

## **PMOC MONTHLY REPORT**

### **East Side Access (MTACC-ESA) Project**

Metropolitan Transportation Authority

New York, New York

Report Period May 1 to May 31, 2014



PMOC Contract No. DTFT60-09-D-00007

Task Order No. 7, Project No. DC-27-5235, Work Order No. 2

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

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## **THIRD PARTY DISCLAIMER**

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## **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. 007. 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 the end of April 2014, MTACC reported that the overall Engineering effort was 98.6% complete, an increase of 0.2% from the previous month. The derivation of the figures for that calculation are not clear to the PMOC given that the ESA Cost Report shows only 90.0% of the budgeted section titled "Design" as having been invoiced, and 91.0% of the cost category named "EIS & Engineering".

Amtrak provided signed concurrences for the FHA04 Catenary; Signals; and 60Hz power designs. Amtrak approval for the Communications and Track designs remains open.

NTP for design of the new Concourse Entrance at 43<sup>rd</sup> Street has been issued to the GEC. Approval for the design of a second new Entrance, at 45<sup>th</sup> Street was approved at the April 2014 MTA Board meeting. A Proposed GEC Change Order for the design of the support of future Electronic Media into the Concourse, the 48<sup>th</sup> Street Entrance and the Cavern Station is under review by MTACC Procurement

Design work for the CH057 bid package by the GEC is underway. Anticipated advertising date for this package is July 2014 (previously forecast for June 2014) with NTP forecast for

September 2014. Design for CH057C package, which will be the second on-call contract to perform various track construction formerly designated to be performed by LIRR Force Account labor, has been completed. The package will go to prospective bidders in early June 2014. Construction NTP is forecast for July 2014.

On December 20, 2013, the CCC approved the repackaging of the CH058 Contract and an alternate method for constructing the Eastbound Reroute tunnel to make better use of available extended track outages in the summers of 2015 and 2016. A modification to incorporate these changes into the GEC contract was approved at the March 2013 MTA Board meeting; and a design NTP was issued on May 2014, with a 90% submission planned for August 2014, and a 100% submission by November 2014

The PMT received three deliverables from the GEC for the CM007 Contract Package in May 2014. The initial design memorandum outlining the proposed changes to the architectural finishes was received on May 1, 2014, while the 100% designs for the south and north back of house areas were received on May 15<sup>th</sup> and 22<sup>nd</sup> respectively. It is anticipated that the GEC will submit deliverable No. 4, detailing proposed options to the fiber optic network re-routing on June 2, 2014. It is also anticipated that Division 1 Specifications will commence early legal review in mid to late June 2014. The track portion from the CS284 Contract will form the 4<sup>th</sup> part of the CM007 package. Completion of 60% design is now forecast for June 2014 (IPS indicates May 2014); and the advertise date for the package is still forecast for October 2014.

## **b. Procurement**

As of the end of April 2014, the Cost Report showed total procurement activity on the project as 64.4% complete, with \$6.247 billion in contracts awarded out of the \$9.693 billion revised budget

Advertising date for CS084 (RFP) -Traction Power Substations is re-forecast for June 5, 2014 (previously forecast for May 2014); procurement dates for CS284 (track and signal installation) remains TBD given that the package will now be split into two separate packages, with the track work going into the CM007 package and the signal installation work bid as a stand-alone package, Contract CS086.

The Recommendation for Award for the VS086 (Signal Equipment) Contract package was presented and approved at the January 2014 MTA Board meeting. As of the end of May 2014, notice of award has not been issued. The ESA PMT cites issues with the Contract pertaining to maintenance of the equipment after warranty as the reason for delay in award.

CM014B was advertised as an RFP on May 9, 2014. The Pre-Proposal/Site Tour meeting is scheduled for June 9, 2014.

On September 17, 2013, the CCC approved creating a new package (CH057B) to construct the relocated LIRR tracks ML2 and ML4. This work was taken out of the CH057 package and will be performed by an MTA on-call track Contractor. Bids for this work were opened on April 3, 2014. NTP was issued on May 19, 2014.

## **c. Construction**

The PMT reported in its April 2014 Progress Report that the total construction progress reached 49.8% complete vs. 51.6% planned, an increase of 0.5% since the previous month (which is confirmed by a review of the ESA Expedition Cost Report).

## **Manhattan Contracts:**

**CM013A – 55th Street Vent Facility:** MTACC reports that through April 30, 2014 the EAC is \$57.086 million. Forecast Substantial Completion remains April 5, 2015. As of May 31, 2014, MTACC reported that the actual percent complete continues to track ahead of schedule at 39.5% actual vs 37.9% planned.

### Construction Progress:

Plenum: Continued with installation of rebar, forming and placing concrete at the north and south Plenum Walls. Finalizing installation of rebar for placement of the invert slab west of the Shaft.

Cavern: Completed placement of lower concrete walls and lower fan room slab. Began rebar form and placement of the 2<sup>nd</sup> level of cavern concrete walls.

**CM004 – 44th Street Building Demolition and Fan Plant Structure; 245 Park Avenue Entrance:** MTACC reports that through April 30, 2014, the EAC is \$55.28 million. The Forecast Substantial Completion date for the CM004 Contract has been further extended to June 15, 2014 from the previous May 15, 2014. Beneficial Use for the 245 Park Avenue Entrance was achieved October 21, 2013. The actual percent complete was 98.8% versus 100% planned.

### Construction Progress:

Vent Plant: Final cleanup is ongoing. The Substantial Completion walkthrough with Long Island Railroad (LIRR) is scheduled for June 4, 2014.

245 Park Ave. Entrance: Portions of the failed terrazzo floor in the passageway continues to be an issue, The Project Office has reported to the PMOC that the contractor has been directed to remove all terrazzo tile in the passageway area for inspection by the design consultants for a determination of the cause of the problem.

**CM013 – 50<sup>th</sup> Street Vent Facility:** MTACC reports that through April 30, 2014, the EAC is \$95.57 million. MTACC continues to report the forecast substantial completion date as March 29, 2014. Although MTACC reports that as of April 30, 2014 the work was 100% complete, the project office has advised the PMOC that official signoff on substantial and final completion is pending lifting of the stop-work order by the Code Compliance Unit (CCU). [See Section 7.0 Issues and Recommendations of this report]. The reported Forecast Substantial Completion date remained March 20, 2014. As of April 30, 2014, MTACC reports that the project work was 100% complete.

Construction Progress: The punch list work throughout the building and the shaft was completed. Overhead doors and man-doors were completed. Landscaping in the planters in the Public Plaza was completed.

**CM014A– Concourse and Facilities Fit-Out:** MTACC reports that through April 30, 2014, the EAC remains \$55.90 million. This includes \$54.71 million for original contract work and \$1.19 million for the CM014-B scope transfer work. Forecast Substantial Completion date remains December 15, 2014.

The reduction in the percent complete planned reported by MTACC reflects an adjustment to the schedule based on the contractor forecast substantial completion which includes impacts of the redesign to the Supervisory Control and Data Acquisition (SCADA) system (based on LIRR

requirements, added scope of work, and forecast dates when Con Ed will energize the system and final testing and commissions complete). Given the amount of remaining work, the PMOC continues to believe that ESA will change the forecast substantial completion date.

Construction Progress:

Garage: The contractor began preparations to begin permanent power cable pulling. This will take approximately 1 week to complete.

Concourse (Original Contract Work): Surveying and layout is ongoing. Installation of fire stopping continues and CMU wall erection is ongoing. Painting of CMU walls and vibration walls continues but is intermittent due to weather and difficulty in maintaining consistent ambient temperatures. Erection of permanent stair in Shaft #2 continues. Seismic clip and fire standpipe installation resumed on April 21, 2014. Branch feeder and conduit installation is ongoing throughout. The 16340 & 16341 switchgear was delivered the week of May 19, 2014. The Contractor completed the rooms, which required 2 hour fire-rated enclosure.

Concourse (Scope Transfer from CM014-B): Some the utility work has been completed and the remaining is on hold pending resolution of the related changes in the work, The block wall along Track 115 is temporarily on hold pending an RFI response from MTACC. For the ramp work, this still is slated to be removed from this contract due to significant utility interference that must be relocated by Metro North Railroad (MNR).

**CM005- Manhattan South Structures:** The Estimate at Completion (EAC) for CM005 was reduced in April 2014 from \$222,566,277 to \$203,353,485. This reduction was due to the removal of a schedule acceleration contract modification for \$12.0 million and a \$7.5 million scope transfer for access tunnel lining. The MTACC forecast for Substantial Completion (SC) remained at February 6, 2016. Actual construction progress for April 2014 was 5.49% versus 3.94% planned. Cumulative progress was 24.21% actual versus 21.22% planned.

Construction Progress: The contractor completed placement of invert concrete in the GCT 1&2 East Wye and the Eastbound Tail Track TT402 and installation of waterproofing in the Westbound Tail Track TT403 during May 2014. Additionally, the contractor continued to install waterproofing of the sidewalls of the 38th St. vent facility, place concrete in several sump pits in both main caverns, and began to install invert concrete at the south end of the Eastbound Cavern and archway concrete in the Westbound Tail Track TT403.

**CM006 – Manhattan North Structures:** The MTACC awarded the CM006 contract on March 31, 2014. The Estimate at Completion (EAC) is \$294,201,750 and the Substantial Completion (SC) date is November 30, 2016. The contractor has not begun any field construction yet, so there is no monthly or cumulative construction progress to report.

Construction Progress: The contractor has not begun any field construction to date, but continues to develop early submittals, obtain Subcontractor approvals, and apply for permits. The contractor's 6 Week Look-Ahead Schedule, which it submitted during its first progress meeting in May 2014, indicates that it will not start any actual field construction until at least June 24, 2014.

**CS179 – Systems Package 1:** MTACC awarded this contract in March 2014. As of April 30, 2014, the Estimate at Completion for CS179 is \$550,388,000. The MTACC forecast for Substantial Completion is November 25, 2019. Contractor schedule has not been submitted yet.

Construction Progress: The Contractor is in the mobilization stage of the Contract and is currently finalizing the project organization. An authorized project representative (CM) has been assigned. The Contractor submitted a deficient 90 day look-ahead bar chart as a preliminary project CPM schedule. This submittal was rejected and a revise and resubmit request was sent to the Contractor.

### **Queens Contracts:**

**CQ032 – Plaza Substation and Queens Structures:** The Estimate at Completion for CQ032 increased to \$231,221,188 from \$227,776,070 during April 2014 due to a re-forecast of the construction sequencing and the contractor’s Time Impact Analysis for the earlier access delays. The MTACC forecast Substantial Completion date slipped an additional 2 weeks to January 11, 2016. Actual construction progress was 3.62% versus 2.84% planned. Cumulative progress was 56.72% actual versus 55.21% planned (the MTACC and the contractor have informally agreed upon a revised baseline schedule which incorporates all the prior access delays. April 2014 is the first month that this agreement has been included in the cumulative project completion percentage).

Construction Progress: The contractor continued to power wash the brick face of the B-10 Substation and to install waterproofing membrane and apply pneumatically applied concrete (PAC) to the external and internal walls of the Plaza Interlocking/Substation structure, install structural steel, decks, and re-bars for the tunnel invert and C06 and C07 Substation levels, and make concrete repairs in the 63<sup>rd</sup> St. tunnel, as well as punch list repairs to the vent facilities at Roosevelt Island, Vernon Blvd., and 29<sup>th</sup>, 23<sup>rd</sup>, and 12<sup>th</sup> St.

**Harold Interlocking: CH053 Contract – Harold Structures Part 1 and G.0.2 Substation:** As of April 30, 2014, the Estimate at Completion for CH053 was reduced slightly from \$303,113,354 to \$302,044,353 due to MTACC’s re-forecast cost of existing contract modifications. The MTACC forecast for the Substantial Completion date was extended by 2 weeks to January 7, 2015. Actual construction progress for April 2014 was 0.93% versus 2.01% planned. Cumulative progress was 88.48% actual versus 90.66% planned (note that, as of this report, the MTACC has incorporated the recent re-baseline schedule into its cumulative progress schedule).

As an update to the seven “sink hole” or ground depression issues which the PMOC reported in its April 2014 Monthly Report, there were an additional 4 depressions discovered since that report. All of these new depressions were relatively minor in size and none caused any train delays or property damage. The MTACC continued to analyze these incidents and the ground conditions in the immediate vicinities of each depression to determine their root cause(s) and expects to have its final report ready by mid-June 2014.

Construction Progress: The contractor continued to install soldier piles for the Tunnel A Approach Structure west of 39<sup>th</sup> St., continued construction of the 43-S2 retaining wall near 48<sup>th</sup> St., continued to install duct bank for the motor generator set at Woodside Interlocking, poured the concrete approach slabs at the Westbound Bypass Bridge, and continued miscellaneous catenary structure construction in Harold Interlocking.

**CH054A – Harold Structures Part 2A:** As of April 30, 2014, the Estimate at Completion for CH054A was reduced slightly from \$64,306,105 to \$63,293,505 due to the MTACC’s re-forecast and deletion of contract modifications. The MTACC forecast Substantial Completion

date was extended by 2 weeks to December 12, 2014. Actual construction for April 2014 was 1.83% versus 6.37% planned. Cumulative construction was 77.95% versus 83.30% planned (note that, as of this report, the MTACC has incorporated the recent re-baseline schedule into its cumulative progress schedule).

Construction Progress: The contractor continued to install the storm sewer system between Queens Blvd. and the GO2 Substation.

**CH057A – Part 3 Westbound Bypass:** As of April 30, 2014, the Estimate at Completion for CH057A remained at \$103,300,000. The MTACC forecast for Substantial Completion remained at February 25, 2016. The contractor had not begun any measureable field construction, so the MTACC did not report any monthly or cumulative construction progress in its April 2014 Monthly Report. The PMOC is aware that the contractor accomplished a limited amount of construction in May 2014, however, which is reported below.

Construction Progress: The CH057A contractor continued to prepare submittals, apply for permits, mobilize, perform surveys, abate lead paint at existing signal bridges and catenary poles, and install survey prisms to monitor potential track movement. Additionally, the contractor started and completed water main work for the fire standpipe at Honeywell St., excavated the foundation and installed re-bar for new signal bridge 24, and demolished existing signal bridge 12 and catenary pole B-922.

#### **Railroad Force Account:**

**FHA01 – Harold Stage 1 Amtrak:** As of April 30, 2014, the Estimate at Completion for FHA01 remained at \$18,824,861. The MTACC's forecast for Substantial Completion remained at February 25, 2016. Actual construction progress for April 2014 was 0.19% versus 0.52% planned. Cumulative progress through April 30, 2014, was 95.73% actual versus 95.97% planned.

Construction Progress: The Electric Traction Department continued to make limited catenary wire transfers at various locations in Harold Interlocking between Thomson Avenue and Sub 44.

**FHA02 – Harold Stage 2 Amtrak:** As of April 30, 2014, the Estimate at Completion for FHA02 remained at \$41,683,606. The MTACC's forecast for Substantial Completion remained the same at September 6, 2017. Actual construction progress for April 2014 was 1.86% versus 0.20% planned. Cumulative progress through April 30, 2014, was 80.13% actual versus 79.59% planned.

Construction Progress: Amtrak C&S personnel continued preparations for the installations and cutovers of the E34 and E35 signal bridges in Harold Interlocking.

**FHA03 – Harold Stage 3 Amtrak:** As of April 30, 2014, the Estimate at Completion for FHA03 remained at \$10,608,828. The initial phase of Stage 3 was completed during the summer of 2013 when Amtrak Force Account personnel reconstructed parts of Lines 2 and 4 in Harold Interlocking to allow the installation of a concrete track slab by the CQ031 contractor. This slab was installed early to facilitate the CH057A contractor to construct the Westbound Bypass Tunnel under Lines 2 and 4 at a later date. All construction for the initial phase of FHA03 was completed by late August 2013. Cumulative progress for phase 1 of Amtrak Stage 3 (through May 31, 2014) was 100.0% actual versus 100.0% planned.



Construction Progress: No additional construction has taken place for FHA03 since phase 1 was completed in August 2013.

**FQA65 – Loop Interlocking Amtrak:** As of April 30, 2014, the Estimate at Completion for FQA65 remained at \$33,163,652. The MTACC forecast for Substantial Completion is August 12, 2018. Actual construction progress was 2.70% versus 3.29% planned. Cumulative progress was 10.70% actual versus 11.88% planned.

Construction Progress: Amtrak C&S personnel continued to install signal trough and conduit in Loop Interlocking during May 2014.

**FHL01 – Harold Stage 1 LIRR:** As of April 30, 2014, the Estimate at Completion for FHL01 remained at \$20,804,621. The MTACC’s forecast for Substantial Completion remained at January 30, 2015. Actual construction progress was 0.0% versus 0.12% planned. Cumulative progress was 81.64% actual versus 81.76% planned.

Construction Progress: LIRR did not do any Stage 1 construction during May 2014.

**FHL02 – Harold Stage 2 LIRR:** As of April 30, 2014, the Estimate at Completion for FHL02 remained at \$71,189,359. The MTACC’s forecast for Substantial Completion remained at November 25, 2016. Actual construction progress was 0.64% versus 3.28% planned. Cumulative progress was 34.00% actual versus 40.84% planned.

Construction Progress: LIRR Signal personnel placed the “H6” CIL in its location and began “breakdown testing”, continued to make signal revisions and test at “H4” CIL, installed signal heads on new Signal Bridge 12, and completed final signal tests and revisions at new Point Interlocking, which was “cut-over” in late April 2014.

**FHL03 – Harold Stage 3 LIRR:** As of April 30, 2014, the MTACC has increased the total amount of the Estimate at Completion for FHL03 to \$63,564,951, which is comprised of \$37,099,271 of ESA funding and \$26,465,680 of Regional Investment funding (the MTACC only showed the Regional Investment portion of the EAC in its 1Q2014 Monthly Report). As with FHA03, the initial phase of FHL03 was completed during the summer outage of 2013 when LIRR personnel reconstructed portions of Lines 2 and 4 and installed 3 turnouts in Harold Interlocking when the CQ031 contractor installed the concrete track slab for the Westbound Bypass Tunnel. All construction progress for the initial phase of LIRR Stage 3 was completed by late September 2013. Cumulative progress for phase 1 of Stage 3 (through May 31, 2014) was 100.0% actual versus 100.0% planned.

Construction Progress: No additional construction for FHL03 has taken place since phase 1 was completed in September 2013.

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

##### **ESA Project Quality Manual (PQM):**

A Draft of Revision 7 to the PQM was prepared and sent to the PMOC for review in March 2014. The PMOC returned comments to the ESA Quality Manager that same month. The ESA Quality Manager has finalized Revision 7. It is now with MTACC Headquarters for final review and is expected to be officially issued in June 2014.

### **Submission of As-Builts:**

Most contractors are deficient in submitting their as-builts on time and in the proper format. The ESA Quality Manager planned to perform an audit/surveillance beginning in May 2014 on a combination of as-builts and closeouts. These audits/surveillances have been delayed due to other priorities and will be initiated in June 2014. Contracts to be covered are CH053, Cho54A, CQ032, CM004, CM014A, CM005, and CM013

### **CH053/CH054A Special Inspector Certifications:**

The MTACC Code Compliance Officer determined that the CH053/CH054A Contractor was using uncertified inspectors on Special Inspections (for field compaction tests) for the bridges it has installed and advised the Contractor to follow the New York State requirements. The ESA Quality Manager reported that the Contractor now has certified inspectors and the field compaction tests are being performed again. This item is closed.

## **2.0 SCHEDULE DATA**

ESA submitted its IPS #57 data date May 1, 2014 and its variance report. The IPS shows a Revenue Service Date of September 10, 2021 with one year of contingency.

The most important 90 day look-ahead deliverable for the project at this point is CM007 re-design process, with early design deliverables forecast for the end of May 2014 (note that this was not achieved). ESA stated that this effort is tracking on target. It should be also noted that the PMT has added the track work into the CM007 Contract. The rationale for PMT is to mitigate to an interface and access risk, however, the PMT has not provided a constructability review or any risk assessment of this decision.

The Table below shows the significant 90-day look-ahead milestones:

<b>Activity ID</b>	<b>Activity Name</b>	<b>Start</b>	<b>Finish</b>	<b>IPS-Contract</b>
CM012-Cavern-P1	CM007 60% Design		30-May-14	CM007
SUMFHA02-1540	Cutover - ZJ1/ZJ2 (747)		11-May-14	FHA02
FHL02.HT.57770	Complete HP1/HP2 Cable Pulls		11-May-14	FHL02
0700-95401	Complete Micro tunnel		16-june-14	CH053
FHL02.MS.00025	MS - Cutover H4 CIL(2D)		22-Jun-14	FHL02
SUMFHA02-1650	Install DN2 Switch (743B)		29-Jun-14	FHA02
CM014-B5005	CM014 Bid Due Date - Bid Opening		10-Jul-14	CM014B
FHL02.TK.325	Cut & Throw ML4		20-Jul-14	FHL02
MTACC-1230	CH057 Advertise Date	21-Jul-14		CH057
FHL01-1010	Cut & Throw ML2/4		3-Aug-14	FHL01
FHL02.TK.57760	Cut & Throw ML2		3-Aug-14	FHL02
CM014-B5005	CM014 Bid Due Date - Bid Opening		08-Aug-14	CM014B

### **Project Critical Path**

The project critical path goes through contracts CM005, CM007, CS179 (IST), then through Operational Readiness. ESA has awarded contract CS179 with NTP of March 31, 2014. Contract CS179 consists of a base and multiple options which will be exercised between the fall of 2015 and the fall of 2017. CS179 has initiated project start-up activities and commenced initial field surveys and engineering work for the base contract in May 2014. For CM005, Milestone #2 (Complete North Half of EB Cavern Slab - MS 2 (July 6, 2014)) is trending behind original plan and Milestone #4 (Substantial Completion – MS 4 February 02, 2016) The EB GCT1&2, vertical slab did not start as planned, and is trending behind the original plan.

Harold critical path goes through contracts CH058, FHL03, FHL04. The longest path in Harold is being driven by the 2016 long term outage; the H1/H2 CIL cutover is also important to overall progress in Harold.

**Schedule Contingency:** IPS#57 indicates that the ESA's RSD is September 10, 2021 with one year of contingency; however this update is based on a currently unapproved baseline. The PMOC recommends that the PMT produce a contingency draw-down plan to show how the contingency will be managed, as required by the SMP.

### **3.0 COST DATA**

**Funding:** The MTA funding request for the 2015 - 2019 Capital Program will be submitted to the NYS Capital Program Review Board (CPRB) in September 2014. ESA will need to obtain funding from the 2015-2019 Capital Program to award: all the options on the CS179 Contract Package; the CM007 Contract Package; the CQ033 Contract Package; and the CH058 Contract Package. Additionally, \$100 million will need to be funded by the MTA to cover the budget shortfall for the CM014B Contract Package, which was advertised in early May 2014. [REDACTED]

**Budget/Cost:** The ESA April 2014 Progress Report shows the total project progress was 52.4% vs. 53.7% planned (no change in Planned since previous month), against the Current Baseline Budget (CBB) and the construction progress as 49.8% vs. 51.6% planned (no change in Planned since previous month), based on invoiced amount. As of February 2014, the CBB was adjusted to a new baseline value of \$9.693 billion, but MTACC expects to finalize the number before the June 2014 CPOC meeting. ESA recognizes a range of possible costs, and \$9.693B is at the lowest point of that range. The current budget has a series of small contingencies on varying areas of possible cost however the PMOC believes that this scattered distribution of contingencies will make it difficult to manage the drawdowns. Although ESA reassigned values to each of the SCCs as part of their Re-plan, they have not demonstrated to the PMOC how the values were determined or that the structural problems in the SCC have been addressed. The PMOC has recommended that ESA re-evaluate its SCC structure going forward and establish a more properly aligned structure at the Re-plan to avoid such discrepancies.

MTACC has stated that the Re-plan Budget and Schedule for ESA will be finalized in time to present to the MTAC CPOC at the June 2014 meeting.

[REDACTED]

The MOD should have been seen as part of Contingency, but due a new and as of yet unexplained cost allocation system instituted by ESA costs are kept off of Contingency for unknown reasons. As part of the Re-Plan, ESA had said it was eliminating the Allocated for MODs category, but apparently has now reinstated it using a slightly different approach to MOD categories and appears to be pre-encumbering potential MODs. The PMOC will continue to request ESA provide an outline and the rationales for their proposed cost allocation and categorization schemes. [REDACTED]

**Change Orders/Budget Adjustments:** The PMT reported that over the last month, two (2) change orders each over \$100K were executed, with a net value of \$1.33M nearly evenly split between a Construction Change-and a change to the GEC.

#### 4.0 RISK MANAGEMENT

MTACC previously conducted a comprehensive four-day Risk Assessment Workshop for the remaining construction at Harold in March 2014, as a well as limited risk assessment for the remaining Manhattan/Systems Contracts in January 2014. In lieu of a full Programmatic Risk Assessment (which the PMOC recommended) MTACC decided to combine the results of the Manhattan/Systems and Harold Risk Workshops to determine total Program Risk. A meeting was held on April 30, 2014, to present the results of this effort. Results of the combined risk models were presented: For the schedule, the model indicated that there is an 80% probability of achieving RSD by August 2021, and a <1% chance of achieving the IPS date of March 2020. For the cost, the model indicated that there is an 80% probability that the total cost for the project would not exceed \$9,826M, which is \$133M more than the Re-plan number of \$9,693M. Given that the methodology for merging the results of the two separate risk assessments was not presented at the meeting, and the number of open questions that the PMOC has regarding the Manhattan/Systems Risk Workshop, the PMOC cannot attest to the validity of the presented results. At the request of the PMOC, MTACC's risk facilitator re-ran the risk model in May 2014, using maximum, deterministic values to replace the base uncertainties used in the previous running of the model and came up with November 2021 as the new RSD. In the PMOC's opinion, this date also appears to be unreasonably optimistic.

MTACC released a draft report for combined risk models used to simulate the programmatic risk assessment as mentioned above. The PMOC expressed its concern to MTACC that one of the top risks for the Manhattan/Systems work, interface and coordination risks, did not appear in the "tornado chart" listing the top risks.

MTACC is planning to conduct a package level risk assessment for the CM014B (GCT Finishes) in June 2014, two months after it plans to advertise the package. The PMOC has commented in the past about the timing of package level risk assessments, and the necessity to perform them before the packages are advertised for bid. MTACC has stated that they plan to perform a package level risk assessment for CM007 once the design is finalized, currently forecast for August 2014 .

## 5.0 ELPEP COMPLIANCE SUMMARY

The current status of each of the remaining main ELPEP components is summarized as follows:

- **Technical Capacity and Capability (TCC).** The PMOC had previously noted that a TCC review might be warranted given the significant personnel changes to many key upper management level positions, including the Program Executive that occurred in 4Q-2013 and 1Q-2014. The FTA has requested MTACC to update its TCC Plan in response to the FTA/PMOC comments that were generated in November 2013. At the March 31, 2014 ELPEP Quarterly Review Meeting, MTACC stated that the TCC Plan revisions will be completed upon finalization of the new ESA organization. As of May 31, 2014, the revised TCC Plan has not been submitted
- **Continuing ELPEP Compliance:** The following ELPEP components continue to need improvement or are deficient: Management Decision; Design Development; CCC Process and Results; Stakeholder Management; Issues Management; Procurement; Timely Decision Making; Risk-Informed Decision Making.

The PMOC notes that since June 2013, the ESA project has continued to be non-compliant with ELPEP, and is not meeting some of the more important requirements of the SMP and CMP sub-plans to the PMP. The PMOC's opinion is that this is a serious deficiency and needs to be resolved immediately. The PMOC's major areas of concern include:

- **Cost/Schedule Contingency:** ESA has not accurately calculated the schedule contingency utilization resulting from the repackaging of CM012R and the major procurement delays. ESA has also not addressed the need for utilizing project cost contingency to cover the budget shortfall.
- **Schedule Management Plan:** The ESA project is non-compliant with requirements for IPS Updating, Forecasting, and Schedule Contingency Management.
- **Cost Management Plan:** The ESA project is non-compliant with requirements for Cost Estimating, Contract Level EAC Forecasting, Project Level EAC Forecasting, Project Level EAC Forecast Validation, Monthly Update Process and MTACC Cost Contingency Management and Secondary Mitigation.

A workshop was held on February 27, 2014 to address the FTA and PMOC's concerns regarding ELPEP compliance. Although regularly scheduled cost review meetings have been held, ESA has only recently agreed to start holding regular schedule review meetings.

**Revisions to the ELPEP Document:** The FTA and MTACC had agreed to hold working meetings to progress development of a revised ELPEP. These meetings had been expected to start during 2Q2013 but were delayed pending agreement on how to proceed without the revised ESA cost and schedule baselines, which are needed to provide a comprehensive revision to the ELPEP document that will include the new cost and schedule contingency values. Although the MTA has not yet approved the current re-planned cost and schedule baselines, MTACC has stated that the schedule and budget to be presented to the MTA CPOC will not be significantly different than the current working budget and working IPS. With completion of MTACC's "equivalent" programmatic risk evaluation, the PMOC believes that MTACC should be in a position to address cost and schedule contingencies in the June 2014 time frame. The next

ELPEP Quarterly Review Meeting with MTACC, FTA-RII, SAS and ESA projects and the PMOC has been scheduled for June 19, 2014.

**MTACC Project Procedures Audit Related to ELPEP:** At the March 31, 2014 Quarterly ELPEP Compliance Meeting, MTACC advised that they have completed their audit of 22 ELPEP-related project procedures and the CMP, SMP and RMP Sub-Plans for ELPEP compliance. Audit findings have been reviewed by the ESA project, revised language has been approved for the CMP, SMP and RMP and the MTACC Quality Department will verify incorporation of the revised language. MTACC planned to audit 11 additional Project Procedures in April 2014 however this target was not met. MTACC is now forecasting conducting these audits in the June/July 2014 time frame.

## **6.0 SAFETY AND SECURITY**

Project safety statistics for lost time accidents on active construction contracts continue to trend above the Bureau of Labor Statistics (BLS) national average at 2.22 vs. 1.70 lost time accidents per 200,000 hours. This average has remained fairly constant since November 2013. The PMT performed safety assessments during the 1Q 2014 which are currently being finalized, and continues to track trends on daily hazard logs.

The PMT did not report any significant security issues during May 2014.

## **7.0 ISSUES AND RECOMMENDATIONS**

**Design:** The PMOC remains concerned that the GEC and PMT continue to consistently miss their target dates for remaining design activities on the project. The level of effort for the GEC will increase significantly given the development of the CM007 Contract Package and the remaining design in the CH058 package (due to scope shifts and restructuring of the package), making the timely achievement of design milestones even more critical in maintaining the project schedule. The PMOC continues to recommend that the PMT develop a tracking sheet with firm dates for interim milestones as a tool to augment the design management process.

**Procurement:** The lack of stability in the contracting strategy and Contract Packaging Plan remains a concern. The PMT continued to shift and split scope among different packages during 1Q2014, making it difficult to fully understand the impact of these changes to the overall ESA Project. An updated draft Contract Packaging Plan (revision 10.0) was submitted on March 28, 2014. ESA should adhere to it without shifting scope for the remainder of the project.

The PMOC remains concerned about the continuing scope shift among existing and future Contract packages. The latest major shift is the moving of track work out of the CS284 package (which included track and signal work) into the CM007 package, with a rationale that this shift would help mitigate schedule pressure on the CM007 Contract. This scope shift was presented to the Executive Change Review Committee (ECRC) in May 2014, but was not presented to the CCC as a voting item. The PMOC reviewed the presentation and observed that it was biased towards the benefits of this scope shift; with no discussion of the possible negative impacts of the shift. As such, the PMOC is concerned that this change is going forward without having the benefits of a detailed voting review by the CCC, which should have included a discussion of the pros and cons of this shift, along with the detailed cost and schedule impacts associate with the shift. The ESA PMT is also still considering moving south and north back-of-house work that is currently in CM007, into the existing CM005 and CM006 packages.

**Contract CM014A:** The PMOC continues to recommend that MTA direct MNR to prioritize removal/relocation of the obstructing utilities to the new ramp, stairs and escalator in the south concourse area. Continuing deferral of this work by MNR could impede the ability to do this work in the upcoming CM014-B Contract.

**Contract CM013:** The Project Office continues to advise the PMOC regarding the partial Stop-Work-Order issued by the Code Compliance Unit (CCU). The CCU must still hire a new independent engineer to sign off on the coring results of the pneumatically applied concrete mockup. The physical work is complete but this issue is preventing official sign-off on both substantial and final completion. This impasse is not affecting either current or upcoming contracts.

**Contract CQ032:** The PMOC's previous concern about the gap between actual and planned construction progress was alleviated in April 2014 when the MTACC and the CQ032 contractor informally agreed upon a re-baselined schedule. Subsequently, for the first time, the MTACC's April 2014 Monthly Report reflected that cumulative actual construction progress is out-pacing planned (56.72% actual vs. 55.21% planned). Although the documentation is not complete, the PMOC is confident that the parties are in agreement and that field construction should continue at its planned pace. Therefore, the PMOC will no longer maintain its concern unless it becomes apparent in the future that the contractor will suffer a relapse.

**Contracts CH053/54A:** The PMOC remains concerned that the CH053/CH054A contracts continue to have a potential for additional construction delays and increased cost due to their high degree of dependence upon the railroads' Force Account support, which has been historically erratic. Although the Contractor continues to progress its construction as rapidly as possible, important tasks continue to be postponed due to lack of proper Force Account protection. The ESA PMT is responsible for allocating a fixed amount of railroad personnel to the various Contracts, but continues to place lower priority on CH053/CH054A tasks than for other contracts. To avoid further schedule slippage, the PMOC recommends that the ESA PMT place a greater priority on the CH053/CH054A work tasks.

**Railroad Force Account:** Presently, the LIRR remains on schedule to begin its 2014 construction, which includes installation of 9 turnouts, cuts and throws of ML2 and ML4 Tracks in Harold Interlocking, cutover of the signal power separation system, as well as cutover of 2 signal Central Instrument Locations (CILs) in Harold Interlocking. This work is scheduled to start with the cut and throw of ML4 Track on the weekend of July 18-20, 2014. The PMOC maintains its concern about LIRR's short range planning capability (its development of Site Specific Work Plans – SSWPs) to keep pace with the aggressive track work schedule needed to install the turnouts and make the track realignments. The PMOC is aware that the LIRR did not complete its first two SSWPs by May 31, 2014, as it had planned, which has increased the PMOC's concern. Since all of the track work included in this year's program is scheduled to be complete by the end of October 2014 (3 months of construction), the PMOC recommends that the LIRR complete its first two SSWPs by June 30, 2014, and begin development of all of the rest of the SSWPs during June 2014.

**Project Funding/Budget:** As stated in the Risk Management Section below, the PMOC believes that funding presents a significant risk to the project. In the February 2014 Report, ESA changed its Budget to \$9.693BM, up from \$8.245B. [REDACTED]

[REDACTED] The Re-Plan Budget

remains significantly below the IEC's projection of \$9,981M and the PMOC's \$10,309M [REDACTED] at a medium degree of mitigation. The PMOC's projected cost forecast for the low degree of mitigation is an additional \$146M. The FTA TRO 2 has stated it supports the PMOC's Low Level of Mitigation number.

ESA has stated its Budget is Preliminary and will be finalized in time for approval at the June 2014 MTA CPOC meeting. MTACC has not made it clear at this point how it will reconcile the difference between its cost estimate for the project and that of the IEC and PMOC; however based on discussions with MTACC, it appears that no reconciliation will occur, but rather a deterministic number will be put forth for approval by the CPOC. The recent Manhattan Systems and Harold Risk Assessment projects a cost of \$133M higher than that used by ESA in its latest budget, and how that will be taken into account has not been provided by ESA. [REDACTED]

[REDACTED] The funding plan to ensure adequate funds are in place to award scheduled Contracts is contingent upon adequate funding being made available in the MTA's 2015-2019 Capital Program, and the PMOC believes that funding delays may affect future contract awards.

**Project Schedule:** The MTA's Independent Engineering Consultant (IEC) engaged a systems specialist via the Supplemental Independent Reviewer to review the current Integrated Systems Testing (IST) and produce an independent schedule for IST activities. The PMOC was invited to a presentation of the preliminary findings on May 29, 2014. This review uncovered several significant flaws and inconsistencies in the project's IST schedule related to IST schedule logic and duration of uninterrupted access for completion of the IST process. Based on these findings, the independent consultant's IST schedule shows the start of IST activities five months later than project schedule; and IST activities ending 21.5 months beyond the project's forecast IST duration. Inserting this independent IST schedule into the current project baseline will push the current RSD of September 2021 considerably further out to approximately May 2023. The PMOC notes that findings of the independent consultant are consistent with previous findings of the PMOC regarding the validity of the IST schedule. While the findings are categorized as preliminary, the PMOC strongly recommends that the ESA project re-examine its IST schedule before finalizing the project baseline for a presentation to the MTA CPOC in June 2014.

The PMT presented its re-planned Project Schedule in a meeting with the FTA/PMOC/MTACC/ and MTA's Office of Construction Oversight (OCO) in December 2013. The RSDs developed by the PMOC, IEC, and the Supplemental Independent Reviewer (SIR) are at least a year or more beyond the PMT's date presented at the MTA CPOC meeting in January 2014. MTACC has still not made it clear at this point how or if it will reconcile the differences between its schedule forecast for the project, and that of the IEC and PMOC, nor how it will incorporate the results of its combined risk assessments for Manhattan/Systems and Harold into the base schedule. MTACC is stating that at this point, it is planning to finalize the schedule in time to present to the MTA CPOC in June 2014.

**Risk Management:** The PMOC is concerned about the continuing failure to fully follow the risk management processes in the Risk Management Plan (RMP). The last monthly risk meeting with the PMOC was held in July 2013. The PMT has also not provided updated risk registers on a regular basis as required. This in combination with lack of regular risk meetings with PMOC



makes it difficult to determine the effectiveness of the ESA Risk Management process and its integration into the Program. In addition, the PMOC has seen no evidence that the results of the integrated Manhattan/Systems and Harold Risk assessments have been taken into account as ESA finalizes its schedule and budget.

Funding availability continues to be a major risk on the ESA project, and is a significant concern. Funding uncertainty has resulted in: the PMT's delay of CM007 contract award until July 2015 with a limited NTP due to budget constraints; and the restructuring of the CS179 Contract by splitting it into a base contract with seven options, based predominately on access restraints imposed by the CM005; CM006; CM007; and CM014B packages, which will significantly increase the interface risks. This segmentation of construction packages has resulted in 63 inter contract interfaces and milestones. The probability of successfully achieving of all of them is marginal in the PMOC's opinion, and leads to the possibility of a ripple effect of delays and coordination difficulties between contracts. There is little room for contractors to make up time. Managing inter-contract handoffs and interfaces will be challenging. Schedule risks will be exacerbated if funding is not in place to award the options in the CS179 Contract Package as planned. The PMOC remains concerned about the "coordination risk" retained by MTACC on the completion of the work in Manhattan, especially with regard to the construction and testing interface management for the systems work. When combined with the extensive scoping re-configuration changes associated with the Harold Interlocking work, the PMOC believes that this will create significant changes to the overall project risk profile.

## APPENDIX A -- ACRONYMS

AFI	Allowance for Indeterminates
ARRA	American Recovery and Reinvestment Act
BA	Budget Adjustment
CBB	Current Baseline Budget
C&S	Communication and Signals
CCC	Change Control Committee
CCM	Consultant Construction Manager
CM	ESA Construction Manager assigned to each contract
CMP	Cost Management Plan
CPOC	Capital Program Oversight Committee
CR	Candidate Revision
CSSR	Contact Status Summary Report
CIL	Central Instrument Location
CPRB	Capital Program Review Board
CPP	Contract Packaging Plan
DCB	Detailed Cost Breakdown
ELPEP	Enterprise Level Project Execution Plan
EPC	Engineering-Procurement-Construction
ERT	East River Tunnel
ESA	East Side Access
ET	Electric Traction
FA	Force Account
FAMP	Force Account Management Plan
FHACS	“F” Harold Alternate Control System
FFGA	Full Funding Grant Agreement
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GCT	Grand Central Terminal
GEC	General Engineering Consultant
HTSCS	Harold Tower Supervisory Control System
IEC	Independent Engineering Consultant (to MTA)

IFB	Invitation for Bid
IPS	Integrated Project Schedule
IST	Integrated System Testing
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
NYCDEP	New York City Department of Environmental Protection
NYCDOB	New York City Department of Buildings
NYCT	New York City Transit
NYSPTSB	New York State Public Transportation Safety Board
OCO	Office of Construction Oversight (MTA)
PAC	Pneumatically Applied Concrete
PEP	Project Execution Plan
PMOC	Project Management Oversight Contractor (Urban Engineers)
PMP	Project Management Plan
PMT	ESA Project Management Team
PQM	Project Quality Manual
PWE	Project Working Estimate
QA	Quality Assurance
RAMP	Real Estate Acquisition Management Plan
RFP	Request for Proposal
RMCP	Risk Mitigation Capacity Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROW	Right of Way
RSD	Revenue Service Date
SC	Substantial Completion
SCC	Standard Cost Category

SIR	Supplemental Independent Reviewer
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
WBY	Westbound Bypass Tunnel

**APPENDIX B – TABLES**

**Table 1: 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	September 2021 (F)	April 2022(F)**
Revenue Service	December 2013	September 2021 (F)	April 2022 (F)

\* Source – Grantee forecast Revenue Operations Date per information presented to PMOC in December 2013

\*\*Source –Based on PMOC 2013 schedule trending analysis representing a high degree of mitigation

**Table 2- Project Budget/Cost Table**

	FFGA			MTA's Current Baseline Budget CBB	Expenditures		
	(Millions)	(% of Grand Total Cost)	Obligated	(Millions)	(% of Grand Total Cost)	(Millions)	(% of CBB)
<b>Grand Total Cost</b>	<b>\$7,386</b>	<b>100.00%</b>	<b>\$4,724</b>	<b>\$10,729</b>	<b>100.00%</b>	<b>\$5,569.90</b>	<b>51.2%</b>
Financing Cost	\$1,036	14.00%	\$617	\$1,036	9.66%	617.6	59.6%
Total Project Cost	\$6,350*	86.00%	\$4,107	\$9,693	90.34%	\$4,952.30	50.3%
<b>Federal Share</b>	<b>\$2,683</b>	<b>36.30%</b>	<b>\$1,148</b>	<b>\$2,699</b>	<b>25.16%</b>	<b>\$1,946.00</b>	<b>72.0%</b>
5309 New Starts share	\$2,632	35.60%	\$1,098	\$2,436.60	22.71%	\$1,688.50	69.1%
Non New Starts grants	\$51	0.70%	\$50	\$67	0.62%	\$62.10	92.7%
ARRA	0	0.00%	0	\$195.40	1.82%	195.4	100.0%
<b>Local Share</b>	<b>\$3,667</b>	<b>49.60%</b>	<b>\$2,959</b>	<b>\$6,994</b>	<b>65.19%</b>	<b>\$3,006.30</b>	<b>42.0%</b>

**Table 3: Comparison of Standard Cost Categories: FFGA vs. CBB**

Standard Cost Category (SCC) No.	FFGA SCC baseline (YOE \$) M	July 2, 2012 Re-baseline (YOE \$)	February 2014 Re-Plan (YOE\$) M	March 2014 SSC (YOE \$) M	April 2014 SSC (YOE \$) M	Apr 2014 % of Re-Baseline	Mar '14 to Apr '14 Change \$M	CBB Variance from FFGA %
10	1,989	2,943	3,363	3,363	3,363	100.00%	0	69.08%
20	1,169	1,514	2,169	2,169	2,169	143.26%	0	85.54%
30	356	388	502	502	502	100.00%	0	41.01%
40	205	488	517	517	517	105.94%	0	152.20%
50	619	698	616	616	616	100.00%	0	-0.48%
60	165	204	204	204	204	100.00%	0	23.64%
70	957	674	34	34	34	100.00%	0	-96.45%
80	1,184	1,649	1,922	1,922	1,922	116.56%	0	62.33%
█	█	█	█	█	█	█	█	█
<b>Subtotal</b>	<b>6,813</b>	<b>8,708</b>	<b>9,693</b>	<b>9,693</b>	<b>9,693</b>	<b>111.31%</b>	<b>0</b>	<b>42.27%</b>
100	1,036	1,116	1,036	1,036	1,036	92.83%	0	0.00%
<b>Total Project Cost (10 – 100)</b>	<b>7,849</b>	<b>9,824</b>	<b>10,729</b>	<b>10,729</b>	<b>10,729</b>	<b>109.21%</b>	<b>0</b>	<b>36.69%</b>

**Table 4 – ESA Core Accountability Items**

<b>Project Status:</b>		<b>Original at FFGA</b>	<b>Current*</b>	<b>ELPEP **</b>
<b>Cost</b>	Cost Estimate	\$7.368B	\$10.156B	\$8.119B
<b>Schedule</b>	RSD	December 31, 2013	September 2021	April 30, 2018
<b>Total Project Percent Complete</b>	Based on Expenditures	52.4 ***		
	Based on Earned Value	NA		
<b>Major Issue</b>		<b>Status</b>	<b>Comments</b>	
Impact of CM012R solicitation cancellation, scope repackaging and re-bidding.		Scope from CM012R (Manhattan Structures 2) solicitation was split among existing and three new contract packages (CM005; CM006; CM007). CM005 and CM006 packages have been awarded and are underway. Design work for a hybrid design (pre-cast and cast in place concrete) based on input from RFEI is underway for CM007.	The PMT continues working on developing the remaining contract package (CM007). A preliminary cost estimate for this package has been developed, however this estimate will change with the decision to add the track work that was previously in the CS284.	
Major Procurements Delays		The CS179 package was awarded in March 2014, almost two years after proposals were received. A recommendation for award of VS086 (Signal Equipment) was also made to the MTA Board in January 2014, but award has not been made as of the end of April 2014. CM014B was advertised in May 2014. Advertise date for the CS084 (Traction Power) Package is now forecast for June 2014.	Partial NTP for the CM007 Package cannot be made before July 2015 due to budget constraints. ESA changed the structure of the CS179 Package to include a base contract and seven options. The ESA PMT has also stated that it only has funding in place to award the base contract for CS179 at present.	
Project Schedule		ESA does not have an official baseline schedule as of May 2014. The latest IPS update, shows an RSD in September 2021 (with 12 months of contingency/risk included).	PMOC does not agree with the critical path logic in the current base schedule (major difference is how IST is scheduled). This schedule has not been approved by the MTA CPOC. The PMOC is also concerned that the results of a program level risk assessment incorporating Manhattan/System and Harold do not appear to be taken into	

		account in the current re-planned project baseline
Integrated Systems Testing	The MTA's Independent Engineering Consultant (IEC) engaged a systems specialist to review the current Integrated Systems Testing (IST) and produce an independent schedule for IST activities. Findings led to IST schedule shows the start of IST activities five months later than project schedule; and IST activities ending 21.5 months beyond the project's IST duration.	The PMOC notes that findings of the independent consultant are consistent with previous findings of the PMOC regarding the validity of the IST schedule. Inserting this independent IST schedule into the current project baseline will push the current project RSD of September 2021 considerably further out to approximately May 2023 .

\* Current Budget has not been formally approved by MTA CPOC \*\* 2010 Enterprise Level Project Execution Plan (ELPEP) reflecting medium level of risk mitigation, excluding financing cost of \$1,116 million. ELPEP is to be updated.

\*\*\* Expenditure percentage based on dividing ESA Invoiced" figure by "Current Baseline Budget" figure excluding Rolling Stock Reserve.