PMOC MONTHLY REPORT

East Side Access (MTACC-ESA) Project

Metropolitan Transportation Authority

New York, New York

Report Period May 1 to May 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 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

1.0 PROJECT STATUS

a. Design

As of April 30, 2012, the Engineering/Design effort was 95.9% complete, progressing 0.3% since the March 2012 update.

Amtrak approval to proceed with the 100% Stage 2 catenary design was given on April 27, 2012 and the design was approved by Amtrak on May 30, 2012; thus completing approval of all of the design for Contract Package CH057 (Harold Structures, Part 3A). ESA is projecting completion of the bid set in July 2012.

Preliminary design efforts for the 48th Street entrance to GCT (CM015) continued in May 2012. Scope is finalized 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 were negotiated with the General Engineering Consultant (GEC), ratified by its major sub-consultants, and approved at the May 2012 MTA Board meeting.*

The 90% submittal for CH058 is scheduled for the end of July 2012. The GEC has stopped progressing the design pending completion of review with the ESA Project Management Team (PMT) of the feasibility of alternate construction methods and sequencing for the East Bound

Re-Route and B/C Tunnel Approach Structure with the goal of reducing the overall construction schedule.

Notice-to-Proceed (NTP) to the GEC to begin development of the bid documents for Contract CM014B ((GCT) Concourse/Cavern Finishes) was given in January 2012. A progress printing of the bid set was given to MNR and LIRR for review. *An on-board review with Metro-North Railroad (MNR) was held on April 25, 2012, and final comments were expected during the week of May 14, 2012*; *however, as of this report, ESA-PMT did not receive the comments. An on-board review with Long Island Rail Road (LIRR) was held on May 11, 2012; with comments due back to ESA by June 4, 2012. The current ESA schedule forecasts completion of this bid set July 1, 2012.*

b. Procurement

As of April 2012, the total procurement activity on the project was reported to be 60.3% complete, with $4.695 billion in contracts awarded to date.

The CM012 solicitation was cancelled in November 2011 and the solicitation was reissued on March 12, 2012, with modifications to the Contract bid package based upon discussions with perspective bidders after the cancellation of the previous solicitation. *Bid due dates continue to slip since the April 2012 reporting period (bids were previously due on May 22, 2012; then May 30, 2012; June 20, 2012, and currently July 10, 2012) due to the issuance of several addenda. ESA has adjusted its forecast of NTP from August 2012 to September 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.

[redacted] hedule and cost proposal due dates slipped to April 24, 2012, and May 1, 2012 respectively (previous forecast for both was April 17, 2012). [redacted] Based on the delays mentioned above, and the time involved in a negotiated procurement Request for Proposal (RFP), the PMOC believes that there is insufficient time to issue the NTP by August 1, 2012 (as currently forecast).

Bids for the CM013A (55th Street Vent Plant) were opened on March 27, 2012, and preparation for award to the apparent low bidder is underway. The lowest bid came in at about 9% over the engineers' estimate. *The second lowest bidder submitted a bid protest which was evaluated by MTACC and found to be without merit. MTACC is now proceeding with an analysis of findings of no significant impact and expects to award this contract in July 2012.*

c. Construction

The total construction progress reached 46.8% complete vs. 68.9% planned (based on MTACC's re-baselined budget of September 2009)*, on a cost invoiced basis for this period*. The overall construction progress continues to trend behind plan, mostly due to the delays experienced on the following contracts: CM009/019 delays due to MTACC's ineffective management of a poor performing contractor; CH053/054A delays due to MTACC's poor management of the GEC and the design process and lack of timely attention to stakeholder management issues with Amtrak and LIRR that affected critical construction elements; CQ039 delays due to MTACC inability to expedite procurement, negotiation and contract award; and delays to the procurement and award of Contract CQ031 due to the termination of the CQ028 contractor for default.

Manhattan: CM009/019 Contracts – Manhattan Tunnels Excavation/Structures Part 1: *As of April 30, 2012, the total amount invoiced for CM009 was $375,711,000, which represents 91.2% of the Current Contract Value of $411,811,000. Thirty-seven (37) contract modifications for a total credit of $16,142,240 (including scope transfers) have been executed. Actual work performed, calculated with the re-baselined schedule, is 91.2% versus 93.0% planned.*

As of April 30, 2012, the total amount invoiced for CM019 was $627,297,000, which represents 81.3% of the Current Contract Value of $$772,010,000. Fifty-one (51) contract modifications for a total of $38,010,115 have been executed. Actual work performed, calculated with the re-baselined schedule, is 81.3% versus 80.6% planned.

As of May 31, 2012, the CM009/019 contractor completed excavation of cross flue Phase I (east side) and 55th St. Phase I. The contractor continued shotcrete placement in the GCT West Wye and excavation of benches between the upper and lower levels in both the East- and West-bound Caverns and in GCT 1&2 East and TT1, excavation of well-way in Escalator Way #3, and re-bar installation for final shotcrete placement in the well-way of Escalator Way #4. The contractor began excavation of the lower level air plenum at the 50th St. vent facility and began placement of initial shotcrete on the archway of Escalator Way #1.

The CM019 contractor's remaining work can be divided into two main categories - excavation and lining Since the revised baseline schedule was approved in early 2012,, the contractor's excavation pace is slightly ahead of the revised baseline, whereas its lining placement is slightly behind the revised baseline schedule. The PMOC has observed that the contractor has the capability and capacity to recover its lining schedule. As a result, the PMOC believes that the contractor should be able to meet its revised baseline schedule milestones.

CM013 – 50th Street Vent Facility: *As of April 30, 2012, the total amount invoiced was $51,966,000 for CM013 and $24,500,000 for CM013R (work performed by the property owner), for a total of $74,002,000, which represents 62% of the Current Total Contract Value. Contract modifications executed continued at seventeen for a total of $689,546. Actual work performed is 53.9% versus 60.2% planned.*

The MTACC and the contractor have agreed to add an additional Milestone #5 to allow access to the site to interfacing contractors which is intended to lessen the impact to the project due to the delayed schedule. MTACC has reported that this milestone add change has been executed. The date for the new Milestone #5 is August 27, 2012. Accordingly, the Substantial Completion

Date for the project has been extended to January 4, 2013 from the previous December 11, 2012, which is 7 months beyond the original approved baseline.

During May 2012, the contractor completed waterproofing of the Service Tunnel and began erection to the rebar for the forming and placement of the final concrete liner. In the Vent Plant conduit installation to the electric manholes continued. Rebar placement for the concrete slab in the Deep Shaft was completed and preparations for the final lining continued. Steel framing of the vertical utility chase along the existing building continued. The contractor began construction of an elevated platform on the street level on 50th St. behind the observation deck. This platform will be the staging area for a new crane that will support the erection of the Vent Plant building. The existing crane that is positioned at the Vent Plant bottom deck (Concourse level) will be removed by a separate crane on 50th St. after the deep shaft lining is complete.

CM004 – 44th Street Demolition and Fan Plant Structure: *As of April 30, 2012, the total amount invoiced was $33,775,000, which represents 75% of the Current Total Contract Value. Forty five (45) contract modifications have been executed for a total of $1,358,499.* [redacted] *Actual work performed is 75.8% versus 100% planned.*

As previously reported by the PMOC, there has been a significant delay by MTACC on the processing of key change orders for the Contract; particularly the extension of the shaft to approximate elevation 233 and the revisions to the Vent Plant building configuration. As a result ESA has reported in the April 2012 Monthly Report that the Substantial Completion date has been further extended to December 2012 from the previous extended date of October 2012.

The additional schedule time as a result of this proposed change cannot be determined at this time.

During May 2012, at the Vent Plant the contractor completed field investigations of the in-place horizontal Access Tunnel #1 (constructed by the CM019 contractor) to confirm the existing footprint and alignment with the vertical shaft. Completed placing mud mat and layout for shaft drilling and completed drilling mobilization and setup. Construction of Elevator shaft walls to Elevation 356 continued and demolition of the rubble wall for the water main chamber in 44th St also continued.

At 245 Park Ave., the contractor continued to coordinate with MNR on their force account work and work on the additional scope requested by both MNR and MNR Police Department along with completing the original contract work.

CM014A – Concourse and Facilities Fit-Out: The contract was awarded in November 2011, with a Notice-to-Proceed date of November 7, 2011. Substantial Completion is forecast for April 2013. *As of April 30, 2012, the total amount invoiced was $1,800,000, which represents 4% of the Current Total Contract Value. Actual work performed is 4.2% versus 6% planned (note: ESA PMT reported 4.6% complete last month; PMOC is following up on the apparent discrepancy).*

During May 2012, test pits continued intermittingly in the 43rd Street garage. Surveying and layout continued and will continue weekly for some time. Fabrication of the electric structures was completed and they are being waterproofed and scheduled for site delivery in early June

2012. Trench excavation and loading out of contaminated soil and debris continued along with the importation of clean fill. Under-drain/sub-drainage work began.

The GEC stated that the Conformed Documents for this Contract were "misprinted". Accordingly, as of the date of this meeting the GEC has re-issued over 100 drawings to the project with more possibly to come. The contractor has said that they are proceeding to make some of the revisions to trench direction etc. but it is still too early to determine what the overall effect these newly issued drawings will have on the overall contract cost and schedule.

Queens

CQ031 (Queens Bored Tunnels and Structures): *As of April 30, 2012, the EAC remained at $778.5 million. The forecast Substantial Completion date remained the same at March 2013, a 6-month delay to the original date. Based on the latest data available from the grantee, cumulative actual percent complete is 74.4% versus planned 93.9% on a cost expenditure basis, and 86% of the contract time to Substantial Completion has elapsed. 56 contract modifications (change orders) totaling $106.2 million have been approved and this represents 13.6% of the current EAC*. The March 22, 2012 re-baselined draft IPS (rev. 3) shows that Contract CQ031 is not on the critical path.

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 contractor commenced TBM mining of the Track D Tunnel on March 28, 2012 and was completed on May 29, 2012. The TBM mining for the Track B/C Tunnel started on May 7, 2012*.

During May 2012, the contractor continued: substructure construction at the Yard Lead Emergency Exit; construction of final portions of the Yard Lead Approach Structure; construction of the C.O.8 Substation; installation of storm sewers along 43rd Street; preparation work for the B13 Substation and construction of the westbound bypass (WBBY) structure at the Honeywell Street bridge.

CQ032 Contract – Plaza Substation and Queens Structures: *As of April 30, 2012, the EAC remained the same at $162.1 million and the forecast Substantial Completion date remained unchanged at August 2014. As of April 30, 2012 based on the latest data available from the grantee, the cumulative actual percent complete is 5.6% versus planned 7.2% on a cost expenditure basis*. The contractor has mobilized at the existing Roosevelt Island, Vernon Boulevard, 12th Street, 23rd Street and 29th Street ventilation facilities and continues asbestos and lead paint abatement, fencing installation, selective demolition work, installation of temporary power and lighting, removal of mechanical equipment and modifications to platforms, floors and stairways, . *The contractor started installation of soldier piles for the B10 Substation.* The March 22, 2012 draft re-baselined IPS (rev. 3) shows that Contract CQ032 is not on the critical path.

CQ039 Contract – Northern Boulevard Crossing: *As of April 30, 2012, the EAC remained at $101.0 million and the forecast Substantial Completion date remained at March 2013, a 7-month delay to the revised Substantial Completion date of August 2012 and a 17 month delay to the original date of October 2011. As of April 30, 2012, based on the latest data available from the grantee, the cumulative actual percent complete is 51.9% versus planned 84.5% on a cost expenditure basis, and 90% of the contract time to the current approved Substantial Completion*

date has elapsed. The contractor has completed utility relocations at the B10 Substation and has turned over that area to the CQ032 contractor to continue his work constructing the substation. There were problems achieving acceptable ground freeze that required additional grouting to seal groundwater leaks and caused an additional three months of delay. Tunnel mining commenced on April 30, 2012. The March 22, 2012 draft re-baselined IPS (rev. 3) shows that Contract CQ039 is not on the critical path.

Harold Interlocking

CH053 Contract – Harold Structures Part 1 and G02 Substation: *As of April 30, 2012, the EAC remained the same at $200.2 million. The forecast Substantial Completion remained the same at December 2013, 23 months later than the current approved plan and 40 months later than the original plan. For this reporting period, based on the latest data available from the grantee, cumulative actual percent complete is 65.8% versus planned 100% on a cost expenditure basis, and 100% of the revised contract time to Substantial Completion has elapsed. For the April 2012 period, the actual percent complete was 1.3% versus planned 0% (the PMOC notes that the contractor is re-baselining the schedule, hence no planned progress figures are available). Construction work continued on the following: the civil portion of the 12kV duct bank and foundations for catenary poles and signal towers at various locations in Harold Interlocking;; excavation for Retaining Wall 39-N1; erection of catenary poles and signal towers; fabrication of catenary poles and internal wiring and equipment testing for the G.O.2 Substation. Contractor started installing support-of-excavation for demolition of the existing abutment wing wall for construction of the new WBBY west abutment foundations.* Completion of work on the Tunnel A Approach Structure has been delayed due to late approval of associated re-designs for adjacent existing catenary and signal power structures. The March 22, 2012 draft re-baselined IPS (rev. 3) shows that Contract CH053 is on the critical path.

CH054A Contract – Harold Structures Part 2A: The EAC remained the same at $38.1 million. The forecast Substantial Completion date remains May 2013, 29 months later than both the original and current approved plan date of December 2010.

As of April 30, 2012, based on the latest data from the grantee, the cumulative percent complete was only 55.2% versus planned 71.2% on a cost expenditure basis and based on a forecast progress curve. Substantial Completion was to have been achieved in December 2010. The PMOC notes that the contract has not been modified to reflect the current forecast substantial and final completion dates.

Railroad Force Account: *As of April 30, 2012, the total amount invoiced for FHA01 was $14,394,000, which represents 85.6% of the Current Agreement Value of $16,825,000. Actual work performed was 74.3% versus 74.1% planned using the re-baselined schedule. There has been one amendment to the agreement for a budget increase of $1,500,000. Amtrak Force Account personnel completed: signal cutover between new Tower 25 and existing Tower 33, installation of catenary wires, hardware, and bond wires between new catenary poles B-928W and B-947-3/4W, and the removal of old signal wires between existing Towers 25 and 27. Amtrak ET forces continued to support 3rd party installation of catenary poles and signal tower poles on the main line.*

As of April 30, 2012, the total amount invoiced for FHA02 was $14,827,000, which represents 105.2% of the Current Agreement Value of $14,090,000. Actual work performed was 53.2%

versus 50.6% planned using the re-baselined schedule. Amtrak C&S forces continued signal construction while negotiations to increase the value of the Project Initiative (PI) (i.e. the Current Agreement Value) continued. Work progressed on essentially a "time and material" basis. There have been no amendments to the agreement to date. During May 2012, Amtrak forces completed installation of the #771 crossover in "F" Interlocking and the cutover of the new #734W signal from position light to colored position light. Amtrak C&S forces continued: assembly of new signal masts for the F2 CIH, installation and termination of cables for the F2 CIH, circuit revisions for the #771 and #747 crossovers, and installation of signal pull boxes and troughs between Line 3 and the Eastward LIRR Passenger Track.

As of April 30, 2012, the total amount invoiced for FHL01 was $17,204,000, which represents 82.8% of the Current Agreement Value of $20,782,000. Actual work performed was 72.3% versus 72.1% planned using the re-baselined schedule. There have been no amendments to the agreement to date. LIRR forces completed the signal wire cutover at new Tower 33 with Amtrak, installed fiber optic cables between 43rd and 48th Streets, and provided protection for Amtrak signal wire transfers.

As of April 30, 2012, the total amount invoiced for FHL02 was $12,924,000, which represents 86.0% of the Current Agreement Value of $15,024,000. Actual work performed was 21.5% versus 20.5% planned using the re-baselined schedule. LIRR personnel completed: installation of trough, conduit, and pull boxes between Honeywell Street, the H3 CIL, and existing Harold CIL. LIRR forces continued: installation of cross track conduits at various locations in Harold Interlocking, installation of wood poles and brackets for the F2 CIH and the F2E power supply, terminations and cutovers of existing turnouts with new cables at the new Point CIH (including point checking and break-down testing), and installation of insulated joints for future signals at various locations within Harold and Point Interlockings.

d. Quality Assurance and Quality Control (QA/QC)

One of the two new Quality Engineers that were recently hired was reassigned, leaving one vacancy. This position was advertised in April 2012. *Another ESA Quality Engineer will be taking a six-week leave of absence starting around September 1, 2012. The Quality Engineer position is expected to be filled part time in mid-June 2012 by the construction manager who worked on CM002. He has over 4 years of experience on the project and QA/QC experience from managing multiple contracts. His initial assignment will be working on CM014A, CM013, and CM004 to get acclimated. He will then cover those contracts while the ESA Quality Engineer is taking a six-week leave of absence.*

2.0 SCHEDULE DATA

MTACC reported at the May 2012 CPOC meeting that its risk adjusted (80% probability) new baseline schedule shows Revenue Service date (RSD) occurring in August 2019. The IPS update #35 data date (May 1, 2012) and its variance reports submitted by ESA has not been updated yet to support the revised risk-informed RSD. The updated IPS still has an RSD of September 30, 2016. The ESA PMT informed the PMOC that the new risk informed baseline schedule will be made available in June 2012.

Project Critical Path:

The ESA PMT has stated in its current variance report that "Work in the Harold interlocking continues to drive the critical path of the overall program."

Schedule Contingency: Schedule contingency will be analyzed once the re-baselined schedule is finalized and issued.

3.0 COST DATA

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

Budget/Cost: *MTACC reported that, as of April 30, 2012, the overall project completion was 52.0%, based on the invoiced amount of $3.815 billion in the MTA-Approved Budget of $7.328 billion (and $463 million for rolling stock reserve); however, the overall project completion continues to significantly lag behind the planned progress of 69.9% (September 2009 baseline).*

The $3.815 billion invoiced amount represents 49.0% of the Current Working Budget (CWB) of $7,791 million, approved in September 2009 by the MTA Board (excluding financing costs), with a 1.0% progress increase since the March 2012 reporting period.

MTACC reported at the May 2012 CPOC meeting that its risk adjusted (80% probability) new baseline cost estimate is $8.24 B (note: excluding $463M for vehicles and excluding finance cost), based on an RSD of August 2019.

The current Budget and Cost data (*not yet adjusted for the new baseline)* is shown in Table 1 in Appendix B of this report. Table 3 in Appendix B of this report shows a comparison of the MTA's Current Working Budget (CWB) vs. the FFGA Baseline Budget in Standard Cost Categories (SCC).

Contingency:

During April 2012, the project contingency decreased by $3.6 million (from $399.9 million in March 2012 to $396.3 million).

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 April 2012 falls within the allocated contingency range for each of the active contracts. In April 2012, the adjustment for the active executed contract modifications decreased the project contingency by $2.8 million.*
- *Scope Transfers: The total decrease in the overall contingency for scope transfers was $0.8 million.*

Change Orders: In *April 2012*, MTACC reported that there were *16* additional executed change orders for a total of 688 executed change orders for a total of *$323.5* million, representing *6.9%* of the total awarded contracts (*$4,694.7* million). The 16 additional change orders are in the amount of $2.8 million.

The following modifications were approved in *April 2012*:

- *For Contract CH053, four (4) modifications were executed to address additional foundation work, signal work, Micro tunnel TBM head replacement and aerial crossing work totaling $1.1 million.*
- *For Contract CH054A, one (1) modification was executed for temporary guy anchor relocation totaling $1.1 million.*
- *For Contract CM004, three (3) modifications were executed for additional plumbing and façade work totaling $0.1 million. The contract contingency decreased from 7.82% to 7.62% since the last reporting period.*
- *For Contract CM009, two (2) modifications were executed for additional conduit work totaling $0.1 million. The contract contingency remains at 0.42% since the last reporting period.*
- *For Contract CM019, two (2) modifications were executed for revisions in the shaft walls totaling $0.1 million. The contract contingency decreased from $12 million to $11.9 million since the last reporting period.*
- *For Contract CQ032, four (4) modifications were executed for LIRR shaft obstruction work, change to CMU walls and re-bracing work at levels P1 and P3 totaling $0.3 million. The contract contingency decreased from 9.58% to 9.35% since the last reporting period.*

4.0 RISK MANAGEMENT

Background Summary: An initial Risk Assessment was performed on the ESA project in 2004 in accordance with FTA Project Management Oversight Program Operating Guidance #22 (PG22). Prior to the signing of the FFGA in 2006, a more comprehensive Risk Assessment was performed in accordance with PG40, followed by an update 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 the 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 the implementation of the ELPEP. MTACC-ESA has also revised or rewritten most of the PMP sections/sub-plans/procedures associated with meeting the risk management requirements of the ELPEP.

2006 Risk Mitigation Commitments at FFGA: A detailed risk mitigation plan was developed in May 2008, based on the MTACC risk mitigation commitments made in 2006, just prior to the FFGA. The PMOC observes that many of the forecast risks were realized and the project also encountered new risks such as contract default (CQ028) and the need for extensive slurry wall repairs in the Queens Open-Cut Excavation Area. As a result, MTACC has missed all but one of the basic annual mitigation milestones from Q4-2006 through Q4-2011 for the following performance metrics: Design Completed; Contracts Awarded (based on current contract/package values); and Construction Completed (cost expenditure basis).

Current Risk Mitigation Efforts: *ESA-PMT continued its efforts to identify and mitigate specific risks that may adversely affect the program's cost and schedule performance.* Ongoing and significant new risk mitigation initiatives include the following:

- 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 continues to affect track outage coordination with the ESA project.
- ESA-PMT is evaluating additional transfers of work scope in the Harold Interlocking from railroad force account to third-party contractors.

During March and April 2012, MTACC-ESA commenced the programmatic risk assessment of the revised cost and schedule baselines developed by ESA. An independent outside consultant facilitated the workshop and performed the risk assessment. *The independent consultant issued a draft report on May 15, 2012, summarizing the results of the risk assessment. Based on these results, MTACC presented a new project budget, $8.24 billion (w/o vehicles and financing), and a new RSD, August 2019, to the MTA Capital Program Oversight Committee on May 21, 2012. These figures reflect the decision by MTA's upper management to use the results from the risk assessment representing an 80% probability of occurrence.*

The PMOC completed its update of the 2009 PG47-based risk assessment and presented the results to the FTA Region II Office on May 8, 2012. These results were relatively close to the values obtained by the MTA. (Note: MTA risk assessment process is a "bottom-up" approach that identifies individual risks, while the PG47-based process is a "top-down" approach that examines risk in broad, aggregate categories.)

5.0 ELPEP

The current status of each of the main ELPEP components 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 II Office. The PMOC and the FTA met with MTACC in April 2012 to discuss the status of the consolidated comments. *A working session to resolve comments will be planned for June 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. *Upon ESA finalization of the new ESA baseline schedule, the PMOC will monitor compliance with the SMP.*

- **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.
- **Risk Mitigation Capacity Plan (RMCP):** *MTA addressed all PMOC comments in its submittal of the MTACC RMCP, covering both ESA and SAS, on October 28, 2011. Resolution of final comments regarding the RMCP have been coordinated and combined with the PMOC's review of the ESA and SAS Project Risk Management Plans. FTA-RII provided its conditional acceptance of the RMCP in its May 24, 2012 letter to MTACC.*
- **Conformance and Compliance:** *MTA's final conformance and compliance document, the ELPEP Whitepaper, was completed and submitted to FTA-RII. In its May 30, 2012 letter to MTACC, the FTA acknowledged that ESA was in compliance with the ELPEP requirements.*
- **Risk Management Plan:** *Drafts of the ESA and SAS Project Risk Management Plans were transmitted to FTA Region II during October 2011. FTA/PMOC review comments were sent to MTACC on April 12, 2012. The PMOC met with MTACC on April 17, 2012 and May 6, 2012 to finalize comments and discuss resolution. MTACC expects to complete its final draft of the update by July 20, 2012.*

6.0 SAFETY AND SECURITY

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 April 2012 (the latest up-to-date report available), the injury ratio for CM009 was 3.13 lost time accidents, for CM019 it was 2.63 lost time accidents, and for CQ039 it was 5.80 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). *MTACC briefed the FTA RII Office and the PMOC on April 26, 2012 on its Safety Program. Implementation and operations of the Safety Program were discussed. MTACC noted that the Contractor submits a Safety Work Plan and an Accident Prevention Plan which are reviewed by MTACC. MTACC is currently compiling statistics from daily safety reports and incident reports, and is the process of performing a root cause analysis to identify areas that need improvement.*

7.0 ISSUES AND RECOMMENDATIONS

Harold Electrical/Catenary Design: *Progress has been made over the last several months in getting Amtrak approval on the Electric Traction (ET) design packages; however there are several packages that are trending behind schedule (see Table 4 below). The PMOC recommends that MTACC management continue to focus on the resolution of catenary design package approvals through better communication and coordination among the GEC, the 3rd party design checker, Amtrak and the ESA construction manager.* Key milestone dates and status are shown in Table 4 in Appendix B.

Contracts CM009/019: *The PMOC remains concerned that although the Contractor has made significant progress during the past several months with its excavation and construction,*

CM009/019 will remain on the project near critical path until the completion of the work. To ensure that the contractor progresses its remaining work in accordance with its re-baselined schedule, the PMOC recommends that the Contractor maintain (and improve, if possible) its excavation/construction rates at each of its project sites until work at every location is complete.

Contract CQ031: The PMOC *remains* concerned about the costs of the additional CQ031 work required to mitigate potential delays due to late completion of key work by the CH053 contractor at the single remaining critical construction interface (Track B/C tunneling beneath the existing, in-service G.O.2 Substation) and the continuing appearance of new CQ031/CH053 interferences. *The PMOC recommends that the ESA-CMs continue to closely monitor the schedule performance of both the CQ031 and CH053 contractors to ensure adherence to current work schedule, thus minimizing additional costs exposure.*

Contract CQ039: The PMOC remains 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. *Difficulties with the ground freeze have caused significant schedule slippage to the start of tunnel excavation that will, in turn, delay the start of Contract CQ032 (Plaza Substation and Queens Structures) work in the Early Access Chamber area. This situation will delay turnover of the Milestone 1A Area and the start of Contract CQ032 (Plaza Substation and Queens Structures) work in the Early Access Chamber area.*

Contracts CH053/54A: Overall, the CH053 contractor failed to meet the rate of construction progress required to meet the goals of the Contract re-baselined schedule. Because of this, the PMOC remains concerned that the contractor may not be able to achieve and maintain the higher production rate called for in re-baselined schedule. *Historical progress has averaged approximately 1.3% per month, yet the contractor will need to achieve 1.71% progress per month to meet the current forecast Substantial Completion date of December 2013.* The current production rate *for the period of January 2012 through April 2012 was 4.2%, an average of only 1.05% per month. Given that continuing major problems remain unresolved, such as inadequate railroad force account support and interface issues with Contract CQ031and newer problems, such as the Amtrak labor unions claim to CH053 work, continue to arise, the PMOC does not believe that any significant increase in productivity is possible.*

Railroad Force Account: Amtrak announced at the Harold Part 2 Risk workshop held on April 11, 2012 that because of upcoming Amtrak projects (Moynihan Station, Brookfield, NJHSR), the availability of Amtrak ET resources may be significantly reduced over the next several years. This turn of events has the potential to significantly impact the schedule for Harold work over the next several years. *The PMOC notes, however, that MTACC has, this year, been able to engage Amtrak at the higher management levels. As a result, MTACC has generally been better able to present critical ESA issues to the Amtrak President and Chief Engineer and to more effectively engage them in achieving resolution.*

Procurement: In the PMOC's opinion, MTACC has not effectively managed the procurement process. The continued procurement delays consume valuable schedule time before contract award and deprive individual contract packages of needed schedule float during construction.

As it now stands, the PMOC believes that the proposed NTP date of August 1, 2012 for the Systems Package 1 (CS179) is not achievable, given the fact that the schedule proposals were not received until late April 2012, and cost proposals were received in the first week of May 2012. In order to award on schedule, a selection must be made by July 1, 2012 in order to make a recommendation for award to the July 2012 MTA Board meeting for approval. *If the July Board meeting is missed, the award will be delayed by two months, since the Board does not meet in August. The PMOC believes that there is insufficient time to issue the NTP by August 1, 2012 (as currently forecast). Also, the CM012 bid due date continues to slip (from May 8, 2012, to May 30 2012; to June 20, 2012; and currently July 10, 2012), resulting in a delay in NTP from August 2012 to September 2012. Continuing procurement delays may have significant impacts on the new ESA project baseline schedule. .*

Project Funding/Budget: In 2011, the MTA proposed a revised financial plan that identified some additional funding streams including a potential Railroad Rehabilitation and Improvement Funding loan from the Federal Railroad Administration (FRA) for $2.2 billion. The NYS legislature allocated $770 million in the NYS budget in March 2012 for the MTA Capital Program. The allocation of this funding among the projects in the MTA Capital Program (including ESA) remains to be finalized. *The PMOC is concerned that MTACC stated at the May 2012 CPOC meeting that it is assuming that efficiencies in MTACC projects and the inter-agency Program will fund an additional $200 M commitment needed in the current 2011-2014 Capital Program Plan. There is a reasonable possibility that this level of forecast efficiency savings will not be realized. MTACC also presented its new risk adjusted budget of $8.24B (excluding $463M for rolling stock) at this CPOC meeting.*

Project Schedule: *MTACC reported at the May 2012 CPOC meeting that its risk adjusted (80% probability) new baseline schedule shows RSD occurring in August 2019. The ESA PMT has to submit an updated IPS based on this Risk informed RSD. In addition, the ESA PMT should submit an updated Schedule Basis for the revised baseline, and address the following SMP requirements in the revised baseline schedule:*

- *Establish critical path of the project (SMP section 5.5; Schedule Forecasting and Reporting Process)*
- *Establish 20 milestones that would be tied to RSD with a reasonable amount of float (SMP section 5.5; Schedule Forecasting and Reporting Process)*
- *Establish contingencies for each package and overall project (SMP section 6.1 FFGA Schedule Contingency Management).*
- *Establish 4 near critical paths with the amount float and risk associated with these paths (SMP section 6.1 FFGA Schedule Contingency Management).*

APPENDIX A – ACRONYMS

ARRA	American Recovery and Reinvestment Act
BA	Budget Adjustment
BAFO	*Best and Final Offer*
CCC	Change Control Committee
CCM	Consultant Construction Manager
CM	ESA Construction Manager assigned to each contract
CMP	Cost Management Plan
CIL	Central Instrument Location
CPOC	Capital Program Oversight Committee
CPRB	Capital Program Review Board
CPP	Contract Packaging Plan
CWB	Current Working Budget
CWP	Construction Work Plan
EAC	Estimate at Completion
ELPEP	Enterprise Level Project Execution Plan
ERT	East River Tunnel
ESA	East Side Access
ET	Electric Traction
FA	Force Account
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
GCT	Grand Central Terminal
GEC	General Engineering Consultant
IPS	Integrated Project Schedule
LIRR	Long Island Rail Road
MNR	Metro-North Railroad
MTA	Metropolitan Transportation Authority
MTACC	Metropolitan Transportation Authority – Capital Construction
NATM	New Austrian Tunneling Method
NTP	Notice to Proceed
NYCT	New York City Transit

NYSPTSB	New York State Public Transportation Safety Board
OSHA	Occupational Safety and Health Administration
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PMT	ESA's Project Management Team
QA	Quality Assurance
RAMP	Real Estate Acquisition Management Plan
RFP	*Request for Proposal*
RMCP	Risk Mitigation Capacity Plan
ROD	Revenue Operations Date
RSD	Revenue Service Date
SC	Substantial Completion
SCC	Standard Cost Category
SMP	Schedule Management Plan
SSMP	Safety and Security Management Plan
SSPP	System Safety Program Plan
SWP	Safety Work Plan
TBM	Tunnel Boring Machine
TCC	Technical Capacity and Capability
VE	Value Engineering
WBBY	Westbound Bypass
WBS	Work Breakdown Structure

APPENDIX B – TABLES

Table 1: Project Budget/Cost Table

	FFGA (as of December 18, 2006)			FFGA Amendments	MTA's Current Working Budget (CWB)		Expenditures as of *April 30, 2011*	
	($ Millions)	(% of Grand Total Cost)	Obligated (Millions)	TBD	($ Millions)	(% of Grand Total Cost)	($ Millions)	(% of CWB)
Grand Total Cost	**$7,386**	**100**			**$8,827**	**100**	*$3,627.4*	*41.1*
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	*$3,627.4*	*46.6*
Federal Share	$2,683	36.3	$1,148		$2,699	30.6	*$1,663.0*	*21.3*
5309 New Starts share	$2,632	35.6	$1,098		$2,436.6	27.6	*$1,417.1*	*18.2*
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
Local Share	$3,667	49.6	$2,959		$5,092	57.7	*$1,964.4*	*25.2*

* CWB represents MTA Board approved $7,791 budget that includes $463 million for Rolling Stock Reserve, but excludes financing cost (September 2009).

Table 2 – Summary of Critical Dates

	FFGA	Forecast (F) Completion, Actual (A) Start	
		Grantee*	FTA**
Begin Construction	September 2001	September 2001(A)	September 2001(A)
Construction Complete	December 2013	*August 2019*	TBD
Revenue Service	December 2013	*August 2019*	TBD

* Source – *Grantee forecast Revenue Operations Date per information presented to MTA CPOC on May 21, 2012*

**Source – *ELPEP baseline needs to be adjusted based on 2012 risk assessment results*.

Table 3 – Comparison of Standard Cost Categories: FFGA vs. CWB

Standard Cost Category (SCC) No.	Description	FFGA baseline ($)	MTA's Previous Reporting Period CWB ($) – *(March 31 2012)*	MTA's CWB ($) *(April 30, 2012)*	% Change from FFGA to April 2012 CWB
10	Guideway & Track Elements	1,988,741	2,608,387	*2,593,996*	*30.4*
20	Stations, Stops, Terminals, Intermodal	1,168,655	1,527,225	*1,522,804*	*30.3*
30	Support Facilities: Yards, Shops	356,264	349,489	*349,132*	*[2.0]*
40	Site Work & Special Conditions	205,105	366,381	*366,861*	*78.9*
50	Systems	619,343	627,338	*640,216*	*3.4*
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	1,434,170	*1,439,978*	*21.6*
90	Unallocated Contingency	168,529	0	0	0
Subtotal		**6,349,899**	**7,791,000**	**7,791,000**	**22.7**
100	Finance Charges	1,036,104	1,036,104	1,036,104**	0
Total Project Cost (10 – 100)		**7,386,003**	**8,827,104**	**8,827,104**	**19.5**

*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.

Table 4 – *May 2012*
ESA: Catenary Review Schedule

Catenary Package	30% Submittal HNTB/Amtrak Review		60% Submittal HNTB/Amtrak Review		90% Submittal HNTB/Amtrak Review		100% Submittal HNTB/Amtrak Review	
	Submit	Return	Submit	Return	Submit	Return	Submit	Return
STAGE 1							8/8/11	8/26/11 10/06/11 (A)
STAGE 2			9/7/11 11/16/11 (A)	9/21/11 2/29/12 (A)	10/28/11 3/9/12 (A)	12/1/11 4/18/12 4/27/12 (A)	1/6/12 4/27/12 5/10/12 (A)	2/6/12 6/01/12 5/30/12 (A)
STAGE 3	10/14/11 12/14/11 (A)	11/18/11 2/29/12 (A)	12/23/11 4/18/12 4/27/12 (A)	1/30/12 5/24/12	3/9/12 6/20/12	4/15/12 7/30/12	5/18/12 8/17/12	6/18/12 9/18/12
FQA65	9/29/11 12/14/11 (A)	10/21/11 2/29/12 (A)	11/25/11 4/3/12 4/13/12 (A)	1/06/12 5/10/12	2/10/12 6/11/12	3/20/12 7/18/12	4/20/12 8/3/12	5/26/12 9/4/12

A = Actual

Note: yellow highlights denote missed target dates.

Table 5 – Core Accountability Items				
Project Status:		**Original at FFGA**	**Current***	**ELPEP****
Cost	Cost Estimate	$7.386B	*$8.24B*	$8.119B
Contingency	Unallocated Contingency	$168.5M	$0	$260M
	Total Contingency (Allocated plus Unallocated)	$855M	*$396.3M*	$722M
Schedule	Revenue Service Date	December 31, 2013	*August 2019*	April 30, 2018

Total Project Percent Complete	Based on Expenditures	*52%*
	Based on Earned Value	NA

Major Issue	**Status**	**Comments**
Availability of local funding	NYS approved $770 million for MTA Capital Program in March 2012.	*Funding allocation for ESA work has not yet been finalized by MTA as of the end of May 2012.*
Re-baseline (cost and schedule)	Cost and schedule re-baselines were to be finalized in February 2012. *As of end of May 2012, neither cost nor schedule final baselines have been received.*	MTA initially committed to having new baselines completed by the end of December 2011, and presented to the MTA CPOC in February 2012. *The new risk adjusted total project cost and RSD were presented to the CPOC in May 2012.*
Amtrak East River Tunnel Work	Amtrak original plan for two tunnel outages during 2012 has been changed to one tunnel.	ESA re-baseline is based on two tunnel outages. Impact (if any) on new baseline has to be evaluated.
Completion of Risk Assessment	*Risk workshops were held in March, April and May 2012, as part of the MTACC programmatic risk assessment. Draft results were published May 15, 2012.*	*PMOC has not received final results of risk assessment as of the end of May 2012. A draft report was issued on May 15, 2012*
Date of Next Quarterly Meeting:	*June 21, 2012*	

* *MTACC's risk adjusted cost and schedule numbers presented to the MTA CPOC on May 21, 2012.*

** *Enterprise Level Project Execution Plan (ELPEP) numbers to be adjusted based on 2012 risk assessment.*