical columns; and other miscellaneous revisions. *The current ESA schedule forecasts completion of 100% design by July 1, 2012.*

##### Summary Observations:

*There was considerable progress in getting Amtrak approval for three ET design packages at the end of February 2012. It is important for the project to stay on schedule to get the remaining ET packages submitted and approved in a timely manner. It is important to note that the catenary*

*installation is on the critical path for the Harold work, and is on the near critical path for the project schedule.*

Summary Concerns and Recommendations:



**2.1.2 Procurement**

Detailed Status:

As of *February 29, 2012*, the total procurement activity on the project was reported to be *60.4%* complete, with *\$4.703 billion* in contracts awarded out of the *\$7.791B* budget.

Only the first two years of the 2010 – 2014 MTA Capital Program had been funded by the NYS Capital Program Review Board (CPRB). The CPRB was to approve additional funding by December 31, 2011; however, this did not happen. The MTA will not be able to award the ESA contracts CM014B – GCT Concourse/Cavern Finishes; CS179 – Systems Package 1 (Facilities); and CS084 – Systems Package 2 (Tunnels) if this funding is not in place. *There has been some progress in this area; allocation of \$770 million in the NYS budget in March 2012 for the MTA Capital Program. Since there are three major contracts scheduled for award in 3Q12 that will require local funding to be in place, it remains to be seen if the allocation of funds to the ESA Project is adequate to allow for award of these major upcoming procurements.*

The procurement process for CS179, CM012 and CM014B contract packages, which are high-dollar value contracts with long durations, *is trending significantly behind schedule*, due in large part to continuing scope shifts, volume of questions from bidders and proposers, and the addenda needed to address them.

The CM012 solicitation was cancelled in November 2011 after the ESA-PMT was informed by several potential bidders that it would be difficult, if not impossible, to submit a reasonable bid given the requirements in the bid package. *The solicitation was reissued on March 12, 2012, with modifications to the Contract bid package based upon discussions with perspective bidders since the cancellation of the previous solicitation.* Bids were previously due on May 8, 2012; however this date has been changed to May 22, 2012. ESA is still forecasting NTP in August 2012, with construction to begin in January 2013. The PMOC believes that it will be difficult to start construction on this contract in January 2013 given the significant procurement delay.

Of particular concern is the continuing slippage of the proposal due date for the CS179 package. The ESA-PMT transferred a significant amount of work (by addenda) that is not systems-related, into the CS179 package including the tunnel bench walk, the 63<sup>rd</sup> Street tunnel rehabilitation work, and various scope items in the Manhattan running tunnels. To address this delay, ESA separated the due dates for the Technical proposals and Cost and Schedule proposals. *The Technical proposals were received on March 7, 2012, a delay of three weeks since the forecast in January 2012. Schedule and cost proposal due dates have slipped to April 24, 2012, and May 1, 2012 respectively (previous forecast for both was April 17, 2012).* Based on the delays mentioned above, and the time involved in a negotiated procurement (RFP), the PMOC believes that there is insufficient time to issue the NTP in August 2012 (as currently forecast).



*The current ESA forecast has the 100% design being completed July 2012; with a plan to advertise by August 2012, and award in October 2012.*

Summary Observation:

The PMOC notes that the schedules for each of the above packages have slipped significantly in one phase of the procurement process or another.

Summary Concerns and Recommendations:

*CS179, CM012 and CM014B are high dollar value contracts and have long durations. The delays in these procurements have been accounted for in the new baseline schedule; however, continuing slippages in the procurement of these contract packages will impact the new schedule.*

### **2.1.3 Construction**

#### **Harold Interlocking Contracts**

Detailed Status:

CH053 Contract – Harold Structures Part 1 and G02 Substation

- Original Contract value: \$137.3 million
- *Approved Change Orders: \$36.1 million*
- *Current Contract value: \$173.4 million*
- Current Estimate-at-Completion: \$200.2 million (includes approximately \$15 million for additional work scope to be transferred from CH054 and Harold Stage 2 Force Account package).
- NTP date: January 2, 2008
- Original contract Substantial Completion date: May 2010.
- Current approved plan Substantial Completion date: January 2012 (20-month delay)
- *Current forecast Substantial Completion date: November 2013 (42-month delay)*
- *The original contract final completion date was September 2010. The current forecast final completion date is January 2014.*

Schedule: ESA-PMT had previously approved the contractor's re-baselined schedule, which had a Substantial Completion date of January 2012, 20 months later than the original date of May 2010. *The forecast Substantial Completion recovered 3 months from January 2014 to November 2013, 42 months later than the original date. As of February 29, 2012, the scheduled completion by cumulative cost was 64.5% actual versus 100% planned, based on the contractor's current approved re-baselined schedule and 100% of the revised contract time to Substantial Completion has elapsed. The schedule completion by cost expenditure for the February 2012 reporting period was 1.3% actual versus an unspecified percentage planned based on a proposed new baseline.*

Cost: Recognizing the impact of the continuing delays to the schedule caused by differing field conditions, changes due to re-designs and added scope, ESA-PMT increased the Estimate at

Completion (EAC) from \$191.7 million to \$200.2 million in August 2011. *Sixty-nine contract modifications (change orders) totaling \$36.1 million have been executed as of February 29, 2012. The EAC is now \$56.1 million, or 39%, over the original budget.*

Construction status for the period of January – March 2012:

- *Completed: installation of piles for the center pier of the ML4 bridge over 43<sup>rd</sup> Street, sewer construction along 43<sup>rd</sup> Street at the Amtrak/LIRR Mainline Bridge.*
- *Continued fabrication of steel catenary structures; erection of catenary poles; construction of 12kV duct bank and manholes; construction of foundations for signal towers and catenary poles at various locations in Harold Interlocking; erection of signal tower poles; installation of support-of-excavation for WBBY west abutment foundations; and internal wiring of G.O.2 Substation.*

Approximately 40 catenary poles have been released based on final Amtrak approval of design package MP5. Work on remaining portions of the Track A Approach Structure is still on hold awaiting relocation of existing catenary poles and signal towers. As a result, the CQ031 was required to relocate the Track A TBM reception pit.

*During the period January – March 2012, the ESA-CM did not report any significant quality or security issues. There were four first aid injuries for Contracts CH053 and CH053A.*

Observations:

*During February 2012, which is the latest data available from the grantee, the contractor achieved 1.3% actual versus an unspecified percentage planned based on a proposed new baseline. The August 2010 adjustment to the EAC results in a total increase of \$62.2 million, or 45.8%, to the original contract award value of \$137.3 million.*

The ESA-CM has negotiated contract milestone changes with the contractor to reflect the cumulative impacts of the various delays to date, and the continuing delays are summarized below:

- *The General Engineering Consultant's (GEC) late responses to contractor's Requests-for-Information (RFIs) and late completion of catenary construction staging plans through 2008, 2009, 2010 and into 2011 have continued to delay construction work.. The PMOC had previously expressed its concern about the GEC's ability to respond quickly to contractor's RFIs and unforeseen site conditions and to adequately plan for required construction staging. In response to these quality issues, the GEC changed its management organization and added staff and MTACC-ESA engaged HNTB to provide additional review of catenary re-designs prior to submission to Amtrak. Also, the GEC has re-organized the catenary design team under a new design manager. However, despite all these changes intended to resolve Amtrak design approval issues, delays have persisted through October 2011 when the last major CH053 catenary design package was approved. This long-standing delay contributed significantly to the contractor's inability to recover lost time.*

Significant issues that remain are as follows:

- [REDACTED]

*is a significant part of the CH053 base contract scope of work is likely to have substantial adverse impacts to the CH053/CH054A schedules and budgets.*

- [REDACTED]

[REDACTED]

Concerns and Recommendations:

*Overall, the CH053 contractor failed to meet the rate of construction progress required to meet the goals of the contract re-baselined schedule due to the issues discussed in the Observations section above. Because of this, the PMOC remains concerned that the contractor may not be able to achieve and maintain any higher level of production rate. Historical progress has averaged approximately 1.3% per month, yet the contractor's re-baselined schedule shows that construction progress would now need to average 1.8% per month to meet the current forecast Substantial Completion date of November 2013. The current production rate is 15.3% for January 2011 through February 2012, an average of 1.09% per month.*

[REDACTED]

*The PMOC continues to recommend that ESA prioritize the GEC construction support to this contract, expedite resolution of utility interferences, prioritize contractor's requests for track outages and carefully monitor the recent improvements in Amtrak force account support.*

[REDACTED]

CH054A Contract – Harold Structures Part 2A

- Original Contract value: \$21.78 million
- *Current Contract value: \$23.9 million*
- Current Estimate-at-Completion: \$38.1 million
- NTP date: August 24, 2009 (A)
- The original contract Substantial Completion date: December 2010.
- Current approved planned Substantial Completion date: December 2010.
- *The current forecast Substantial Completion date: May 2013 (29-month delay)*
- *The original contract Final Completion date was March 2011. The current forecast date is August 2013.*

Status:

Cost: *As of February 29, 2012, the EAC remains the same at \$38.1 million. Seventeen change orders (contract modifications) totaling \$1.72 million have been approved.*

Schedule: *The forecast Substantial Completion date has slipped 1 month from April 2013 to May 2013, 29 months later than the original date of December 2012. Contract work has been delayed by late mobilization, differing site conditions, adverse weather,*

*[REDACTED] As a result, actual construction progress continues to fall well below the late finish progress curve. As of February 29, 2012, based on the latest data available from the Grantee, cumulative actual percent complete is 53.1% versus planned 65.8% on a cost invoiced basis and based on a forecast progress curve. Substantial Completion was originally planned for December 2010. The PMOC notes that the contract has not been modified to reflect the current forecast Substantial Completion and Final Completion dates.*

Construction status for the period January – March 2012: *Completed installation of critical section of 12kV ductbank to support installation of the F2 CIH. Construction of foundations for Signal Bridges E32 and E34 continued, and construction of 12kV duct bank and manholes also continued.*

Observation:

*Construction progress is already lagging by 12.7% under the revised progress schedule.*

Concerns and Recommendations:

*The PMOC is concerned that work progress is very slow and continues to fall behind schedule. The PMOC is also concerned that continued inadequate construction progress and late completion will put additional demands on both Amtrak and LIRR force account support services. The PMOC is also concerned that delay costs will exceed the budgeted post-bid contingency. The PMOC recommends that the grantee evaluate this situation, work on possible solutions with the contractor,*

develop the most cost-effective approach to minimize the delay impacts, and reach an agreement with the contractor on a revised baseline schedule that is realistic.

VH051A (Part 1) – Harold and Point Central Instrument Locations (CILs)

- Original Contract value: \$25.8 million
- Current Contract value: \$26.0 million
- NTP date: May 2009
- Substantial Completion date: TBD (previous forecast August 31, 2013)
- Final Completion date: TBD (previous forecast September 30, 2013)

Status:

*The installation of Point CIL was accomplished in the Q4-2011; however, the subsequent CIL deliveries (H3 and H4) have slipped due to changes required for the 843 switch; the updating of code charts; and the length of time anticipated for factor acceptance testing of H4. As of this report, the delivery schedule for the other remaining CILs has not been delayed. Substantial completion will be reforecast; at present it is TBD.*

Observation:

The VH051B (Part2) contractor's work on the "F" Harold Alternate Control System (FHACS) and expedited delivery of the equipment are necessary to mitigate further delays to the CIL deliveries and subsequent cut-over dates.

Concerns and Recommendations:

*LIRR and GEC's timely review of contract submittals is critical to keeping remaining work on schedule. In order to mitigate potential delays, the GEC is planning to add resources to their signal design team.*

VH051B (Part 2) – Harold Tower Supervisory Control System (HTSCS)

- Original Contract value: \$5.4 million
- Current Contract value: \$7.1 million
- NTP date: February 2009
- Substantial Completion date: December 31, 2012
- Final Completion date: November 23, 2013

Status:

*The contractor continues to work on "F" Harold Alternate Control System (FHACS) and factory acceptance testing of the FHACS began at the end of March 2012.*

Observation:

*Substantial Completion forecast (December 2012) remains unchanged from last month. Contemplated revisions to the work, ERT repair work, and availability of resources for cut-over support may further delay Substantial Completion. FHACS delivery, installation and in-service are required to support all CIL and CIH cutover.*

### Concerns and Recommendations:

*The PMOC remains concerned about the availability of Amtrak project management resources that will be necessary for the final implementation of the FHACS and recommends that the ESA-PMT works to ensure that these resources will be available.*

### **Queens Third-Party Contracts**

#### CQ031 Contract – Queens Bored Tunnels and Structures

- Original Contract value: \$648.9 million (was \$659.2 million prior to Feb. 2011)
- *Approved Change Orders: \$103.6 million*
- *Current Contract value: \$752.5 million*
- Current Estimate-at-Completion: \$778.5 million (includes \$58.4 million option)
- Award/NTP date: September 28, 2009 (Actual)
- Start date: September 28, 2009 (Actual)
- The original contract Substantial Completion date: September 2012
- Current approved plan Substantial Completion date: September 2012
- *The current forecast Substantial Completion date: February 2013 (5 month delay)*
- *The original contract Final Completion date was January 2013. The current forecast date is June 2013.*

#### Status:

Schedule: *The Substantial Completion date slipped 1 month from January 2013 to February 2013, a 5-month delay to the original date. As of February 29, 2012, based on the latest data available from the grantee, the cumulative actual percent complete was 71.0% versus planned 88.1% on a cost invoiced basis, and 80% of the contract time to Substantial Completion has elapsed. The PMOC notes that the IPS has not been updated since July 2011 due to the on-going re-baselining effort and, therefore, no schedule float date is available.*

*The contractor commenced TBM mining of the Yard Lead Tunnel on May 17, 2011 and completed the tunnel on February 9, 2012. The TBM mining for the Track A Tunnel started on August 9, 2011 and was completed on December 22, 2011. The TBM mining for the Track D Tunnel started on March 29, 2012.*

Cost: *As of August 31, 2011, the Estimate-at-Completion remained at \$778.5 million. As of February 29, 2012, the PMT reported that \$533.3 million has been invoiced, representing 70.9% of the current contract value and 68.5% of the Estimate at Completion. 53 contract modifications (change orders) totaling \$103.6 million have been approved.*

#### Construction status for the period January – March 2012:

- *Completed disassembly, transport from Track A Tunnel TBM reception pit to TBM launch area and re-assembly of TBM No. 2 for the Track D Tunnel mining; installation of mini-piles at the 39<sup>th</sup> Street Bridge Pier 1S; installation of secant pile guide walls for WBBY structure; fabrication of pre-cast concrete tunnel liner panels; sewer construction beneath the 43<sup>rd</sup> Street Amtrak/LIRR Mainline bridge.*

- *Continued assembly of TBM No. 1 in TBM launch area for the Track B/C Tunnel mining; excavation at the Yard Lead Emergency Exit/Ventilation sub-structure; construction of the CO8 Substation; environmental monitoring, water quality sampling and groundwater elevation readings for the Long Island Well Permit report.*

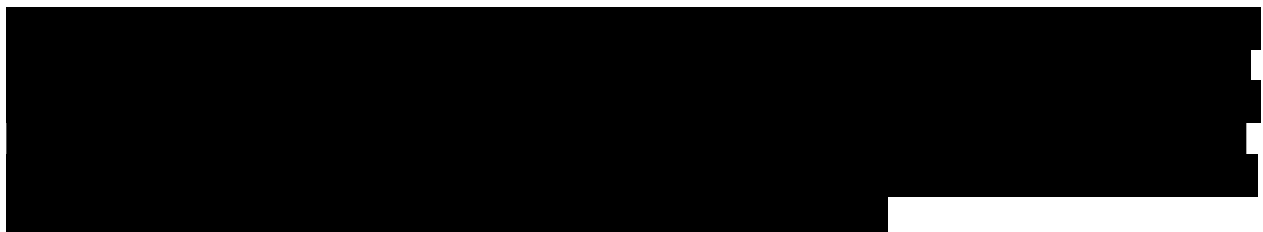
*The ESA-CM reported that there were four recordable accidents, one lost-time accident and fifteen first-aid injuries during this period. No security or significant quality issues were reported for this period.*

Observation:

The ESA-PMT and the CM have managed this contract to ensure start of Tunnel Boring Machine (TBM) mining as planned in May 2011. To achieve this goal, the initial set of slurry wall repairs were completed on an accelerated basis. Up until Q4-2010, the contractor had been able to mitigate all but 2 weeks of the schedule delays caused by late start of the open-cut excavation and additional delays due to necessary slurry wall repairs. Additional delays experienced during the December 2010 through February 2011 and April 2011 through May 2011 time periods resulted in an 8-week schedule slip. TBM mining commenced on May 17, 2011 for the Yard Lead Tunnel and on August 9, 2011 for the Track A Tunnel.

During the 3<sup>rd</sup> Quarter of 2010, ESA-CM identified eight critical interfaces related to TBM mining schedule between Contract CQ031 and Contract CH053, Harold Interlocking, Part 1. Since that time, seven interfaces were resolved with re-designs, construction workarounds and scope deletions. *The single remaining critical interface, tunneling beneath the existing/operating G.O.2 Substation, will require mitigations that will result in additional costs and possibly some delays.* As the CQ031 work advances; however, the contract continues to be impacted by new interferences resulting from late completion of work under the CH053 contract. These new interferences often result in schedule delays and increased costs.

Concerns and Recommendations:



CQ032 Contract – Plaza Substation and Queens Structures

- Original Contract value: \$147.4 million
- *Approved Change Orders: \$0.563 million*
- *Current Contract value: \$147.9 million*
- Current Estimate-at-Completion: \$162.1 million
- Award/NTP date: August 10, 2011 (Actual)
- Start date: August 10, 2011 (Actual)
- Original contract Substantial Completion date: August 2014
- Current approved plan Substantial Completion date: August 2014

- Current forecast Substantial Completion date: August 2014
- Original contract Final Completion date: November 2014
- *Current forecast Final Completion date: November 2014*

Status:

Schedule: The contractor is revising the baseline schedule based on MTACC-ESA review comments. There are no changes to critical dates.

Cost: The contractor has revised and resubmitted the Detailed Cost Breakdown Schedule.

Construction Status for the period January – March 2012:

- *Roosevelt Island facility: Commenced structural demolition work and structural modification work.*
- *Vernon Boulevard facility: Continued lead paint abatement and structural modifications.*
- *12th Street facility: Completed installation of temporary lighting and power. Started structural demolition and lead paint abatement.*
- *23th Street facility: Completed installation of temporary lighting and power. Continued demolition of various structural and systems elements and installation of new drainage.*
- *29th Street facility: Continued demolition of existing HVAC and electrical systems.*
- *B10 Substation: Completed underpinning of CM009/019 conveyor tower structure and excavation at slurry wall.*
- *Plaza Interlocking: Completed 3D scanning of Open Cut Excavation Area.*

*The ESA-CM did not report any accidents or injuries during this period. No security or significant quality issues were reported for this period.*

Observation:

*Release of Access Restraint #1 area (west end of Open Cut Excavation Area and Early Access Chamber area), scheduled for August 24, 2012, will be delayed due to late completion of the Northern Boulevard tunnel by the CQ039 contractor.*

PMOC Concerns and Recommendations:

*The PMOC is concerned about late release of Access Restraint #1 as well as ESA-PMT's coordination efforts required for CQ032 access to the B10 Substation site.*

CQ039 Contract – Northern Boulevard Crossing

- Original Contract value: \$85.0 million
- *Approved Change Orders: \$11.2 million*
- *Current Contract value: \$96.1 million*
- Current Estimate-at-Completion: \$101.0 million
- NTP date: February 3, 2010 (Actual)
- The original contract Substantial Completion date: October 2011



- Current approve plan Substantial Completion date: August 2012
- *The current forecast Substantial Completion date: March 2013 (17 month delay)*
- *The original contract Final Completion date was February 2012 and revised to November 2012. The current forecast date is June 2013.*

Status:

Schedule: The contract was awarded on January 29, 2010 with a Notice-to-Proceed of February 3, 2010. To assure structural adequacy and water tightness, repairs to the Early Access Chamber (EAC) constructed by the CQ028 contractor needed be completed prior to excavation within the EAC and the start of tunneling work beneath Northern Boulevard. As a result, the start of the base contract scope-of-work was delayed. *As of February 29, 2012, the forecast Substantial Completion date has slipped two months from January 2013 to March 2013, a 17-month delay to the original date.* The contractor has forecast an approximate 3 month delay to the Substantial Completion date but notes that part of the delay was caused by the need for installation of additional freeze pipes because rock was encountered at a lower elevation than shown on the plans. *The ESA-CM is reviewing the validity of this delay claim. The ground freeze commenced on November 27, 2011 and was forecast to be completed within 50 days, about mid-January 2012. Tunnel excavation would then follow starting in late January 2012 or early February 2012. Problems achieving acceptable ground freeze required additional grouting to seal groundwater leaks. The mitigation, as of the end of March 2012, appears to be effective and tunneling may start in mid-April 2012.*

Cost: *The EAC remained the same at \$101.0 million. As of February 29, 2012, based on the latest data available from the Grantee, the cumulative actual percent complete 51.2% versus planned 72.3% on a cost invoiced basis and 83% of the current approved contract time to Substantial Completion has elapsed. Thirteen contract modifications totaling \$11.2 million have been executed as of February 29, 2012.*

Construction status for the period January – March 2012:

- *Completed access ramps for initial tunnel excavation; waterproofing plaza invert slab; re-bracing at Queens Bellmouth Structure.*
- *Started ground freeze remediation grouting.*
- *Continued ground freeze process and modification of EAC bracing diaphragms.*

*The ESA-CM reported that there was one lost-time accident and three first-aid injuries during this period. No security or significant quality issues were reported for this period.*

Observation:

*Initial repairs to the exterior of the Early Access Chamber slurry walls, subsequent repairs to the interior of these walls and additional repairs to the slurry wall at the lower elevations have significantly delayed progress of the contract base scope of work and have been very costly. Although the PMT and CM have pursued several initiatives such as tunnel liner and waterproofing re-designs to shorten particular construction activity durations, there remains a significant risk that any such time savings may be negated by the continuing additional delays caused by unforeseen field conditions and difficulties with certain construction means and methods.*

Concerns and Recommendations:

The PMOC believes that this complex and challenging contract will more than likely experience delays during the remaining construction that will consume the remaining available float and likely impact the project critical path. Some of these delays have already emerged. [REDACTED]

[REDACTED] The PMOC is also concerned about the contractor's ability to maintain acceptable progress during New Austrian Tunneling Method (NATM) excavation due to the particular characteristics of this contract including: very limited site access; labor intensive excavation/construction work; NYCT oversight of the construction work; a high probability of encountering unforeseen field conditions during tunnel excavation that will result in re-design and a change in the construction means and methods. [REDACTED]

[REDACTED] *The PMOC estimates that this will be a 4-6 month delay and recommends that ESA-PMT work closely with the CM, the contractor and the GEC to minimize any further delays to the Sequential Excavation Method (SEM) mining beneath Northern Boulevard.*

Manhattan Contracts

The PMOC Observations and Concerns and Recommendations for the below GCT contracts are incorporated at the end of this section:

CM004 – 44<sup>th</sup> St. Demolition and Construct Fan Plant Structure and 245 Park Ave. Entrance

- Original Contract Value: \$40.77 million
- Current Contract Value: \$42.03 million
- Approved Change Orders: \$1.27 million
- EAC: \$45.30 million
- NTP Date: September 2009
- Substantial Completion: October 2012

Status:

*ESA's latest forecast for Substantial Completion of excavation in vertical Shaft #1 by CM004 to the original contract invert of Elevation 282 is March 2012, which is an additional one month over the previous month's forecast of February 2012. As a result, CM004 is now approximately nine months behind the contractor's approved baseline schedule.*

*The MTACC has decided to alter the scope of work for CM004. The Gantry Crane, previously scheduled to be removed in December 2011 will not be removed under this Contract. Instead, it will stay in place to assist in the lining of the remaining vertical shaft #1 and horizontal shaft #1. This "Leave Out" will be placed into Contract 14B where that contractor will dismantle/remove the Gantry and complete the building façade. This plan calls for the CM004 contractor to complete the building and the 44<sup>th</sup> Street façade from the third floor up. The GEC A/E team has revised the drawings for the above-grade building structure to accommodate this change. The contractor has submitted a cost proposal for this change that is under review by MTACC.*

Also, the contractor has submitted, by MTACC request, a cost proposal to continue the shaft excavation from the contract invert of Elevation 282 down to the final invert elevation of approximately Elevation 233.

Additionally, the CM has advised the PMOC that there is another consideration on the table to not complete the above grade building at this time, purchase the building components, store them and construct the building after the Gantry Crane is no longer needed. The 14B contractor would then be charged with erecting the above grade structure along with the building fit-out that is already in the 14B scope. This option, along with the other changes noted above, is under review by MTACC.

The impact to the schedule can only be determined when MTACC decides on the above-noted changes.

Construction status for 44<sup>th</sup> Street for the period January - March 2012:

- Continued with rock excavation to Elevation 282. Shaft rock excavation to the contract invert is currently scheduled for April 4, 2012.
- Continued construction of the basement both north and south of Column 2. At the area south of Column 2 the contractor completed the demolition of the UA wall and placed the permanent footings.
- The contractor continues to work day and night shifts. Most work in the shaft is being done during the second shift (6:30PM – 10:30PM).

Construction Progress for 245 Park Avenue for the period January - March 2012:

- Completed plumbing and fireproofing.
- Continued lighting and communication systems installation at the north end.
- Completed installation of engineered stone wall tiles at the Platform and cross Passageway.
- Completed installation of ceiling systems.
- Completed escalator finishes and began preparation for 80 hour training video and start-up and testing.
- Completed installation of Plaza area, steps, railings, and granite cladding.
- Completed installation of the entrance canopy cladding.
- Began installation of signage.

As of February 29, 2012, the total amount invoiced was \$29,978,000, which represents 71% of the Current Contract Value. Forty two (42) contract modifications have been executed for a total of \$1,269,729. Ten (10) have been negotiated for a total of \$1,515,028, but as of February 29, 2012 a MOD had not been issued. Actual work performed is 72% versus 100% planned.

Observation:

The revised Substantial Completion date of October 2012 is three (3) months extended from the previously reported date of July 2012. The July Substantial Completion date was for the original contract work. This new Substantial Completion date reflects the estimated time to include the

*change to have the CM004 contractor continue excavation of the shaft from the contract invert of Elevation 282 to the final invert of approximate Elevation 233.*

Concerns and Recommendations:

*The MTACC must finalize its review and direction on the project changes, especially since the contractor is reaching the contract elevation invert in the shaft. The PMOC is concerned that a decision to not build the vertical building at this time may prove to be more problematic than beneficial, but this can only be determined once MTACC has completed its cost/benefit analysis.*

CM009 Contract – Manhattan Tunnels Excavation

- Current Contract value: \$448.42 million
- Approved Change Orders: \$20.47 million
- NTP Date: July 2006
- Start Date: September 2007
- Substantial Completion: *Upon approval of re-baselined schedule, will be August 16, 2013*

Status:

The CM009 contract had vacillated between 3 and 7 months behind schedule since the early stages of the project. *During the first half of 2011, however, the contract slipped to between 13 and 14 months behind its original baseline schedule, based on the PMOC's latest analysis (Appendix G, December 2011 Comprehensive Report). As a result, in late September 2011, the MTACC announced that it would re-baseline the schedule. As of March 31, 2012, that re-baseline effort is in the final stages of development and the MTACC intends to present it to the MTA Board in May 2012 for approval. The new schedule will contain revised contract milestones and will forecast Substantial Completion for August 16, 2013.*

*As of February 29, 2012, the total amount invoiced for CM009 was \$374,343,000, which represents 83.5% of the Current Contract Value of \$448,421,000. Thirty-four contract modifications have been executed for a total of \$20,467,318. Actual work performed is 90.9% versus 91.3% planned, based on re-baselined schedule.*

CM019 Contract – Manhattan Structures Part 1

- Original Contract value: \$734.0 million
- Current Contract value: \$752.35 million
- Approved Change Orders: \$18.35 million
- NTP Date: *April 2008*
- Substantial Completion: *Upon approval of the re-baselined schedule, will be August 16, 2013.*

Status:

*As with CM009, the CM019 contract vacillated between 3 and 7 months behind schedule since the early stages of the project, but continued slippage during the first half of 2011 resulted in it being between 13 and 14 months behind its original baseline schedule, based on the PMOC's latest analysis (Appendix G, December 2011 Comprehensive Report). As a result, in late September*

2011, the MTACC announced that it would re-baseline the schedule. As of March 31, 2012, that re-baseline effort is presently in the final stages of development and the MTACC intends to present it to the MTA Board in May 2012 for approval. The new schedule will contain revised contract milestones and will forecast Substantial Completion for August 16, 2013.

As of February 29, 2012, the total amount invoiced for CM019 was \$578,499,000, which represents 76.9% of the Current Contract Value of \$752,347,000. Actual work performed is 74.9% versus 74.3% planned, based on the re-baselined schedule. Forty-eight contract modifications for a total of \$18,347,328 have been executed.

#### CM009/CM019 Contracts – Manhattan Tunnels Excavation/Structures Part 1

Combined Status: As the combined CM009/019 re-baselined schedule was being developed, in an effort to recover overall project schedule, MTACC project and contractor management jointly developed opportunities for follow-on contractors to access project sites earlier than previously planned. These opportunities will be incorporated into the milestones of the finalized ESA re-baselined schedule.

During the first quarter of 2012, the contractor has concentrated its construction efforts on concrete placement on the archway of the Eastbound Cavern (as of March 31, 2012, 19 of 23 pours have been made), bench excavation between the upper and lower levels in both the East- and Westbound Caverns, excavation and shotcrete application in the wellways of Escalators #3 and #4, archway shotcrete in Escalator #2, excavation completion in Escalator #1, as well as concrete and shotcrete applications and continued excavation of “cheeks” and “tights” in various project locations.

The CM009/019 contractor’s safety record continues to be unacceptable to the MTACC. The combined CM009/019 contract safety performance for the period December 15, 2011, through March 14, 2012, included 23 First Aid, 1 Recordable, and 4 Lost Time injuries. Through February 29, 2012, the BLS (Bureau of Labor Statistics) injury ratios were 3.19 for CM009 and 2.73 for CM019 per 200,000 work hours, both higher than the National Industrial Average of 2.20.

#### Construction Status for the period January 2012 – March 2012:

- Completed shotcrete placement of the archway and invert of Escalator Way #3 and excavation of Escalator Way #1 in Madison Avenue Yard, 19 of 23 concrete archway pours in the Eastbound Cavern, as well as concrete and shotcrete applications and “cheeks” and “tights” excavation in various locations throughout the project site.
- Continued bench excavation between the upper and lower levels in both the East- and Westbound Caverns and shotcrete application in GCT3 West Wye and in wellways #3 and #4.
- Began Phase I excavation of the crossflue and shotcrete application of the archway of Escalator Way #2.

#### Observations:

The contractor has maintained its construction pace, which has resulted in significant project advancement, in both caverns and the escalator ways in Madison Avenue Yard. According to its weekly status reports; however, the CM009/019 still has approximately 120,000 CY of excavation to complete the contract, including major excavations for the cavern benches, the 55<sup>th</sup> Street vent plant, and the access tunnels between the escalators and the Westbound Cavern. At its present

*excavation rate, the PMOC estimates that this will take at least another 5 months to complete. The PMOC also believes that, because there is so much excavation and other finish work to do in so many different locations, it will be difficult for the contractor to complete all of its construction any earlier than August 2013. The PMOC does believe, however, that the contractor, barring unforeseen circumstance, will be able to accomplish everything that will be in its revised contract by then.*



*The PMOC continues to update its analysis of the CM009/019 milestones against their respective schedules, which will change once the re-baselined schedule is approved by the MTA Board. This analysis is presented in Appendix G of this report. The PMOC will continue its analysis of the contract milestones using the revised criteria if and when the new schedule is approved.*

#### Concerns and Recommendations:

*The contractor has addressed all the PMOC's stated construction issues from previous reports and has increasingly proven that it has the technical capability and capacity to complete its remaining construction in accordance with the ESA re-baselined schedule. The PMOC is aware that, as part of the global settlement that will accompany the re-baselined schedule, the contractor's present management team will remain through contract completion. The PMOC therefore recommends that, since this team has been so effective in its management of the project, the MTACC ensure that this clause remains in the upcoming contract modification and that the contractor continues to execute the contract in the manner it has for the last 6 months.*

*The PMOC remains concerned about the contractor's safety performance and notes that any periodic improvement it has shown over the 5 years of its contract has historically only been temporary. This reinforces the need for both the MTACC and the contractor to focus constant attention on safety and to jointly develop a program designed to effectively prevent all injuries.*

#### CM013 – 50<sup>th</sup> Street Vent Facility

- *Original Contract Value: \$118.35 million (includes \$24.0 million for work by Property Owner)*
- *Current Contract Value: \$119.04 million (includes \$24.0 million for work by Property Owner)*
- *Approved Change Orders: \$0.69 million*
- *EAC: \$123.57 million*
- *NTP Date: January 2010*

- Substantial Completion: December 2012

Status:

The MPT along 50<sup>th</sup> Street and 49<sup>th</sup> Street is ongoing and is being maintained successfully. MTACC reports that the project is six months behind schedule due to the rock excavation. The MTACC also reports that there has been no additional schedule slippage, the new forecasted milestone dates are being maintained, and there has been no change to the completion dates. The focus at the Vent Plant is completing the excavation and lining of the deep shaft from invert Elevation 309 to approximate Elevation 219.

Construction Progress for 50<sup>th</sup> Street Vent Plant for the period January - March 2012:

- *In the Service Tunnel, completed shotcrete inspection and began installation of waterproofing.*
- *In the Service Tunnel, began forming, rebar and concrete placement of the structural walls.*
- *In the Service Tunnel, completed new concrete manholes and electrical duct banks.*
- *In the Service Tunnel, completed installation of the mud slab and began preparations for the placement of the structural slab.*
- *Completed the installation of the connection angles at the vertical utility chase at 300 Park Avenue.*
- *Completed excavation of the deep shaft at the Vent Plant and completed muck removal.*
- *Began shotcreting of the lower portion of the deep shaft.*

*As of February 29, 2012, the total amount invoiced was \$69.33 million, which represents 58% of the Current Contract Value. Seventeen (17) contract modifications have been executed for a total of \$689,546. Actual work performed is 49.7% versus 51.8% planned.*

Observation:

MTACC is introducing a new milestone into the project. Milestone #5 will allow early access to the vent plant shaft and is intended to lessen the impact of the delay in achieving substantial completion. *As of March 2012, an approved date for this milestone has not been set but MTACC reports that the Substantial Completion date will be extended 6 months because of this additional milestone.*

Concerns and Recommendations:

The MTACC CM should continue to work with the contractor to ensure that Milestone #5 is achieved on schedule.

CM014A – GCT Concourse & Facilities Fit-Out

- Original Contract Value: \$43.5 million
- Current Contract Value: \$43.5 million
- Approved Change Orders: \$0.00
- EAC: \$46.5 million
- NTP Date: November 7, 2011

- Substantial Completion: April 2013

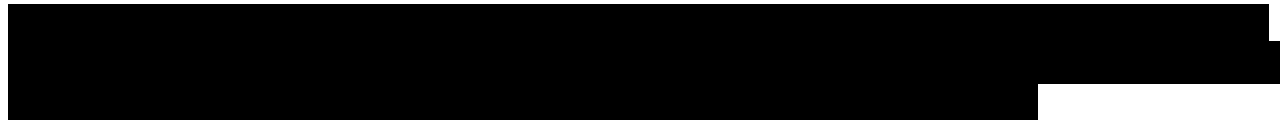
Construction Progress for the period January – March 2012:

- Continuing with site surveys and layout.
- Continuing with wood tie removal.
- Continuing with rail removal and track bed demolition.
- Continuing with general site excavation.
- Continuing with test pits.
- Continuing with sawcutting and demolition of column encasements.
- Completed the initial environmental tests.

Observations:

*The volume of work at the site is steadily increasing.*

Concerns and Recommendations:



**2.1.4 Force Account (FA) Construction Contracts**

Harold Stage 1 Amtrak FA (FHA01)

- Original Agreement Value: \$9.50 million
- Current Agreement Value: \$16.83 million
- Commence Stage 1: June 2007
- *Stage 1 Completion Date: Originally June 2012, presently February 2014*

Status:

*As of February 29, 2012, the total amount invoiced for FHA01 was \$13,503,000, which represents 80.3% of the Current Agreement Value of \$16,825,000. Actual work performed is 71.8% versus 71.8 planned (based on the re-baselined schedule).*

Harold Early Stage 2 Amtrak FA (FHA02)

- Original Agreement Value: \$9.7 million
- Current Agreement Value: \$9.7 million
- Commence Early Stage 2: December 2008
- *Stage 2 Completion Date: Originally September 2010, presently September 2013*

Status:

*As of February 29, 2012, the amount invoiced for FHA02 was \$13,254,000, which represents 136.6% of the Current Agreement Value. The MTACC has authorized Amtrak to proceed with limited Stage 2 C&S construction without the formal Project Initiative in place on essentially a*



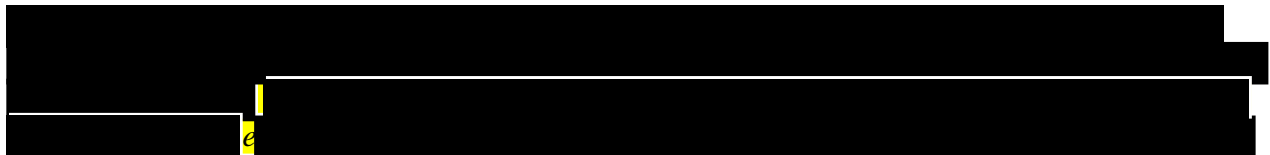
*“Time and Material” basis. Actual work performed is 46.9% versus 46.9% planned (based on the re-baselined schedule).*

Combined Construction Status FHA01 and FHA02 for period January – March 2012:

- *Completed installation of a switch and hardware on new catenary poles B928W and B929W and static wire installation on existing signal tower 11.*
- *Continued ET support of CH053 contractor’s installation of Subsets A, C, and the Main Line; installation and termination of cables for “F” Interlocking CIH; installation of pull boxes, troughs, and conduits under Lines 1 and 3 between signals and switches and the “F2” CIH.*
- *Began installation of crossovers in “F2” Interlocking with the installation of #747A turnout panel.*

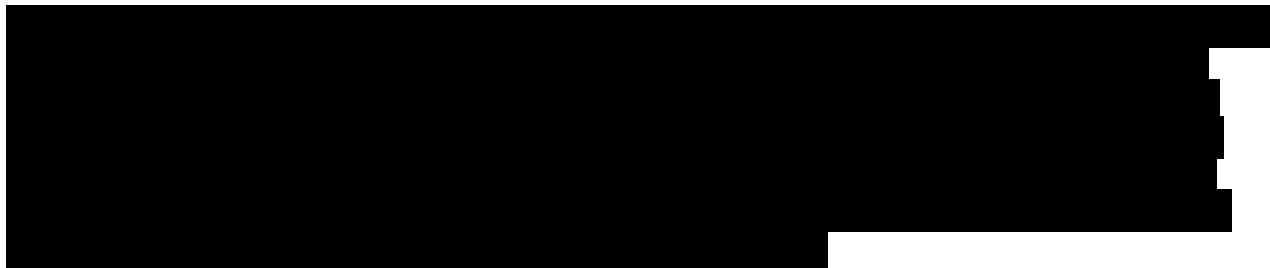


Observations:



*The ESA construction that CH053 was able to accomplish during the last weekend in March 2012, during which it installed 14 catenary poles, 4 cantilevers, 1 truss, 1 K frame, and removed LIRR Signal Bridge 16, is a positive indication to the PMOC that Amtrak’s ET support of the project will continue to improve.*

Concerns and Recommendations:



Harold Stage 1 LIRR FA (FHL01)

- Original Agreement Value: \$28.78 million

- Current Agreement Value: \$20.78 million
- Commence Stage 1: June 2007
- Stage 1 Completion: *Originally September 2010, presently September 2013*

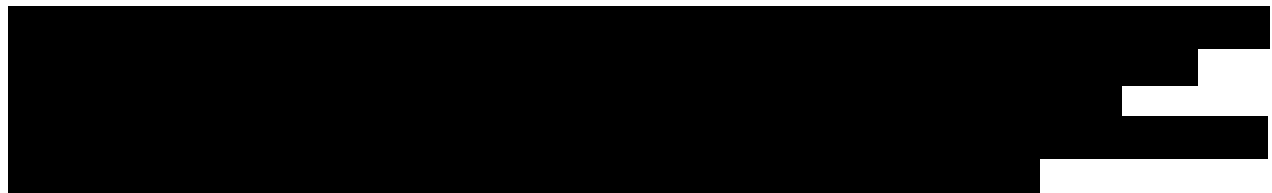
Status:

*As of February 29, 2012, the total amount invoiced for FHL01 was \$17,190,000, which represents 82.7% of the Current Agreement Value of \$20,782,000. Actual work performed was 72.0% versus 72.0% planned (based on re-baselined schedule).*

Harold Early Stage 2 LIRR FA (FHL02)

- Original Early Agreement Value: \$7.35 million
- Current Early Agreement Value: \$7.35 million
- Commence Early Stage 2: August 2009
- *Early Stage 2 Completion: Originally September 2011, presently June 2015*

Status:



Combined Construction Status FHL01 and FHL02 for period January – March 2012:

- *Completed installation of temporary pedestal signals to replace Signal Bridge 16, Harold Interlocking, and cable installation to 3 turnouts from the new Point CIL.*
- *Continued relocation of 3<sup>rd</sup> rail power cables supporting the 12kV duct bank at Substation 44, cable pulling and break-down testing of the new Point CIL, and preparations to connect the server in the HTSCS temporary signal trailer.*

Observations:

*As stated in previous monthly reports, the LIRR's reconfiguration of its Westward Passenger Track, which had been scheduled for 2Q-2012, has been postponed until November and December 2012. This has caused the successor activity turnout installation, which had been scheduled for 3Q-2012, to be pushed out until 2013.*

Concerns and Recommendations:

*The PMOC is concerned that the LIRR has historically re-scheduled many aspects of its trackwork program without considering the effect on the overall ESA construction program. In the PMOC's opinion, this could cause construction to pile up at the end of the program, when the LIRR already has 45 turnouts scheduled for installation between 2013 and 2017 (about 75% of the total). The PMOC believes that it is a possibility, based on past postponements, that LIRR Harold trackwork could be postponed beyond 2017, which could greatly impact the project end date. The PMOC also believes that it is management's responsibility to do everything it can now to prevent this from happening in the future. To avoid such schedule creep, the PMOC recommends that the LIRR and*

*the MTACC agree on a project schedule now and develop the mutual management fortitude and commitment to maintain this schedule by establishing a “can do/will do” culture within their respective project teams.*

### **2.1.5 Operational Readiness**

#### **Status:**

*The ESA Operational Readiness group has focused their effort in several areas during the Q1-2012.*

#### **Asset Management**

- *The Operational Readiness Group’s efforts since last quarter have been focused on completing the templates to be used for listing items in the Asset Inventory as well as developing room data sheets for all ESA facilities and locations. These templates will be used by the contractors and are being incorporated into the procurement packages. To date, these templates have been included in the Contract packages for CQ032 and CM014A. In addition, the team is creating initial operating manuals for equipment and facilities.*

#### **Operations & Maintenance Plan**

- *Volume 2 – Infrastructure of the Operations and Maintenance Plan (rev. 6, is completed and is under internal review). Target date for release of the document is for Q2 2012. Mr. Coates noted that Revision 7 of the O&M Plan will include a re-written Volume 1 – Train Operations, since the original version of Volume 1 is dated.*

#### **Rail Activation Plan**

- *A draft of Volume 2 of the Plan is complete and will be ready for release in early April 2012. Volume 2 of the Plan lays out the various responsibilities of the different task groups involved in the rail activation process. Volume 1 of the Plan will be modified to incorporate activities pertaining to Metro North Railroad.*
- *The Operational Readiness Group in the process of updating the task level schedule as part of the reforecasting process for the new ESA IPS baseline. Tasks and activities are being organized in “work paths” to show the relationship of tasks, activities, and groups.*

#### **Transition Strategy**

- *The Operational Readiness Group is working closely with the LIRR Training and Procurement Departments on development of a strategy for upgrading the Cab Simulator, along with materials for instruction and qualifying of Train and Engine crews using the Cab Simulator.*

#### **Observation:**

*The Operational Readiness group continues to progress activities comprising system start-up and commissioning.*

#### **Concerns and Recommendations:**

*There are no significant concerns or recommendations at this time.*

## **2.2 Third-Party Agreements**

*During March 2012, ESA and Amtrak continued to negotiate Stage 2 of the Communications and Signaling (C&S) Project Initiative.*

## **2.3 Contract Packages and Delivery Methods**

### Status:

Contract Packaging Plan (CPP) Rev. 9.0 was projected to be released in July 2010; however, it was not released until November 2010.

### Observation:

*There has been a significant amount of scope shift under evaluation by the ESA-PMT (see discussion in Section 1.2.1 of this report) during the Q4-2012; and the new schedule baseline has taken these transfers into account.*

### Concerns and Recommendations:

The PMOC has expressed its concern to ESA about the stability of the packaging plan and the need to carefully evaluate the impacts of all proposed scope moves. Given the potentially large amount of scope shifts among the various contract packages, *the PMOC continues to recommend that ESA consider issuing another revision to the CPP.*

## **2.4 Vehicles**

### Status:

There has reportedly been some activity by MTACC/LIRR to remove the rail vehicle procurement from the federally funded ESA project, the details of which have not been shared with the PMOC. ESA has represented that the funds dedicated to rail car procurement will be reassigned to contingency in their report to the MTA Board. The PMOC was informed by the FTA Region II Office in April 2011 that the MTA has been notified to put back the original funding allocated for the purchase of rail vehicles and abide by the federal procurement rules and regulations to purchase the vehicles.

*The LIRR RFP for the procurement was initially planned for release in August or September 2010, then January 2012, and currently April 2012. The contract was to be signed in 2011 with a 3-year production leading to a pilot test. The production units could then begin to deliver all ESA vehicles by opening day. Completion of pilot testing of 14 cars is now planned for June 2016.*

### Observation:

The PMOC has not received any verification that the original funding allocation for the rail vehicles has been put back in the ESA project budget.

### Concerns and Recommendations:

ESA needs to adhere to the FTA request to keep the rail car procurement funding allocation back in the project budget.

## 2.5 Property Acquisition and Real Estate

### Status/Observations:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

### Observations:

[REDACTED]

### Concerns and Recommendations:

The PMOC has no concerns or recommendations at this time. As more information regarding these issues becomes available, this section will be updated.

## 2.6 Community Relations

### Status:

The ESA Community Relations team provides construction updates to affected communities in Queens and Manhattan and outreach to property owners/representatives, residents, and community board representatives.

*During the period of January 2012 through March 2012, the ESA project team performed the following community outreach activities:*

- Distributed updated community flyers, newsletters and monthly updates to property representatives, residents and the local community board regarding construction work at various locations in Manhattan.
- *Continued to provide community updates about planned construction work along Northern Boulevard, at the 63<sup>rd</sup> Street Tunnel facilities and in the area of Sunnyside Gardens, Queens.*

- Continued coordination of NYCDPR landscaping design for the area behind the Vernon Blvd. Facility in Queensbridge Park.
- Continued work on indenture agreement with MTA legal, NYCDPR and the GEC regarding improvements to the existing Vernon Boulevard facility.
- Continued outreach to several property representatives, including NY Friar's Club and 65 East 55<sup>th</sup> Street regarding Contract CM013A (55<sup>th</sup> Street Ventilation Facility).
- *Met with Community Board 2 regarding removal of TBM No. 1 from the Yard Lead Reception Pit along 43<sup>rd</sup> Street.*
- *Continued coordination with JP Morgan Chase regarding shafts located within their building at 383 Madison Avenue.*
- *Met with City Council member about 43<sup>rd</sup> Street closings.*
- *Conducted public outreach with Second Avenue Subway project regarding controlled blasting in Treadwell Farms Historic District.*

Observation:

The PMOC believes that the ESA Community Relations staff is reaching out appropriately to inform the community of upcoming and current changes, and has properly handled concerns and complaints from the community.

Concerns and Recommendations:

There are no significant concerns at this time.

### **3.0 PROJECT MANAGEMENT PLAN AND SUB PLANS**

#### **3.1 Project Management Plan**

##### Status/Observations:

MTACC provided a complete copy of the updated PMP, Revision 8.0, during the first week of May 2011. The PMOC informed MTACC that its review of the PMP is contingent upon receipt of a complete plan; however at the request of FTA, the PMOC began its review of the top ten candidate revisions (CRs) prior to the submission of the complete copy of Revision 8.0, and completed that review in the first quarter of 2011. The initial review was to verify that the top ten CRs had been incorporated as required by the TCC Implementation Plan approval letter. *The PMOC subsequently completed its review of the remaining candidate revisions and has met with the FTA Region 2 Office to discuss its review. FTA Region 2 Office and PMOC will discuss comments with the grantee in April 2012.*

##### Concerns and Recommendations:

*The PMOC and the grantee need to schedule a meeting as early as possible in April 2012 to review comments on the PMP.*

#### **3.2 PMP Sub-Plans**

##### Status/Observations:

*The LIRR Rail Fleet Management Plan was updated in March 2011; however the PMOC did not receive a copy of this revision until the 1<sup>st</sup> Quarter of 2012. The PMOC is currently reviewing the document.*

The MTACC released its final draft Force Account Management Plan (FAMP), dated December 2010, on March 16, 2011, for review. The PMOC completed its review of the MTACC FAMP and forwarded a copy of its comments to the FTA and the MTACC on June 17, 2011. The MTACC stated that it will consider the comments and follow up with the PMOC. The MTACC is still in the process of addressing the review comments.

MTACC's Director of Safety and Security committed to provide an updated Safety and Security Plan (SSMP) no later than December 2010. ESA transmitted a copy of the updated SSMP to the PMOC on March 10, 2011. The PMOC completed its review of the SSMP and forwarded a copy of its comments to the FTA and MTACC on June 20, 2011. ESA provided responses to the comments on the SSMP in November 2011. These responses are currently being reviewed by the PMOC.

##### Concerns and Recommendations:

The PMOC recommends that ESA respond to the comments made on the FAMP as soon as possible, since eight months have passed since the comments were provided.

#### **3.3 Project Procedures**

##### Status:

*The MTACC did not release any additional procedures during March 2012. The total number of revised procedures is presently 76. The PMOC is aware that the MTACC's procedure development continues to be a dynamic process and that as many as 4 additional procedures, including the critical AD.15 – Program Change Control, remain under development.*

Observations:

*The MTACC did not develop the revised project procedures according to the schedule to which it originally committed. It had originally committed to have 75 procedures revised by April 12, 2010, but it did not reach that total until October 2011, 18 months later. These revised procedures will, in many cases, replace the procedures that are currently referenced in the PMP.*

Concerns and Recommendations:

*The PMOC is concerned that the MTACC has not completed the implementation of the revised procedures after over 2 years of development. Additionally, the PMOC believes that AD.15 – Program Change Control is critical to the management of the program. With all the formal changes that have already occurred between project contracts and that will most likely continue to occur, based on the way the MTACC is managing the project, a revised procedure that details the manner in which these changes will be formally authorized, tracked, and closed is essential.*

*The PMOC therefore recommends that the MTACC direct its Contract Construction Manager in charge of developing the revised procedures to finish all remaining procedures by no later than April 30, 2012, and that the MTACC implement them immediately thereafter.*



## 4.0 PROJECT SCHEDULE STATUS

### 4.1 Integrated Project Schedule

#### Status:

*The ESA-PMT is finalizing its revised baseline IPS and is planning to present it to the MTA Board in May 2012. Although the PMT has issued three drafts of the IPS since last quarter, it has not finalized the Revenue Service Date (RSD) yet. The revised baseline IPS forms the input for a refined costs and the risk assessment.*

*MTACC has re-advertised Contract CM012 on March 5, 2012. In addition, MTACC received bids for Contract CM013A on March 27, 2012, and technical proposals for Contract CS179 on March 7, 2012.*

#### Observations/Analysis:

*After the global settlement with CM009/019 which took place in January 2012, the CM012 contract package had some scope transferred from CM019 contract that was included in the bid package of CM012.*

The PMOC performed a review of the ESA schedule performance since MTACC started revising its baseline schedule in July 2011 (up to IPS #31). In its review, the PMOC divided the civil construction packages into the following three categories (note that the PMOC did not consider force account contracts in this analysis because the complexities involved in their performance makes them difficult to predict):

- a) Active Contract packages since July 2009. These packages were under construction when the PMT re-baselined the ESA in July 2009;
- b) Future construction packages, which are set to be awarded in 2012 and 2013;
- c) Active construction packages that have been awarded between July 2009 and December 2011.

The following is a breakdown of these categories:

#### **A. Active Contract Packages**



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\* The total amount of unallocated contingency for these active packages is \$133,737,786.29.

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#### **4.2 90-Day Look-Ahead of Important Activities**

Status:

The PMOC received the variance report for IPS update #34 (data date March 1, 2012). The ESA-PMT has announced that the RSD (September 2016) in the current IPS, which was re-baselined in July 2009, cannot be met. Consequently, ESA-PMT is in the process of producing a revised baseline schedule that will have a new RSD. Table 4.10 shows important 90-day look-ahead activities:

**Table 4.10: 90 Day Look Ahead**

Activity Name	Start	Finish
CM013A: NTP	N/A	Jun/1/2012
CM012: Bid Opening	N/A	May/22/2012
CH054A: Milestone #2 - Complete West of Thomson	N/A	Mar/30/2012
CH057-100% Design Completion	N/A	May/15/2012
CH058: 90% Design Submission	N/A	Jun/15/2012
FHA02-Stage 2 - 90% Submittal to Amtrak	N/A	Mar/9/2012
FHA03-Stage 3 - 60% Submittal to Amtrak	N/A	May/10/2012
FHL03-Submission of 100% Design Documents	N/A	29-Mar-12
CS179- Proposal & Best and Final Offer due date	May/18/2011 A*	Jun/1/2012
CS284 - Advertisement	May/10/2012	

\* "A" represents the actual date

The following are near critical 90-day look-ahead construction operation activities in Contract CM009-012, CQ031, CQ039 and CH053:

**Table 4.11: Critical 90-Day Look-Ahead of Construction Operation Activities**

Activity ID	Duration (w days)	Start	Finish
CM009-019 Cavern West Bound-Bench II - 404 Full length	77	4-Apr-12	23-Jul-12
CM009-019 Cavern East Bound-Bench II - 402 South 2/3rd	87	5-Apr-12	7-Aug-12
CH053- LOOP A Outage Start	0	30-Mar-12	
CQ031: Queens Bored Tunnels and Structures-Yard Lead Tunnel X-Passage			14-May-12
CQ031: Tunnel D-TBM Intervention	5	2-Apr-12	6-Apr-12
CQ031:B13 Substation	69	1-Mar-12	6-Jun-12
CQ031:Tunnel B/C: Set Up Tunnel B/C TBM/Train	40	2-Mar-12	27-Apr-12
CQ039: Excavation Drift	28	3-May-12	11-Jun-12

Observation/Analysis:

The ESA-PMT has announced that “the current IPS update will have to undergo some major adjustments in the coming months”, however the PMOC has presented its analysis in Section 4.1 to demonstrate the current state of ESA schedule.

Because the PMT is in the process of revising the baseline IPS, the PMOC cannot comment on delay impact on the design stages and the award of future contracts until the re-baseline is finalized. However, the PMOC has shown the escalation cost of delays, and potential impact on the RSD occurred to date in Section 4.1.





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- Key Contract Interface – 01: CM009-019 Milestone #5A (turn over to CM012)
- Key Contract Interface – 02: CM009-019 Milestone #6A (Substantial Completion)
- Key Contract Interface – 03: CM012 Superstructure Completion and TOC Room Readiness
- Key Contract Interface – 04: CM014A Contract Substantial Completion

Key Contract Interface – 05: CQ031 Milestone #4:

- Completion of the Plaza Superstructure is key to ESA because the majority of the Queens systems equipment is located within the Plaza structure.
- CQ031 Milestone #4 is what is driving CQ032's Access to Plaza site.

Key Contract Interface – 06: Readiness of Plaza Track Level from Yard Lead to Bellmouth

- ESA currently plans to deliver systems materials via the Yard Lead thru Plaza Track Level to Manhattan. In order to secure this clear access:
  - a) CQ032 Milestone #2 Plaza Track Level needs to be completed
  - b) CQ039 must be substantially completed to provide a clear path under Northern Blvd.
  - c) CQ031 should complete Yard Lead Tunnel Bored with Invert/Bench Completed

Key Contract Interface – 07: B10 Power Substation – Permanent Power Available

- B10 substation is the main power source for Queens including 63rd Street Exiting Facilities. To secure B10 Permanent Power on time or in advance of when it is required, ESA needs to control/manage the following:
  - a) The GEC has verified that the B10 structure can be constructed around the existing conveyor; therefore, B10 will not be delayed, and can actually begin even sooner than plan.
  - b) CQ032 achieving MS#1 on time for System's B10 Construction. Also, it is important to control Systems B10 Construction time as well as B10 related electrical equipment long lead times.
  - c) Temporary power feeds could be considered in certain locations if the power is available but the conduit runs are not.

Key Contract Interface – 08: Individual FPSS Substations – Permanent Power Available

- Much of the system equipment such as Communications and Vent Plant Equipment is dependent on FPSS power availability in order to start Integrated System Testing. The possibility of starting construction of the B-10 substation earlier is being investigated.

Key Contract Interface – 09: Bench Walk/Invert of Manhattan Tunnel and 63rd Street Tunnel

- To enable the system cables/trackwork thru the tunnel, the bench walk/invert must be completed, especially from B-10 through the NBX and Bellmouth, which allows for connectivity from Queens to the miscellaneous facilities fed/controlled from.
- Part of the connectivity from B-10 to the west entails completion of conduit within the Bellmouth. This work will be constructed either in CM012 or an existing contract. Temporary power could be considered in certain locations if the power is available but the conduit runs are not.

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**Concerns and Recommendations:**

*The PMOC is concerned that the new baseline IPS has not been finalized yet and, therefore the PMOC cannot conduct basic analysis to measure the schedule performance.*

*Because of the current re-baseline schedule and a new RSD, the FTA milestones identified in ELPEP will have to be re-evaluated and ELPEP requirements with respect to schedule contingency will have to be revisited.*

## **5.0 PROJECT COST STATUS**

### **5.1 Budget/Cost**

Status:

*Although the PMT reports that it continues to revise its project schedule to reflect progress delays to date, it has not reported any changes to the project budget to go along with this re-baseline effort as of February 29, 2012.*

*The updated Project Cost Table is shown in the Executive Summary as Table 1 in the front of this report. Table 5-1 below shows a comparison of the MTA's Current Working Budget (CWB) vs. the FFGA Baseline Budget in Standard Cost Categories (SCC) and remains unchanged from the previous month's report.*

**Table 5.1: Comparison of Standard Cost Categories: FFGA vs. CWB**

Standard Cost Category (SCC) No.	Description	FFGA baseline (\$)	MTA's Previous Reporting Period CWB (\$) ( <i>January 31, 2012</i> )	MTA's CWB (\$) ( <i>February 29, 2012</i> )	% Change from FFGA to CWB
10	Guideway & Track Elements	1,988,741	2,691,161	2,691,161	35.3
20	Stations, Stops, Terminals, Intermodal	1,168,655	1,434,089	1,434,089	22.7
30	Support Facilities: Yards, Shops	356,264	352,271	352,271	[1.1]
40	Site Work & Special Conditions	205,105	367,214	367,214	79.0
50	Systems	619,343	632,769	632,769	2.2
60	ROW, Land, Existing Improvements	165,280	203,639	203,639	23.2
70	Vehicles	493,982	674,372*	674,372*	36.5
80	Professional Services	1,184,000	1,435,485	1,435,485	21.2
90	Unallocated Contingency	168,529	0	0	0
<b>Subtotal</b>		<b>6,349,899</b>	<b>7,791,000</b>	<b>7,791,000</b>	<b>22.7</b>
100	Finance Charges	1,036,104**	1,036,104**	1,036,104**	0
<b>Total Project Cost (10 – 100)</b>		<b>7,386,003</b>	<b>8,827,104</b>	<b>8,827,104</b>	<b>19.5</b>

\* Rolling Stock (“Vehicles”) includes passenger revenue vehicles, construction locomotives, and construction flat cars.

\*\* Current Budget Finance Charges are estimated at the same value as the FFGA.

Observations:

*The standard cost elements in Table 5.1 above did not change from the previous month's report*

Concerns and Recommendations:

*The PMOC will review, in April 2012, the re-baselined cost estimate presented to the FTA/PMOC on March 28, 2012.*

### **5.1.1 Project Cost Management and Control**

#### Status:

*MTACC reported that, as of February 29, 2011, the overall project completion was 50.2%, based on the invoiced amount of \$3.677 billion in the MTA Board-Approved Working Budget of \$7.328 billion (excluding financing costs). This amount also represents 47.2% of the CWB of \$7,791 million (excluding financing costs), representing a 0.6% progress increase since the January 2012 reporting period.*

#### Observations:

*The variance between planned and actual cost expenditure on this project has been largely due to delays in design, procurement, and construction activities.*

Section 5.4 of the Schedule Management Plan (SMP) requires ESA to develop measures for recovering the lag in progress. In the May 23, 2011 Cost Review Meeting, the PMOC requested that the PMT indicate how they plan to implement the recovery process as per the SMP. At that time, the ESA-PMT agreed to report the status of recovery from its contractors' schedules and include a recovery write-up with the Monthly Schedule update. *As of the end of March 2012, the recovery write-up has not yet been included with the Monthly Schedule update.*

#### Concerns and Recommendations:

*The PMOC continues to be concerned that project expenditures continue to lag behind its re-baseline plan of 2009. . The continuing lag in planned vs. actual progress could result in the project falling behind in the new baseline schedule that is currently being finalized.*

### **5.1.2 Project Expenditures and Commitments**

#### Status:

*Table 5.2 below shows the ESA project budget, the awarded value and the invoiced amounts for Construction and Soft Costs as of February 29, 2012.*

**Table 5.2: Project Budget**

Elements	Current Total Budget (\$M)	Awarded Value (\$M)	Invoiced (\$M) (as of February 29, 2012)	% of Line Item Budget Expended
Construction	5,557.3	3,451.3	2,488.3	44.8
<b>Soft Costs</b>				
Engineering	590.7	582.7	583.1	98.7
OCIP*	190.9	112.9	97.6	51.1
Project Mgmt.	620.8	453.8	408.4	65.8
Real Estate	166.3	101.9	100.1	60.2
Rolling Stock**	665.0	0.0	0.0	0.0
<b>Soft Costs Subtotal</b>	2,233.7	1,251.3	1,189.2	
<b>Project Subtotal</b>	<b>7,791.0</b>	<b>4,702.6</b>	<b>3,677.5</b>	<b>47.2</b>
Financing Cost (current estimate)	1,036.1			
<b>Total</b>	<b>8,827.1</b>	<b>4,702.6</b>	<b>3,677.5</b>	<b>41.7</b>

\*The OCIP budget remains \$250 million. A portion of the costs (\$84M) has been paid by proceeds from the Surety payment for the default of the CQ028 contract. These funds are not included in the capital program.

\*\*\$463 million for ESA rolling stock (above the \$202 million included in the project budget) is now included in a reserve pending review of a simulation of opening day service and fleet need.

The value of \$1,036.1 million for Financing Cost, shown Table 5.2, has not been updated from the FFGA amount in 2006.

Observation:

The PMOC observed that actual expenditures *continue* to lag the planned expenditures.

Concerns and Recommendations:

*Cost issues are usually discussed with the grantee at the Monthly Cost Review meetings, however these meetings continue to be temporarily suspended (for several months) due to the project re-baselining efforts by the ESA-PMT. These meetings will resume once the new ESA cost baseline has been finalized.*

**5.1.3 Change Orders**

Status:

*In February 2012, MTACC reported that there were 13 additional change orders executed valued at \$9.0 million, for a total of \$336.2 million, representing 7.1% of the total value of awarded contracts (\$4,702.5 million).*



*The following modifications were approved in February 2012:*

- *For Contract CH053, two (2) modifications were executed for additional testing of monopoles totaling \$1.1 million. The contract contingency decreased from 15.96% to 15.26% since the last reporting period.*
- *For Contract CH054A, three (3) modifications were executed for additional concrete Jersey barriers, furnishing and installing metal steel ties and to furnish and deliver 25kV cap nut terminations totaling \$0.4 million. The contract contingency decreased from 62.00% to 59.41% since the last reporting period.*
- *For Contract CM004, two (2) modifications were executed for additional drainage and modified steel connections totaling \$0.1 million. The contract contingency decreased from 8.08% to 7.78% since the last reporting period.*
- *For Contract CQ031, three (3) modifications were executed for additional rock stabilization work, additional backfill at the MCC Room Vault and repair to the base of catenary pole B-931 totaling \$0.3 million. The contract contingency decreased from 3.50% to 3.45% since the last reporting period.*
- *For Contract CQ032, two (2) modifications were executed for revised bid item #11 and modifying the conveyor foundation for a total of \$0.6 million. The contract contingency decreased from 10.0% to 9.58% since the last reporting period.*
- *For Contract CQ039, one (1) modification was executed for a settlement agreement totaling \$6.5 million. The contract contingency decreased from 9.68% to 2.45% since the last reporting period.*

Observations:

*The PMOC noted that Contract CH053 has a remaining contingency of \$27.0 million or 15.26%. It was also noted that this contract had 69 executed change orders totaling \$36.1 million and representing 26.3% of the awarded value of \$137.3 million. This value is much greater than the 7.7% average change order percentage for all contracts (as reported in February 2012 and shown in Table 5.3 of this report).*

*The PMOC also noted that Contract CQ039 currently has a remaining contingency of \$2.4 million or 2.45% of the contract budget, with 12 months scheduled until Substantial Completion. Additionally, the PMOC noted that eight modifications were executed during the last twelve months for this contract for a total value of \$11.5 million. The change order issuance averaged \$0.95 million per month during the last twelve months.*

**Table 5.3: Approved Project Change Orders Status**

Contract Number	Description	Original Award (\$M)	Engineer's Estimate (\$M)	Approved Change Order (\$M)	Total # of Change Orders	% of Award Value
<b>25 Completed Contracts</b>						
Subtotal of Completed Construction Contracts		474.4		(7.9)	262	(2.0)
<b>One Terminated Contract</b>						
CQ028	Queens Open-Cut Excavation	121.5	154.0	(52.9)	19	(45.7)
<b>23 Open Contracts</b>						
CM002	GCT Expansion Joint Replacement.	4.5	7.0	0	1	0
CM004	44 <sup>th</sup> St. Vent Plant and 245 Park Ave Entrance	40.8	42.9	1.3	41	3.2
CM009	Manhattan Tunnel Excavation	427.9	482.5	20.5	34	4.8
CM013	50 <sup>th</sup> St. Vent Facility	94.4	112.1	0.7	17	0
CM014A	GCT Concourse	43.5	45.3	0	0	0
CM019	Manhattan Structures 1	734.0	562.6	18.3	53	3.5
FMM19	MH Force Account Support – MNR	31.8	31.8	0	0	0
CQ031*	Queens Bored Tunnels and Structures	648.9	475.6	103.6	53	16.0
CQ032	Plaza Substation and Queens Structures	147.4	237.2	0.6	2	0
CQ039	Northern Blvd. Crossing	85.0	57.4	11.2	13	13.2
FHA01	Harold Stage 1 – Amtrak FA**	9.5	16.0	7.3	1	76.8
FHL01	Harold Stage 1 – LIRR F/A**	28.8	19.1	(8.0)	1	(27.4)
FHA02	Harold Stage 2 – Amtrak F/A**	9.7	26.0	0	0	0
FHL02	Harold Stage 2 – LIRR F/A**	7.4	54.3	0	0	0
CH053	Harold Structures Part I	137.3	148.4	36.1	69	26.3
CH054A	Harold Structures – Part 2A	21.8	37.1	2.1	20	9.6
VHA02	Harold Materials Stage 2 Amtrak	11.2***	N/A	0	0	0
VHL02	Harold Materials Stage 2 LIRR	16.3***	N/A	0	0	0
VM014	Vertical Circulation	24.1	103.2****	0	2	0
VH051-1	Harold and Point CILs	25.8	36.4	0.2	2	0.1
VH051-2	Harold Tower Supervisory Control	5.4	7.2	1.8	4	33.3
Various	Other Open Contracts	337.0	337.0	0	0	0
<b>Subtotal</b>		<b>2,892.5</b>		<b>195.7</b>	<b>312</b>	<b>6.7</b>
<b>Professional Service Contracts</b>						
Completed Engineering (SEC, TEC)		232.0		8.5	31	3.7
General Engineering Consultant (Open)		140.0		173.6	32	124.0
PMC		219.8		19.2	4	8.7
CCM		74.6		0	0	0
<b>Subtotal – Professional Services</b>		<b>666.4</b>		<b>201.3</b>	<b>67</b>	<b>30.2</b>

Contract Number	Description	Original Award (\$M)	Engineer's Estimate (\$M)	Approved Change Order (\$M)	Total # of Change Orders	% of Award Value
<b>Other Soft Costs</b>						
	OCIP	112.9		0	0	0
	Real Estate	98.6		0	0	0
	<b>Subtotal – Other Soft Costs</b>	<b>211.5</b>		<b>0</b>	<b>0</b>	<b>0</b>
	<b>Grand Total</b>	<b>4,366.3</b>		<b>336.2</b>	<b>660</b>	<b>7.7</b>

\* Contract mods include option for \$58.4 M.

\*\*Partial Award. (to be in stages).

\*\*\* Early Work procurement only.

\*\*\*\*Engineers Estimate includes all options and services not yet awarded.

### Concerns and Recommendations:

*The PMOC is concerned that Contract CH053 has a large number of change orders with values exceeding the project average and industry practice, and the remaining contingency may not be sufficient to complete the project work.*

*In addition, based on the remaining duration (currently scheduled for completion on March 4, 2013) for Contract CQ039, if the issuance of change orders continues at the same rate as observed above, the remaining contingency may be insufficient to complete the project work.*

## **5.2 Project Funding**

### Status:

The FTA executed an FFGA with the MTA on December 18, 2006 for \$2.683 billion in federal participation and \$3.667 billion in local share (financing not included). As of February 2008, the ESA forecast of the local share increased to \$4.629 billion (no financing).

The MTA submitted a Capital Project Amendment to the CPRB in May 2010. The FTA's obligated funding remained \$1.563 billion and, of that amount, \$50.4 million is allocated to LIRR and MNR as the ESA portion of shared facilities (Highbridge and Arch Street Yards and procurement of the Switch Exchange System machine).

*There is no change in the status of project obligated funding from the previous report.*

**Table 5.4: Federal Grant Status**

<b>Grant Number</b>	<b>To be Used For</b>	<b>Obligated Grant Amount (\$M)</b>	<b>Disbursement (\$M) thru February 29, 2012</b>
NY-03-0344-01-02-03-04	ESA	81.5	81.5
NY-03-0344-05	ESA	73.8	73.8
NY-03-0344-06-07	ESA	99.2	99.2
NY-03-0344-08	ESA	333.2	333.2
NY-03-0344-09	ESA	300.0	300.0
NY-03-0344-10	ESA	210.7	210.7
NY-03-0344-11	ESA	207.5	207.5
NY-03-0344-12	ESA	246.9	93.9
<b>Subtotal</b>		<b>1,552.8</b>	<b>1,399.9</b>
NY-90-X467	Highbridge	7.6	7.6
NY-03-0406	Highbridge	5.0	5.0
NY-03-X489	Highbridge	1.1	1.1
NY-90-X467	Arch Street	7.6	7.6
NY-03-0395	Arch Street	7.5	7.5
NY-03-0427	Switch Exchange System (SES) Machine	2.0	2.0
NY-05-0108	SES Machine	2.7	2.7
NY-05-0109	SES Machine	5.8	5.8
NY-95-X002	CMAQ	6.6	6.6
NY-95-X009	CMAQ	2.3	2.3
NY-95-X015	CMAQ	2.3	2.3
NY-95-X025	CMAQ	11.6	0.0
<b>Subtotal</b>		<b>62.1</b>	<b>50.4</b>
NY-36-X0002	<b>ARRA</b>	195.4	195.4
<b>FFGA Total</b>		<b>1,810.3</b>	<b>1,645.8</b>

Observation:

The PMOC noted that FTA awarded the remaining grant (NY-03-0344-12) available in September 2011 to be used for the ESA portion of shared facilities. This grant fully covers the funding for the year increment of 2010 and 2011.

*As of February 2012, 38% has been disbursed out of the total above grant of \$246.9 million.*

## Concerns and Recommendations:

*There are no concerns and recommendations for this section.*

### **5.2.1 Overall Project Funding**

There is no change in project obligated funding from the previous report.

### **5.2.2 Local Funding**

#### Status:

In October 2009, the total ESA project cost approved by the MTA Board was \$7.328 billion, \$978 million higher than FFGA Baseline Cost Estimate (BCE) of \$6.350 billion. The ESA Current Working Budget (CWB) is \$7.791 billion, which is a \$1.441 billion increase over the FFGA BCE. [Note: Figures do not include financing costs.]

The NYS CPRB approved MTA's Capital Program Amendment request in May 2010. Funding for ESA was increased by \$915 million to a total of \$5.56 billion. *An additional \$770 million was appropriated in the New York State Budget in March 2012 to fund the MTA Capital Program.*

#### Observations:

MTACC has identified a potential funding constraint imposed by the 2-year incremental funding authorization process under the current MTA Capital Program. *Allocation of \$770 million in the NYS budget in March 2012 for the MTA Capital Program is a positive action. It remains to be seen if the allocation of funds to the ESA Program is adequate to allow for award of major upcoming procurements by the Project in 2012 (note: there are three major contracts scheduled for award in 3Q12 that will require local funding to be in place).*

#### Concerns and Recommendations:

*Award of CM012; CM014B, and CS179 is contingent upon amount of funding to be apportioned to the Project.*

### **5.3 Cost Variance Analysis**

#### Status:

*In its February 2012 Budget Adjustment Memo, the ESA-PMT reported that there were seven (7) executed Budget Adjustments (BAs) with a transfer value of \$20.8 million that include six (6) BAs for executed modifications and one (1) for scope transfer.*

#### Observations:

*Six (6) BAs were executed as a result of approved contract modifications. This resulted in fund movement of \$9.0 million.*

*One (1) BA was executed as a result of the scope transfer to reallocate \$11.8 million of the FA Systems Testing and Commissioning Funds (FSL00) to the Construction Management LIRR Operation Support Services (SH800) as part of the Capital Budget Modification #11-11-0017. There is no change to contingency as a result of this adjustment.*

Additional information is provided in Section 5.1.3 (Change Orders) and Section 6.5.1 (Cost Contingency Status).

Concerns and Recommendations:

The PMOC regards the BA process to be adequate for tracking changes, which is a noticeable improvement from previous cost reporting by MTACC.

**5.4 Project Contingency**

Status:

[REDACTED]

[REDACTED]

Since September 2009, MTACC has been adjusting the project contingency on a monthly basis, to reflect usage, and reporting it on a quarterly basis.

[REDACTED]

**Table 5.5: Project Cost Contingency Comparison**

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

**Table 5.6: Project Cost Contingency Usage**

<b>Date</b>	<b>Contingency (\$M)</b>	<b>Variance vs. Last Period (\$M)</b>	<b>%</b>
Feb-11	493.6		
Mar-11	452.5	(41.1)	-9.08
Apr-11	488.3	35.8	7.33
May-11	481.6	(6.7)	-1.39
Jun-11	469.0	(12.6)	-2.69
Jul-11	468.2	(0.8)	-0.17
Aug-11	465.6	(2.6)	-0.56
Sep-11	461.1	(4.5)	-0.98
Oct-11	456.4	(4.7)	-1.03
Nov-11	447.5	(8.9)	-1.99
Dec-11	452.0	4.5	1.00
Jan-12	440.7	(11.3)	-2.56
Feb-12	431.7	(9.0)	-2.08
<b>Average Usage</b>		<b>(5.2)</b>	<b>-1.18</b>

Observations:

*During February 2012, the contingency level was above the ELPEP minimum requirement of \$260 million. MTACC decreased its project contingency by \$9.0 million from previous reporting period. The reduction resulted from the executed contract modifications as reported in Section 5.5.3 – Change Orders.*

*Cost contingency usage as illustrated in Table 5.6, above, shows an average project contingency usage of 5.2 million over the last 12 months.*

*The current project contingency amount is within an acceptable limit established; however, the remaining contingency is projected to drop below the ELPEP hold point in the 2<sup>nd</sup> Quarter of 2012 (2009 baseline).*

Concerns and Recommendations:

*The ELPEP hold points will have to be adjusted as a result of the new schedule and cost baselines under development, and the contingency drawdown forecasts re-evaluated once the new baselines are finalized.*

## 5.5 Estimate at Completion

### Status:

*As of February 29, 2012, the project EAC, or Target Budget, remained \$7,328 million. This amount has not changed since the re-baselining of the project cost and schedule in September 2009. MTACC is currently revising the project budget based on the new schedule baseline.*

Although the project EAC has remained the same, the individual EAC for various contracts has changed during this period. *Table 5.7 below shows the EAC variance for major open construction contracts, as of February 29, 2012.*



**Table 5.7: Comparison of Current EAC to Baseline EAC**

<b>Contract Number</b>	<b>Description</b>	<b>Baseline EAC (September 2009)</b>	<b>EAC as of <i>February 29, 2012</i></b>	<b>Variance</b>	<b>% of Baseline EAC</b>
CM009	Manhattan Tunnel Excavation	\$ 450,308,760	\$ 456,324,976	\$ 6,016,216	1.3
CM019	Manhattan Structures I	\$ 779,858,644	\$ 775,190,878	(\$ 4,667,766)	(0.6)
CQ031	Queens Bored Tunnels and Structures	\$ 756,762,552	\$ 789,125,439	\$ 32,362,887	4.3
CQ039	Northern Blvd. Crossing	\$ 89,244,750	\$ 101,037,992	\$ 11,793,242	13.2
CH053	Harold Structures Part I	\$ 152,708,247	\$ 203,885,247	\$ 51,177,000	33.5
CH054A	Harold Structures Part 2A	\$ 27,066,666	\$ 38,311,335	\$ 11,244,669	41.5

*As of February 29, 2012, the Construction Management LIRR Operation Support Services Contract (SH800) and the FA Systems Testing and Commissioning (FSL00) reflected changes in their respective EAC's due to the fund transfer as reported in Section 5.7 – Cost Variance Analysis of this report.*

Observation:

*The PMOC noted that Contract SH800 reflected an increase of \$11.8 million while Contract FSL00 reflected a decrease for the same amount as reported in Section 5.3 – Cost Variance Analysis of this report.*

Concerns and Recommendations:

*The PMOC received a copy of the draft new cost baseline for the project on March 28, 2012 and is currently reviewing it.*

## 6.0 PROJECT RISK

### 6.1 Previous Risk Assessments

An initial Risk Assessment was performed on the ESA project in 2004 in accordance with PG22. Prior to the signing of the FFGA in 2006, a more comprehensive Risk Assessment was performed in accordance with PG40, followed by a re-look in 2007/2008. In October 2008, the PMOC issued to the FTA the Technical Capacity and Capability analysis in accordance with PG31C. In Early 2009, the ESA project team provided an updated project budget and schedule. The PMOC subsequently provided modified PG33 and PG34 reports with a focus on changes from FFGA to 2009 Budget and Schedule reports as well as assisting in the development of Cost Risk Summary and “PG47” support documents. From late 2009 through to the current period, MTACC and ESA-PMT, working with the FTA and PMOC, have concurrently progressed both the development and then the implementation of the ELPEP. The MTACC-ESA has also revised or rewritten most PMP sections/subplans/procedures associated with meeting the risk management requirements of the ELPEP.

### 6.2 Current Risk Update

#### Status:

The PMOC has documented the ESA Risk Assessment effort in various draft Spot Reports. The MTACC and FTA have identified and documented the risk mitigation initiatives in a scoping document for incorporation into the PMP. During January 2010, the PMOC and the FTA worked with MTACC and ESA staff to finalize the Enterprise Level Project Execution Plan (ELPEP). Cost contingency and secondary schedule mitigations have been adjusted based on discussions between the FTA Administrator and MTA Chairman. The agreement was to use a Medium Level Risk Mitigation for cost and schedule to allow MTACC to manage the project to its current working budget and Revenue Service Date. MTACC is developing a total cost contingency capacity to match the FTA requirement. The FTA schedule contingency float will be the difference between the Revenue Service Date forecasts in FTA and MTACC schedules. *During the period of January 2012 through March 2012, MTACC continued working with the FTA and the PMOC to finalize the Cost Management Plan, and the PMOC consolidated its review comments on the Risk Management Plan with the FTA-RII comments. These comments will be reviewed with MTACC during April 2012. MTACC had previously completed the next update of the ESA Project Management Plan to reflect changes in project procedures and the programmatic plans and sub-plans. During April 2012, the FTA and the PMOC will review, with MTACC, the adequacy of implementation of the agreed-upon Candidate Revisions to the Project Management Plan.*

*During March 2012, MTACC-ESA commenced the programmatic risk assessment of the revised cost and schedule baselines developed by ESA. An independent outside consultant facilitated the seven-day risk workshop and will be creating “risk-informed” cost and schedule baselines based on the input collected during the workshop.*

#### Observation:

To date, MTACC has worked cooperatively with the FTA and the PMOC to produce various management plans in support of the ELPEP process. Production of elements of the ELPEP requirements has been affected by the mutual recognition that intermediate deliverables would be required in order to clarify the requirements of ELPEP compliant plans and procedures.

Although the delay has been in some cases considerable, the development of these procedures has already benefited the project as the MTACC has worked to resolve organization and decision making issues related to upgrading management plans.

*The PMOC was in attendance and participated in the seven-day risk workshop detailed above. The PMOC actively presented its concerns and recommendations throughout the workshop.*

Concerns and Recommendations:

The PMOC continues to recommend that the MTA continue to provide the resources necessary to improve project management systems as called for in the ELPEP implementation effort.

[REDACTED]

- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]
- [REDACTED]

**6.3 Risk Management Status**

Status:

At the FTA Quarterly Review Meetings and the monthly FTA/PMOC workshops, ESA describes their efforts to incorporate the consideration of risk in their respective decision making processes. These efforts include the periodic review and update of risk registers, the consideration of risk, cost and schedule as part of a defined process for decision making, and periodic internal risk reviews to validate assumptions for individual contract package schedule and cost estimates.

Observations:

The implementation of the above processes will facilitate better management of risk from the agency perspective as well as greater effectiveness in assignment of risk in dealing with third party contractors and the railroads. This will help the agencies to better control cost and schedule assumption accuracy for the project.

The PMOC considers these efforts to be an important step in moving toward full implementation of processes included in the ELPEP.

*During the period of January – March 2012, the PMOC continued to work on the following Risk Assessment update activities:*

- *Review Grantee’s compliance with the 2006 through 2012 risk mitigation commitments;*
- *Support FTA-RII with implementation of the ELPEP; and*
- *Evaluate effectiveness of current risk mitigation strategies being employed by MTACC.*

*The PMOC continues monthly project monitoring and reporting by personnel with specialized skill sets for the following sectors: Cost/Scheduling and Force Account work (FHA/L01). The specialists will review progress and analyze risk items, and the cost/schedule for respective project areas mentioned above.*

#### Concerns and Recommendations:

The PMOC recommends that the ESA project ensure that there is sufficient mitigation capacity and/or contingency funding available to cover the impact of possible realization of identified risks. Specific FTA requirements for improvements to the Project Management Plan (PMP), as detailed in Candidate Revisions to the PMP, PMP sub-plans and project procedures were to have been implemented over the 9 month period from January 15, 2010 through October 15, 2010, and tracked throughout the project, in accordance with the ELPEP implementation schedule. Some of these efforts remain incomplete although MTACC-ESA continues to respond to FTA and PMOC review comments on various MTACC documents including the Cost Management Plan. *An in-depth review with MTACC on the Risk Mitigation Plan and Risk Mitigation Capacity Plan is planned for April 2012.*

## **6.4 Risk Mitigation Actions**

### **6.4.1 2006 Risk Mitigation Commitments at FFGA**

#### Status:

A detailed risk mitigation plan was developed in May 2008 based on the MTACC risk mitigation commitments made in 2006 and as described in the PMOC Spot Report 10, Rev. R0, dated July 31, 2007. MTACC has generally not been successful mitigating most of the specific risks identified in the following categories: requirements risk; design risk; market/bid risk; geotechnical risk; utility construction risk; and mid-range construction coordination risk. In addition, significant new risks materialized during this period that include contractor termination for cause (CQ028) and multiple issues concerning railroad force account construction and force account support to third-party contractors involving two essential project stakeholders, Amtrak and LIRR.

#### Observation:

MTACC has missed all but one of the basic annual mitigation milestones as shown below:

### Mitigation Targets

<u>Basic Milestones</u>	<u>Design Complete</u>		<u>Contracts Awarded*</u>		<u>Construction Completed**</u>	
	<u>Goal</u>	<u>Actual</u>	<u>Goal</u>	<u>Actual</u>	<u>Goal</u>	<u>Actual</u>
Q4-2006	70%	72%	25%	10%	8%	7%
Q4-2007	82%	78%	55%	12%	21%	9%
Q4-2008	93%	80%	58%	19%	38%	13%
Q4-2009	96%	88%	70%	43%	55%	19%
Q4-2010	98%	93%	92%	52%	69%	32%
<i>Q4-2011</i>	<i>100%</i>	<i>96%</i>	<i>97%</i>	<i>66%</i>	<i>80%</i>	<i>41%</i>

\* Based on current contract/package values.

\*\*Cost expenditure basis.

#### Concerns and Recommendations:

The PMOC has had continuing concerns that ESA has not met FFGA cost and schedule commitments and, with one exception, has been unable to meet any of the basic annual mitigation milestone goals for design, contract award and construction progress. The PMOC recommends that MTACC continue to completion, its current comprehensive project re-baselining, revise their Recovery Plan accordingly, and work closely with the FTA to revise the ELPEP and to finalize an FFGA Amendment. Following this agreement, as part of the monitoring plan associated with the ELPEP, the PMOC will rework the Mitigation Monitoring Plan.

#### **6.4.2 Current Risk Mitigation Commitments**

##### Status:

Based on the ELPEP, MTACC-ESA has committed to the following: managing the project to the revised ESA cost and schedule baselines approved by the MTA Board in September 2009; establishment of risk baselines and a risk mitigation framework with milestones; adherence to minimum cost and schedule contingency requirements; development of cost and schedule risk mitigation capacity including secondary mitigation strategies required to offset reserved contingency drawdowns; and implementation of specific design development, geotechnical, real estate and utility risk mitigation strategies.

##### Observation:

The PMOC observes that although MTACC has received conditional approval of the new Schedule Management and Cost Management Plans, the Risk Management Plan has not yet been approved. The revised Risk Management Plan was submitted to the FTA in October 2011 and the PMOC completed its initial review in December 2011. *The FTA and PMOC plan to meet with MTACC-ESA in April 2012 to resolve comments. The PMOC also notes that the ELPEP will need to be revised based on the final approved re-baselined Integrated Project Schedule and Cost Estimate.*

Concerns and Recommendations:

Accordingly, it is the PMOC's opinion that in the absence of an approved Risk Management Plan, MTACC-ESA currently does not yet have a fully integrated approach, along with the required coordinated processes, to be fully compliant with the risk mitigation requirements in ELPEP.

**6.4.3 Current Risk Mitigation Actions**

Status/Observation:

The ESA-PMT has continued its efforts to identify and mitigate risks that may adversely affect the program's future cost and schedule performance. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

- ESA-PMT has started using a 4D model of the B10 Substation construction to better coordinate construction site activities between the CQ039 and CQ032 contractors. By advancing construction of the B10 Substation, the project will be able to achieve an earlier systems installation to support the permanent power needed for integrated systems testing. It is the PMOC's opinion that while this approach offers an opportunity to

mitigate some schedule risk, it does increase project coordination risk that will need to be closely monitored and managed.

- ESA-PMT is proposing to advance LIRR force account work for the WLPc portion of the Westward Passenger track from FHL03 (Harold Stage 3) into FHL02 (Harold Stage 2) to be built in conjunction with the WLPb portion. The PMOC's opinion is that this change would be beneficial provided that ESA-PMT can demonstrate, through the CCC process, a clear cost benefit or schedule advantage to mitigate potential risks.
- *ESA-PMT completed an initial presentation to CCC regarding Manhattan scope transfers to re-configure and optimize site access for future contracts. The effort is based on transfer of considerable work scope from the CM019 contract to multiple future contracts at the Manhattan site. Subsequently, this transfer was finalized in a global settlement with the CM019 contractor. It is the PMOC's opinion that while this approach offers an opportunity to mitigate some schedule risk, it does increase project coordination risk taken on by MTACC that will need to be closely monitored and managed. Any additional costs due to risk realized would accrue to the \$120 million of Cost Risk identified for Construction Schedule Delays identified in the 2009 PG47 analysis.*
- *ESA-PMT is considering additional transfers of work scope in the Harold Interlocking from railroad force account to third-party contractors. This will relieve some demand on the limited railroad force account resources. The PMOC believes that this is a worthwhile effort, but will require resolution of the ongoing labor clearance issue between MTACC-ESA and Amtrak.*

#### Concerns and Recommendations:

The PMOC believes that to validate that these risk mitigation actions will generally reduce the potential for future schedule delays and will thus minimize cost overruns, ESA-PMT must thoroughly evaluate all possible new risks associated with these changes. The PMOC recommends that the PMT continue to perform a cost-benefit analysis, complete with schedule review, within the framework of the ESA Risk Management Plan, and in accordance with current project configuration change control, to confirm the effectiveness of these mitigation actions.

The PMOC *remains concerned* that continued "schedule compression" will force "contract stacking" in the many constricted work areas in Queens and Manhattan which will create new coordination risks for MTACC-ESA. One example of this situation is in Queens where ESA-PMT is now leading coordination efforts between CM009/019 (conveyor), CQ039 and CQ32 (Plaza Substation B10) at the location of the Early Access Chamber. Should the project realize any of these new risks, there will likely be adverse cost and schedule impacts. In addition, there is potential to create quality risks due to fragmentation of discrete work elements, like trackwork, among multiple contracts. The PMOC recommends that ESA-PMT, working with the CMs, GEC and Amtrak/LIRR, fully evaluate this increasing exposure to new critical risks.

### **6.5 Cost and Schedule Contingency**

The project schedule contingency is discussed in Section 4.0 of this report. The project cost contingency status is discussed below in Section 6.5.1.



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

During the September 27, 2011 ESA Cost Contingency Drawdown Curve meeting, MTACC presented a revised Contingency Drawdown Curve to reflect changes in the project schedule since 2009. MTACC was reminded that if the contingency drops below the minimum level of \$260 million, as agreed to in the ELPEP, they need to make provisions to replace the shortage with local funding. The FTA/PMOC recommended at the meeting that MTACC begin its planning for maintaining the agreed upon contingency as soon as possible. *Given the current rebaselining effort, the contingency drawdown curve will have to be re-evaluated.*

Observations:

*In the last 12 months, the project contingency averaged \$35.2 million above the Baseline*

[REDACTED]

[REDACTED]

*The decrease in the project cost contingency for the current reporting period resulted from the following:*

- *Executed Contract Modifications: The total value for executed contract modifications for November 2011 falls within the allocated contingency for each of the active contracts. As stated above in Section 5.4.1, the adjustment for the active executed contract modifications decreased the contingency by \$9.0 million.*

Concerns and Recommendations:

[REDACTED]

## **6.5.2 Schedule Contingency Status**

[REDACTED]

7.0 [REDACTED]

[REDACTED]

[REDACTED]

I	[REDACTED]	[REDACTED]	[REDACTED]
ESA-38-Apr09	2.1.3 Construction: Manhattan	<p>Construction progress of CM009/019 was seven months behind the baseline schedule, and the progress of work continues to be behind the approved baseline schedule.</p> <p><u>Status Update:</u> <i>In its December 2011 Quarterly Report and as part of its re-baseline effort, the MTACC forecasted that Substantial Completion for Contracts CM009/019 will be achieved by August 16, 2013. This adds another 14 months to the Substantial Completion date contained in its previous contract schedule. Additionally, the award of follow-on contract CM012 has been postponed by several months, so this will also relieve pressure from the Substantial Completion of CM009/019.</i></p> <p><u>PMOC Recommendation:</u> <i>The CM009/019 has picked up its construction pace during the last 6 months and has been constructing the project in many different locations, which it had not done before. Since the contractor is doing this, the PMOC recommends that it continue its construction in all locations and achieve Substantial Completion as quickly as possible. The PMOC also recommends that the CM009/019 contractor release identified common construction areas prior to Substantial Completion to allow follow on contractors' earlier access to their work sites.</i></p>	1
ESA-47-Jan10	1.1.1 Organization	<p>The ESA project team issued an Organization Document in December 2008 consisting of: Position Descriptions, Resumes, and Organization Charts, and has not updated it since.</p> <p><u>Status Update:</u> While ESA has been reviewing and filling open positions as they arise, a formal reissue of the ESA Organization document has not occurred however, ESA has provided an updated Organization chart. The PMT stated that it will not be</p>	2

I	[REDACTED]	[REDACTED]	[REDACTED]
		<p>revising this document, but will be updating the organization section of the PMP instead. PMP Rev. 8 describes the ESA organization but does not include updating frequency. ESA submitted a complete PMP (Revision 8.0) in May 2011. The PMOC notes that this latest PMP does not fully replace the ESA Organization Document.</p> <p><u>PMOC Recommendation:</u> <i>The PMOC continues to recommend that ESA consider reinstating the ESA Organization document and updating it periodically.</i></p>	
ESA-49-Jan10	1.1.2a Adequacy of Project Management Plan and Project Controls	<p>The lack of complete development of the revised project procedures, together with incorporation of the ELPEP principles into the PMP, could result in not having a fully updated and FTA-approved PMP and referenced project procedures until 4Q-2010. MTACC also committed to have all new procedures implemented by April 12, 2010. Initially, the number of procedures to be developed was approximately 85, but the MTACC revised that number to approximately 75.</p> <p><u>Status Update:</u> <i>The MTACC did not authorize any additional revised procedures during March 2012. The number of revised procedures remains at 76. The PMOC is aware of at least 4 other revised procedures under development and believes that the earliest possible date they could be implemented is April 30, 2012. Similarly, the PMOC believes that the earliest possible date that the revised PMP could be developed will be 2Q-2012.</i></p> <p><u>PMOC Recommendation:</u> <i>The PMOC recommends that the MTACC direct its Consultant Construction Manager responsible to develop the procedures to finish the process so that the MTACC can authorize and implement all remaining revised procedures by April 30, 2012.</i></p>	1
[REDACTED]	[REDACTED]	[REDACTED]	1

<b>I</b>	-	[REDACTED]	[REDACTED]
		[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

I	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	1
ESA-68- Oct10	5.1.3 Project Funding	<p><u>Local Project Funding:</u> MTACC has identified a potential funding constraint imposed by the 2-year incremental funding authorization process under the current MTA Capital Program. However, ESA is currently moving forward based on the assumption of full funding.</p> <p><u>Status Update.</u> NYS allocated \$770 million in March 2012 to fund the MTA Capital Program.</p> <p><u>PMOC Recommendation:</u> The PMOC continues to recommend that MTA and MTACC upper level management work to ensure the availability of local funding needed to be in-place at the scheduled contract awards to avoid project schedule impact.</p>	1

<p><b>I</b></p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>
<p>ESA-70- Nov10</p>	<p>1.2.4 Project Budget and Cost  5.1.1 Project Cost Management and Control</p>	<p>The ESA-PMT has not indicated if it intends to recover the lag in progress to date, and describe how it intends to do it. Section 5.0 of the Draft Cost Management Plan (CMP) stipulates that the Grantee will report on measures to be taken when the progress lags its plan.</p> <p><u>Status Update:</u> <i>As of February 29, 2012, the PMT reported that the overall project completion continues to lag behind plan (50.2% which lags the planned progress of 67.1%) for this period. The ESA-MTACC is currently revising its baseline cost and schedule. Upon receipt of the final project cost revision, the PMOC will analyze it and report its finding accordingly.</i></p> <p><i>The PMT also agreed to report the status of the recovery schedules from its contractors and include a recovery write-up status with the Monthly Schedule update, but has not yet done it.</i></p> <p><u>PMOC Recommendation:</u> <i>The PMOC continues to recommend that ESA follow the processes detailed in the SMP and devise a strategy to recover lags in progress to the extent possible. The PMOC will keep this item open pending the recovery write-up by ESA-PMT in future monthly schedule updates.</i></p>	<p>2</p>
<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>

<b>I</b>	[REDACTED]	[REDACTED]	[REDACTED]
		[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]



I	-	[REDACTED]	-
		[REDACTED]	
[REDACTED]	+	[REDACTED]	1
ESA-80- Jun11	1.2.5 Project Risk Monitoring and Mitigation	<p>The PMOC is becoming increasingly concerned that continued “schedule compression” will force “contract stacking” in the many constricted work areas in Queens and Manhattan which will create new coordination risks for MTACC-ESA. These new risks will likely result in adverse cost and schedule impacts. In addition, there is potential to create quality risks due to fragmentation of discrete work elements, like track work, among multiple contracts.</p> <p><u>Status Update:</u> ESA-PMT continues coordination efforts between CM009/019 (conveyor), CQ039 and CQ032 (Plaza Substation B10) at the location of the Early Access Chamber. <i>Through March 2012, ESA-PMT/CMs continued to coordinate new work area and access conflicts between Contracts CH053 and CQ031.</i></p> <p><u>PMOC Recommendation:</u> The ESA-PMT should <i>continue</i> to work with the CMs, GEC and Amtrak/LIRR, to fully evaluate the increasing exposure to new critical risks.</p>	2
ESA-84-	1.2.2	<u>Staffing:</u> <i>The ESA Quality Manager was given authority to hire two additional Quality</i>	1

<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>
<p>Mar 12</p>	<p>Quality</p>	<p>staff. A new Quality Engineer started in early December 2011 and a second Quality Engineer began work on January 30, 2012. However, in March 2012, the second Quality Engineer was transferred to a different position. Another ESA Quality Engineer is pregnant and will be taking a three-month maternity leave in several months.</p> <p><i>PMOC Recommendation:</i> The PMOC recommends that top priority be given to replace the Quality Engineer that was transferred out and that a plan be developed to provide coverage for the staff member who will be taking maternity leave.</p> <p><i>NOTE:</i> This issue was previously addressed as ESA-81-Jun11 but was closed after the two new staff members were hired.</p>	<p>[REDACTED]</p>
<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>	<p>[REDACTED]</p>

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

I	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
ESA-A09-Jun07	3.2 PMP Sub-Plans	<p>LIRR has provided a June 2009 Rail Fleet Management Plan; however, it will require further update following the resolution of the number of vehicles to be provided for opening day and the procurement method.</p> <p><u>Status Update:</u> LIRR announced at its December 2010 FTA Quarterly review meeting that a revised RFMP will be issued shortly. <i>The LIRR Rail Fleet Management Plan was updated in March 2011; however, the PMOC did not receive a copy of this revision until the 1<sup>st</sup> Quarter of 2012. The PMOC is currently reviewing the document</i></p>	2	5/31/11
ESA-A26-Feb09	2.4 Vehicles	<p>MTACC/LIRR needs to resolve the vehicle procurement method (Federal/Non Federal) for the ESA project. LIRR prefers non-federal procurement.</p> <p><u>Status Update:</u> <i>Still an open item for three years.</i> The PMOC was informed by the FTA Region 2 Office in early 2011 that the MTA has to put back the original funding allocated for the purchase of rail vehicles and abide by the federal procurement rules and regulations to purchase the vehicles. <i>During the risk assessment workshops conducted in March 2012, ESA-PMT provided details of their plan for Federal procurement of 160 vehicles for the Project.</i></p>	2	5/31/10

I	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
ESA-A34-Jan10	3.3 Project Procedures	<p>The MTACC was not able to meet its commitment date of April 12, 2010 to revise its procedures to a total of 75. It was also not able to complete and implement all these procedures by the end of 2010 [from 12-Jan-2010 FTA Quarterly Review Meeting].</p> <p><u>Status Update:</u> <i>The MTACC did not implement any additional revised procedures during March 2012. The total number of revised procedures remains 76. The MTACC has indicated to the PMOC that the procedure revision process is dynamic and that there are at least 4 additional procedures under revision. The PMOC forecasts that the earliest these remaining procedures will be implemented will be April 30, 2012.</i></p>	2	9/30/10
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

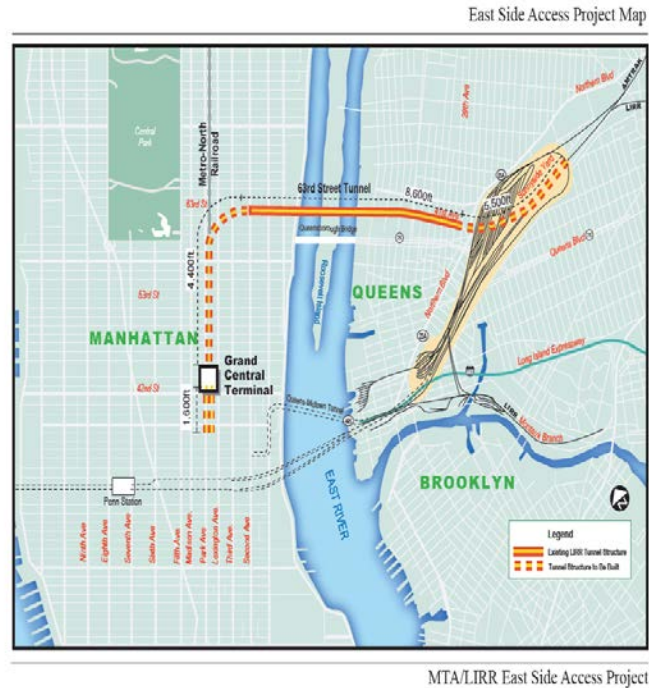
## APPENDIX A -- LIST OF ACRONYMS

AFI	Allowance for Indeterminates
ARRA	American Recovery and Reinvestment Act
BA	Budget Adjustment
CCC	Change Control Committee
CCM	Consultant Construction Manager
CM	ESA Construction Manager assigned to each contract
CMP	Cost Management Plan
CSSR	Contact Status Summary Report
CIL	Central Instrument Location
CPRB	Capital Program Review Board
CPP	Contract Packaging Plan
CWB	Current Working Budget
DCB	Detailed Cost Breakdown
ELPEP	Enterprise Level Project Execution Plan
EPC	Engineering-Procurement-Construction
ERT	East River Tunnel
ESA	East Side Access
FA	Force Account
FAMP	Force Account Management Plan
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
GCT	Grand Central Terminal
GEC	General Engineering Consultant
IEC	Independent Engineering Consultant (to MTA)
IPS	Integrated Project Schedule
LIRR	Long Island Rail Road
MNR	Metro-North Railroad
MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
N/A	Not Applicable
NTP	Notice-to-Proceed

NYAR	New York and Atlantic Railroad
NYCT	New York City Transit
NYSPTSB	New York State Public Transportation Safety Board
OCO	Office of Construction Oversight (MTA)
PE	Preliminary Engineering
PEP	Project Execution Plan
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PMT	Project Management Team
PQM	Project Quality Manual
QA	Quality Assurance
RAMP	Real Estate Acquisition Management Plan
ROD	Revenue Operations Date
ROW	Right of Way
RSD	Revenue Service Date
SAS	Second Avenue Subway
SCC	Standard Cost Category
SMP	Schedule Management Plan
SSMP	Safety and Security Management Plan
SSOA	State Safety Oversight Agency
SSPP	System Safety Program Plan
TBD	To Be Determined
TBM	Tunnel Boring Machine
TCC	Technical Capacity and Capability
VE	Value Engineering
WBS	Work Breakdown Structure

## APPENDIX B-- PROJECT OVERVIEW AND MAP

### Project Overview and Map – East Side Access



### Scope

**Description:** This project is a new commuter rail extension of the Long Island Rail Road (LIRR) service from Sunnyside, Queens to Grand Central Terminal (GCT), Manhattan, utilizing the existing 63<sup>rd</sup> Street tunnel under the East River and new tunnels in Manhattan and Sunnyside yard. Ridership forecast is 162,000 daily riders (27,300 new riders).

**Guideway:** This two-track project is 3.5 route miles long, it is below grade in tunnels and does not include any shared use track. In Harold interlocking, it shares ROW with Amtrak and the freight line.

**Stations:** This project will add a new 8 track major terminal to be constructed below the existing GCT. The boarding platforms and mezzanines of the new station will be located approximately 90 feet below the existing GCT lower level. A new passenger concourse will be built on the lower level of the terminal.

**Support Facilities:** New facilities will include: the LIRR lower level at GCT, new passenger entrances to the existing GCT, the East Yard at GCT, the Arch Street Shop and Yard, a daytime storage and running repair/maintenance shop facility in Queens, and ventilation facilities in Manhattan and Queens.

**Vehicles:** The scope and budget for the ESA project include the procurement of 160 new electric rail cars to support the initial service.





## APPENDIX C – LESSONS LEARNED

There were no Lessons Learned to report for 4th Quarter for 2011

#	Date	Phase	Category	Subject	Lessons Learned
1	Nov-09	Construction	Management	Vacant Queens Area Manager Position	The PMOC recommended that the Grantee fill the position of Queens Area Manager although the Grantee resisted. The Grantee eventually acknowledged the importance of this position and has indicated that they will fill it on a permanent basis.

**APPENDIX D – PMOC STATUS REPORT**

**(This is a separate attachment covering the East Side Access project)**

## APPENDIX E – SAFETY AND SECURITY CHECKLIST

<b>Project Overview</b>			
Project mode (Rail, Bus, BRT, Multimode)	Rail		
Project phase (Preliminary Engineering, Design, Construction, or Start-up)	Construction		
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGC, etc.)	Primarily Design Bid Build		
<b>Project Plans</b>	Version	Review by FTA	<b>Status</b>
Safety and Security Management Plan	12/2010 Rev. 2	2011	Grantee is incorporating PMOC recommended changes
Safety and Security Certification Plan	11/2008 Rev. 1		Submitted
System Safety Program Plan	11/2008 Rev. 1		Submitted
System Security Plan or Security and Emergency Preparedness Plan (SEPP)	11/2010		Submitted
Construction Safety and Security Plan	3/2007 Rev. 1		Submitted
<b>Safety and Security Authority</b>	Y/N		<b>Notes/Status</b>
Is the grantee subject to 49 CFR Part 659 state safety oversight requirements?	Y		
Has the state designated an oversight agency as per Part 659.9?	Y		The New York State Public Transportation Safety Board (NYSPTSB) is the SSOA.
Has the oversight agency reviewed and approved the grantee's SSPP as per Part 659.17?	In Development		Further discussion between the Grantee, the PMOC, and the NYSPTSB will take place in January of 2012 to facilitate adequate understanding and fulfillment of requirements by Grantee.
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	Y		In October 2006
Did the oversight agency participate in the last Quarterly Program Review Meeting?	N		
Has the grantee submitted its safety certification plan to the oversight agency?	N		In development

<b>Project Overview</b>		
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	The MTA unified threat vulnerability methodology was applied to the ESA design. A vulnerability log was developed for ESA based on the feedback from the applied methodology. Controls within the design have been implemented to reduce the relative risk of those vulnerabilities identified. Analysis indicated that the controls within design were adequate for the vulnerabilities identified.
<b>SSMP Monitoring</b>	Y/N	<b>Notes/Status</b>
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	In Development	Pending incorporation of the PMOC's comments on the most recent SSMP revision, the SSMP will be in compliance.
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y	The Grantee has updated the SSMP as of 12/2010.
Does the grantee implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	Y	Eric Osnes serves in the capacity of Safety and Security Director for the MTACC. Osnes meets regularly with the project management team. Additionally, the CCM and the Grantee's safety and security personnel are integrated into the management team.
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	Y	Safety and Security are reported on during the monthly safety meeting and are incorporated into Grantee's monthly project reports.
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	Y	Contained within the Grantee's safety procedure documents.
Does the grantee update the safety and security responsibility matrix/organizational chart as necessary?	In Development	

<b>Project Overview</b>		
Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	Y	MTA, GEC, CCM, and contractors provide personnel and resources to carry out safety and security activities.
Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y	The SSMP Committee process is comprehensive and provides for this.
Does the grantee implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities?	Y	SSMP committee meetings as well as project wide monthly safety meetings take place.
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	Accomplished through daily audits by contractor and CCM and through the comprehensive SSMP Committee process.
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	Y	The SSMP Committee process provides for TVRA, safety, and security analysis as well as input from subject matter experts on the SSMP Committee.
Has the grantee ensured the development of safety design criteria?	Y	The SSMP Committee has established the safety design criteria.
Has the grantee ensured the development of security design criteria?	Y	Accomplished through the SSMP Committee process.
Has the grantee ensured conformance with safety and security requirements in design?	Y	Achieved through the SSMP Committee process.
Has the grantee verified conformance with safety and security requirements in equipment and materials procurement?	N	Project is not at this stage.
Has the grantee verified construction specification conformance?	N	Project is not at this stage.
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	In Development	
Has the grantee verified conformance with safety and security requirements during testing, inspection and start-up phases?	In Development	
Does the grantee evaluated change orders, design waivers, or test variances for potential hazards and /or vulnerabilities?	In Development	
Has the grantee ensured the performance of safety and security analyses for proposed workarounds?	In Development	

<b>Project Overview</b>		
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following: Activation Plan and Procedures Integrated Test Plan and Procedures Operations and Maintenance Plan Emergency Operations Plan	Y	The grantee has an Operational Readiness Group which is addressing these aspects of the project.  An Emergency Preparedness Plan was promulgated by the Grantee in 11/2010.
Has the grantee issued final safety and security certification?	N	Project is not at this stage.
Has the grantee issued the final safety and security verification report?	N	Project is not at this stage.
<b>Construction Safety</b>		
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	The grantee reviews each contractor's CHSP for compliance with ESA construction safety requirements and adheres to its implementation.
Does the grantee's contractor(s) have a documented companywide safety and security program plan?	Y	As above.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	As above.
Provide the grantee's OSHA statistics compared to the national average for the same type of work?	Y	As of Dec. 31, 2011, the overall ESA lost time accident ratio was 2.85 per 200,000 MH vs. US BLS rate of 2.20.
If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	In Development	Grantee is reviewing safety on each of its construction contracts
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	MTA OCIP, MTA Insurance Broker loss control personnel, CCM safety engineers, and contractor(s) safety engineers conduct these required audits.
<b>Federal Railroad Administration</b>	Y/N	<b>Notes/Status</b>
If shared track: has grantee submitted its waiver request application to FRA? (Please identify specific regulations for which waivers are being requested)	N	The ESA Project does not have shared track.
If shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	N	The ESA Project does not include shared corridor.

<b>Project Overview</b>		
Is the Collision Hazard Analysis underway?		
Other FRA required Hazard Analysis – Fencing, etc.?	N/A	
Does the project have Quiet Zones?	N	
Does FRA attend the Quarterly Review Meetings?	N	

**APPENDIX F – ON-SITE PICTURES**  
**(to be sent in separate file)**



**APPENDIX G**  
**PMOC Contract CM009/CM019 Milestone Analysis<sup>1</sup>**  
*March 2012 Monthly Report Update*

<b>Milestone</b>	<b>Description</b>	<b>ESA Mod 024/030 Contract Schedule</b>	<b>PMOC "Optimistic" Projection</b>	<b>PMOC "Most Likely" Projection</b>	<b>Comments</b>
1	Turnover of Escalators 3 & 4	4/1/11	3/12/12	5/12/12	
2	Turnover of Escalator 2, Shafts 2 and 3	9/1/10	5/1/12	6/1/12	<i>Escalator #2 controls turnover.</i>
4A	Turnover of Shaft 1 <sup>2</sup>	10/1/12	9/28/12	11/30/12	<i>Based on CM004 historical excavation rate of Shaft #1.</i>
5A	Turnover south 50th St. (caverns), Shafts 4 & 5	3/1/12	1/12/13	3/12/13	Based on concrete of cavern archways and excavation of benches II and III.
6A	Substantial Completion	8/16/13 <sup>3</sup>	5/12/13	7/12/13	
9 (new)	Turnover of Escalator 1	12/31/11	6/1/12	7/1/12	
AR 3	Hand over of Shaft 1 from CM004 to CM019 <sup>4</sup>	9/1/11	N/A	N/A	

<sup>1</sup> The Complete CM009/CM019 Milestone Analysis is on file in PMOC's office for review.

<sup>2</sup> MTACC forecast based on second universal settlement presently being negotiated and transfer of scope from CM019 to CM004.

<sup>3</sup> MTACC forecast based on second universal settlement presently being negotiated.

<sup>4</sup> Milestone will be eliminated if the CM019 scope is transferred to CM004.

