

COMPREHENSIVE MONTHLY REPORT

September 2012

**Dulles Corridor Metrorail Project
Extension to Wiehle Avenue**
Metropolitan Washington Airports Authority
Washington, DC

October 23, 2012

PMOC Contract Number: DTFT60-09-D-00016

Task Order Number: 002, **Project Number:** DC-27-5142, **Work Order No.** 03

OPs Referenced: 01, 25

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PMOC Lead: [REDACTED]

Length of Time PMOC Assigned to Project: 11.5 years

Length of Time PMOC Lead Assigned to Project: 4.0 years

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EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *October 10, 2012* to conduct a monthly progress meeting for work performed in *September 2012*. The full time on-site PMOC attended various project meetings and site tours throughout this reporting period. Additional information for this report was obtained from MWAA during the first and second weeks of *October 2012*. Future PMOC monthly progress meetings are planned to occur during the first week of each month.

1. Project Description

MWAA, in cooperation with the Washington Metropolitan Area Transit Authority (WMATA), proposes to implement a 23.1-mile rapid transit system in the Dulles Corridor of Northern Virginia. The proposed corridor follows the alignment of the Dulles International Airport Access Highway (DIAAH) and the Dulles Toll Road within Fairfax County, and the Dulles Greenway, a private toll road in Loudoun County. The Project (Initial Operating Segment) undertakes the construction of the initial 11.7-miles of the rail project from the existing Metrorail Orange Line just east of the West Falls Church (WFC) Station to a station to be constructed at Wiehle Avenue with a total project cost of \$3.142 billion. Included in the Project are five new stations (Tysons East, Tysons Central 123, Tysons Central 7, Tysons West and Wiehle Avenue), improvements to the existing yard at WFC, and tail tracks beyond the Wiehle Avenue station. The procurement of sixty-four new rail cars is also included the Project. Based on the Full Funding Grant Agreement (FFGA), the Revenue Service Date (RSD) is December 1, 2014. The Federal New Starts share is \$900 million, along with \$75 million in Surface Transportation Program (STP) funds, for the extension to Wiehle Avenue. Through Federal fiscal year (FY) 2012, Congress has appropriated \$611,124,364 in Section 5309 New Starts funds for the Project. The FTA has awarded \$520,282,364 in Section 5309 New Starts and \$75,000,000 in STP funds to date for the Project.

2. Project Status Summary

The FTA and PMOC met with MWAA on *October 10, 2012* to conduct a monthly progress review meeting and supplemental information was obtained from MWAA during the *following week*. The status of information is as of *September 30, 2012*, unless otherwise noted.

- **Real estate acquisition** continues to keep ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels. Of the *103* parcel packages required, 99 have been acquired.

Rail car Procurement - Monthly Progress Review Meeting No. 25 between WMATA and Kawasaki on the 7000 Series railcars was held on October 11, 2012, and the WMATA/PMOC Update Meeting was held on *October 16, 2012*. The Preliminary Design Review (PDR) phase was completed on March 16, 2012 compared to the mitigation schedule completion date of January 18, 2012. The current Final Design Review (FDR) completion date is *November 8, 2012* compared to the mitigation schedule completion date of March 22, 2012, a slippage of 227 calendar days. FDR meetings have been completed with the

exception of train wayside equipment. *A design working session for train wayside equipment was held on October 2, 2012.* On June 27, 2012, Kawasaki introduced a new supplier for this system to WMATA. The new supplier is Ansaldo, which is also the supplier of ATC; therefore, WMATA does not foresee any major problems. This change in supplier *resulted in the final FDR meeting being held on October 2, 2012 with the FDR completion now being November 8, 2012.* The approved FDR Contract Deliverables Requirements List (CDRLs) is at 51.4% completed, 41.8% in progress (*i.e. either submitted or being revised*) and 6.8% open.

On October 20, 2011, WMATA approved Kawasaki's Master Program Schedule (Baseline). WMATA subsequently approved Kawasaki's Mitigation Schedule, due to the March 2011 tsunami/earthquake, on December 21, 2011; *it has a June 12, 2015 conditional acceptance date for the 64th railcar, which is more than six months beyond the FFGA's RSD date.* MWAA informed the FTA's Regional Administrator for Region III of the delay by letter on January 31, 2012.

- **Design progress** - Overall project design remains at 99% complete as of the end of *September 2012.* The Tysons West Kiss & Ride Lot 100% design *approval and DGS permit are expected on October 19, 2012.* DTP's design submission for a code modification package for the Wiehle Avenue pedestrian bridge and pavilion to add an emergency call station has been accepted. Related architectural matters remain to be resolved, and then the design will be submitted for permitting.
- **MWAA issued a NTP** on January 24, 2011 to an independent third-party consultant, Battelle, to review Alstom's safety analysis of their Generation 4 track circuit modules proposed for use on the Dulles Extension. *Battelle issued a letter dated September 25, 2012 stating that "As of September 24, 2012, Battelle completed the audit/review of all documentation provided throughout this program...all issues identified by Battelle throughout this assessment have been adequately resolved and closed."* MWAA reported that Battelle submitted the Draft Final Report on October 5, 2012 and that MWAA and WMATA would be reviewing the Report in advance of the planned Battelle presentation scheduled for October 18, 2012. WMATA has stated that they will not approve the interlocking into their system and the K-Line cutover cannot proceed until Battelle addresses WMATA's remaining concerns regarding the Generation 4 track circuit modules. The Project had been planning a September 15, 2012 cutover, *but this will now be delayed until early 2013 to address other K-Line access and Dynamic Train Test issues.*
- **Construction progress** is broken into two components: utility relocation (UR), which *remains at 99% complete,* and design-build (DB) construction, which is approximately 82% complete. Significant accomplishments for *September* included, continued progress on barrier walls, track-bed, platform, column, mezzanine and precast panel work on all five stations; both ballasted and direct fixation trackwork installation on the Tysons West Guideway, and along the DCR and DIAAH and Wiehle Avenue tail tracks; and significant progress with the construction of Traction Power Substations to include energization of *seven* of eleven substations, Communications and Automatic Train Control Equipment Rooms and delivery and installation of equipment. The Project also continued to make significant

progress on the K-Line tie-in ATC static *and dynamic train testing and the N-Line ATC, Communications and Traction Power Substation Testing.*

CONSTRUCTION PROGRESS THROUGH SEPTEMBER 2012			
GUIDEWAYS/ TRACKWAYS and SYSTEMS	% COMPLETE	STATIONS	% COMPLETE
Tysons East Guideway	100%	Tysons East	60%
Tysons West Guideway	99%	Tysons Central 123	55%
O-3 (DCR) Trackway	99%	Tysons Central 7	42%
O-9 (DIAAH) Trackway	99%	Tysons West	44%
Systems	25%	Wiehle Avenue	68%
Trackwork	73%		

- **The DTP Schedule Update** with a data date of *August 25, 2012* “Mitigation Schedule” showed a *-8 calendar day variance to the planned August 29, 2013 SSCD as compared to the -5 calendar day variance* reflected in the *July 25, 2012* update.
- **With regard to the West Falls Church Yard (WFCY) completion date**, DTP’s schedule update of *August 25, 2012* again reflects a targeted WFCY completion date of *January 30, 2014*, which represents a *-41 calendar day variance to the planned December 20, 2013* completion date. MWAA reported during *the October Monthly Meeting* that discussions and efforts *continue* between MWAA and DTP to mitigate the delays. *DTP’s September 25, 2012 schedule update reflects a full recovery of the negative float. However, this schedule update has not yet been analyzed.*
- **Budget** status as of *August 25, 2012* indicates that *\$2,110,573,092 (75%, excluding the remaining contingency and finance charges)* has been expended of the *\$3,142,471,634* budget total. MWAA reports *\$283,718,726* of the available contingency for the first *nine* contingency milestones *has* been drawn down to date with a remaining contingency balance of *\$3,519,541* available through the *ninth* contingency phase. The current estimate of the contingency available at the end of construction is *\$11.3M*. The federal portion of the Allowance Items recommended for award and yet to be transferred to the Firm Fixed Price is estimated to be *\$45.75 million* over budget. During the June monthly meeting, MWAA agreed to incorporate the budget overrun. This amount has been added to MWAA’s Contingency Obligation Table. *With the completion of the award of all contracts for Allowance Items, \$32.22M of the original FFGA amount of \$77.47M budgeted for Indexed Commodity Escalation has been transferred to the Firm Fixed Price. A portion of the balance of the Indexed Commodity Escalation Budget of \$45.25M can be transferred to Project Contingency.*
- MWAA’s estimate of the **Earned Value** for the Project through *August* is *79.8%*.

- **Risk** - MWAA submitted RCMP Rev. 3 to the FTA for approval by letter dated March 28, 2012. The FTA approved the RCMP on April 13, 2012. In June 2012, MWAA updated the Risk Register. This document and a recommendation to update the Top Ten Risks were forwarded to the FTA and the PMOC for review on August 2012. FTA, the PMOC and MWAA discussed this issue during the PMOC's September monthly site visit. The PMOC provided review comments and a modified Top Ten List that will be reviewed by MWAA. *On September 30, 2012, MWAA issued a revised list of Top Ten Risks, which is under review.*
- **The Full Time Equivalent (FTE) estimated total for September is 1,447, which is a decrease of seventeen from the August actual of 1,464.** A fluctuation is to be expected with the winding down of design and civil construction and the ramping up of systems installation and testing.

- **Core Accountability Items**

FFGA-MWAA Core Accountability Items			
Project Status:		Original at FFGA:	Current Estimate*:
Cost	Cost Estimate	\$3.142B	\$3.142B
Contingency	Unallocated Contingency		
	Total Contingency (Allocated plus Unallocated)	\$297.76M	\$11.31M
Schedule	Revenue Service Date	December 1, 2014	January 7, 2014***
Total Project Percent Complete			
		Based on Expenditures**	75%
		Based on Earned Value	79.8%
Major Issue	Status	Comments/Action/Planned Action	
Concurrent Non-Project Activities (CNPA)	Project Partners have added activities to the Project that may not be part of the FFGA-funded scope of work.	The FTA, PMOC and MWAA have met to review their respective lists of CNPAs; MWAA submitted its latest tabulation via Letter No. 07222 dated August 10, 2012. MWAA and the FTA/PMOC discussed this tabulation following the September 6 monthly meeting.	
Contingency	Overall Project Contingency level may be insufficient.	MWAA acknowledges a \$71.8 million in available Finance Charges savings that could be added to the contingency (official transfer at end of year). FTA has asked MWAA to review the "Indexed Commodity Escalation" that may result in approximately \$30 million in savings.	
Date of Next Quarterly Meeting:		November 19, 2012	

Note: * Through August 2012

** Excluding remaining contingency and finance charges

*** Contingent upon WFCY not needing to be complete

3. PMOC's Assessment of Project Status

To address potential budget overruns caused in part by scope of work issues, the PMOC concludes that MWAA needs to replenish the Project contingency and actively pursue items that may be additional scope (non-FFGA) and billed to the responsible parties. It is the PMOC's opinion that the change orders for WMATA-requested Emergency Trip Station (ETS) and TPSS Remote Monitoring systems are outside MWAA's Intergovernmental Agreement with WMATA, and should be funded outside the FTA project. The FTA/PMOC and MWAA met on September 6 to discuss MWAA's August 10 re-tabulation of the list of potential Concurrent Non-Project Activities (CNPAs). The items that are not part of the FFGA Project scope could provide a source of funds to replenish the Project Contingency.

The estimated cost overruns of the Allowance Items \$146.2 million, of which \$86.6 million has been funded through Phase 8 of the contingency drawdown schedule, \$45.6 million, has been obligated in Phases 9-12 *plus \$14.0 million that will be obligated in the fourth quarter of 2012*) previously indicated that there was a need to replenish the project contingency. In July 2012, MWAA transferred \$71.8 million in savings from the Finance Charges to Contingency to address this shortfall. In addition, it has been agreed that all future change orders will be discussed and agreed upon before payment is made using FFGA funds. FTA requested MWAA to review the balance of Commodity Escalation funds to determine if any surplus could be used for Contingency, if needed.

The Project continues working according to an agreed "Mitigation Schedule", authorized by MWAA's November 1, 2011 Directive Letter. The mitigation schedule with a data date of *August 25, 2012* reflected a -8 calendar variance to the contract schedule reflecting an SSCD of *September 6, 2013*. Associated cost negotiations and settlement language associated with RFCs 160 and 161 (remote monitoring) were completed on June 15, 2012, but the changes have *still* not yet been officially approved.

DTP has incorporated the West Falls Church Yard construction into the mitigation schedule with a completion date of December 20, 2013. DTP's *August 25, 2012* schedule update reflects a -41 day variance to this completion date. MWAA and DTP are actively working toward mitigation of the delay and the contractors in the field are now fully engaged in the construction efforts and, therefore, MWAA anticipates that the negative float will be recovered in the coming months. *DTP's September 25, 2012 schedule update reflects a full recovery of the negative float. However, this schedule update has not yet been analyzed.* It remains the PMOC's opinion that the Project will be in revenue service within the FFGA specified date of December 1, 2014.

Kawasaki's Mitigation Schedule based on the impacts of the March 2011 tsunami/earthquake forecasts a conditional acceptance date of the 64th DCMP rail cars on June 12, 2015. Final Design Reviews (FDR) continue to lag, but in order to mitigate the delay in FDR completion, Kawasaki and WMATA have undertaken design validation reviews and Kawasaki is manufacturing the prototype cars at risk in Japan. All the final design review meetings have been held and the completion of the submittal of the final design documentation is anticipated by November 8, 2012.

MAIN REPORT

1. Grantee's Capabilities and Approach

a. Technical Capacity and Capability

The PMOC prepared a Spot Report of Grantee Technical Capacity and Capability dated January 10, 2008 as part of the PMOC's effort to evaluate the Grantee's readiness to enter Final Design. The conclusion was that the MWAA project staff assigned to the Project was qualified. However, the MWAA direct staff was very thin with many project responsibilities assigned to MWAA's consultant team, Project Management Support Services (PMSS) team. The PMOC recommended that the Grantee add several staff positions and that reporting protocols be enhanced to ensure important project status information is shared in a timely manner with the Federal Transit Administration (FTA) and the PMOC. MWAA has adopted the recommendations and augmented their staff.

In September 2009, MWAA reorganized by implementing an integrated project management organization consisting of MWAA and PMSS staff. However, the personnel involved remained the same as was evaluated in the January 2008 Technical Capacity and Capability Report with a few replacements and additions. It remains the PMOC's opinion that the staffing levels and technical capabilities are still adequate. MWAA hired Mr. William Kerrigan as Manager of Project QA/QC and Safety, replacing Jon Christensen, who retired. MWAA also hired Mr. Leo Himmel to serve as MWAA's Systems Testing Coordinator. In addition, MWAA has been reorganizing staff members into a new Testing and Start-up Group. MWAA has submitted a draft PMP, Version 8.0 to include the Testing and Commissioning stages of the project. The FTA transmitted comments to MWAA on July 11, 2012 requesting the final PMP by November 1, 2012.

Upon completion of the project, WMATA will become the operator of this extension to their system. WMATA personnel have been active participants in the project. The addition of WMATA personnel, particularly the Director of the Dulles Corridor Metrorail Project, has significantly improved the coordination between DTP, MWAA and WMATA with regard to scheduling outages and work. Over the past year, WMATA's Dulles Project Director has been staffing a Quality Assurance and Inspection Staff to keep pace with Project progress as it enters the Testing and Start-up Phase. In anticipation of the testing and commissioning of the Project, WMATA has hired a start-up technical advisor who has previous experience with WMATA

b. Project Controls

MWAA has procedures in place with regard to monitoring and controlling project scope, quality, schedule, cost, risk, and safety. It is the PMOC's observation that MWAA continues to monitor and control the project in accordance with their procedures.

- The Project Schedule was updated by DTP through *August* 2012. In this update DTP reported a possible loss of 8 calendar days to the SSCD forecasted by DTP to occur on

September 6, 2013. The WFCY schedule reflects a 41 calendar day loss. However, the WFCY activities and completion dates are only overlaid on the master mainline schedule, but not connected to the mainline critical path or SSCD. MWAA completed its schedule review of the schedule update with a data date of *August 25, 2012* on *September 20, 2012* and “*Accepted as Noted*” the schedule update, *to include the critical path.* See Section 4.a for additional information.

- MWAA continues to monitor expenditures to date and to update the estimate at completion. In July 2012, MWAA allocated \$26.24 million of the \$71.8 million in finance cost savings to contingency budget for Phases 1 through 9, resulting in a new total of \$287.24 million. MWAA allocated the remaining \$45.56 million to the contingency budget for Phases 10 through 12. *Through August 2012, MWAA has utilized \$283.72 million resulting in a remaining balance of \$3.52 million through contingency Phase 9.* With \$74.53 million in obligated contingency, this leaves a balance of \$7.79 million for Phases 10 through 12 and a grand total balance, as of the end of *August 2012*, of *\$11.31* million in remaining contingency. *With the completion of the award of all contracts for Allowance Items, \$32.22M of the original FFGA amount of \$77.47M budgeted for Indexed Commodity Escalation has been transferred to the Firm Fixed Price. A portion of the balance of the Indexed Commodity Escalation Budget of \$45.25M can be transferred to Project Contingency.*
- MWAA submitted the latest revision of the RCMP (Revision 3) to the FTA on March 28, 2012 and FTA letter of April 13, 2012 found it acceptable. For details, see section 3 “Project Management Plan and Sub-plans” below.
- The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data.

Through *September 2012*, there has been a cumulative total of *11,286,471* hours worked with six lost time accidents.

Revision 5 of the Safety and Security Certifiable Items List (SCIL) has been reviewed and all comments have been resolved. DTP’s final resubmission on November 18, 2011 was subsequently accepted by MWAA. The SCIL for K99 (West Falls Church Yard) was received by MWAA on December 21, 2011 separately from the entire SCIL for review and comment. Informal comments for the K99 SCIL were provided to DTP on February 14, 2012 and a meeting to discuss the comments was conducted on March 26, 2012. Follow-up comments were officially sent to DTP on May 11, 2012 and the comment resolution process continued. DTP and MWAA met again in June to refine the K99 SCIL. DTP submitted the SCIL Revision 6 to include the WFCY on August 6, 2012. *Comments were received from WMATA on September 21, 2012. MWAA expects to complete its review and return the SCIL to DTP by October 10, 2012 for incorporation of comments.*

DTP submitted revisions to the System Safety/Security Management Plan (SSMP) and DTP Procedures PPQ 01.06.02, Development and Maintenance of the Safety/Security

Certifiable Items List, and PPQ 01.06.03, Design Conformance Certification, that MWAA accepted on December 6, 2010. The FTA and PMOC met with MWAA, WMATA, and DTP on April 29, 2011 and again on January 27, 2012 to discuss development and status of a revised SSMP to integrate WMATA and MWAA systems testing, interface management and pre-revenue operations. SSMP Revision 9 was completed in March 2012 and MWAA and WMATA approved the revised SSMP on March 20 and 22, 2012, respectively. The PMOC reviewed the completed revision and provided comments to the FTA on April 5, 2012. The FTA accepted SSMP, Rev.9 dated March 2012 on April 13, 2012.

c. Compliance

It is the PMOC’s observation that MWAA continues to follow the required statutes, regulations and agreements.

MWAA submitted updates to the Amended Record of Decision Summary Mitigation Report to the FTA for the second quarter of 2012 on July 31, 2012.

2. Project Scope

a. Design Status

Except for the Tysons West Station Kiss and Ride Lot, DTP has completed design work with the receipt of permit approvals on all station designs, and Issued for Construction (IFC) drawings for all five stations have also been completed. The Tysons Kiss and Ride Lot Issued for Permit (IFP) drawings *were submitted* for permit on September 20, 2012 and *permit issuance is expected* by October 19, 2012. The systems design *is nearing completion as reflected below*.

ATC	Alstom	100%
	DTP	95%
TPS	Powell	100%
	DTP	95%
COMM	TWS	95%
	DTP	85%
SCADA	TWS	100%
	DTP	95%

Regarding Automatic Train Control, MWAA issued a NTP on January 24, 2011 to an independent third-party consultant, Battelle, to review Alstom’s safety analysis of their Generation 4 track circuit modules proposed for use on the Dulles Extension. MWAA reported during the July 10, 2012 monthly progress meeting that Battelle submitted its draft “Safety Analysis Review and Assessment” report to MWAA for review on June 29, 2012. DTP/Alstom and Battelle provided a presentation of the report to all partners on July 19, 2012. There were many open items of potential concern and MWAA, WMATA and the PMOC pressed Battelle and Alstom hard to expedite the closing of open items. WMATA

wrote letter No. 173 dated July 20, 2012 stating that “The presentation and draft report by Battelle do not satisfy WMATA’s expectations, leaving some unresolved issues...until we have received an affirmative report from Battelle...WMATA will not approve the interlocking into our system and the K-Line cutover cannot proceed.” Alstom and Battelle committed to expedite the necessary effort to address the concerns. *Subsequent to the commitment, Battelle issued a letter dated September 25, 2012 stating that “As of September 24, 2012, Battelle completed the audit/review of all documentation provided throughout this program...all issues identified by Battelle throughout this assessment have been adequately resolved and closed.” MWAA reported that Battelle submitted the Draft Final Report on October 5, 2012 and that MWAA and WMATA would be reviewing the Report in advance of the planned presentation by Battelle scheduled for October 18, 2012.*

b. Bidding and Construction Status

Through August 2012, DTP has awarded all of the thirty-seven Allowance subcontract packages. MWAA has processed \$421,236,504 worth of the \$437,278,511 federally funded Allowance Items Budget with an overrun of \$86,590,880. In addition, MWAA has Allowance Items recommended for Award, but not yet processed, worth \$145.0 million, which is an additional \$59.5 million over budget. The \$59.5 million does not include Installation of Public Art (C7) and Spare Parts (C11) since these are being procured outside the Allowance Items.

Utility relocation is 99% complete, and DB construction is approximately 82% complete. Remaining utility relocation involves punch list work on traction power ductbanks and manholes and Dominion Virginia Power’s (DVP) installation of power cables.

The following are the major accomplishments of the DB contractor during August 2012:

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1**

Continued repairs on the acoustical soundsorb panels on the O-1 guideway; continued installing SOE lagging for the Sound Cover Box (SCB) foundation at the WFCY; continued micro-pile installation for the SCB foundation in the WFCY; continued driving piles for the S&I Building foundation at the WFCY; continued preparing subgrade for turnout to be installed at existing loop track 5 at the WFCY; installed fire sprinkler piping in the WFCY cut and cover tunnel and re-profiling loop track 5 during outage weekend of September 28 and 29.

Systems Work

- ***K/N Line Junction***

Performed additional safe braking train tests.

- ***During K-Line Full Outage 9/28-9/30***

Converted from K06 ATC circuit configuration to K98 configuration for testing; performed control line dynamic train testing on K1 and K2 tracks and converted circuits back to pre-existing condition.

- **TPSS #1 (Plainfield St. – N91)**
*Installing supports and conduit between the TPSS and rectifier transformers; terminating ETS and heater control cables in trackside cabinets; installed roof gutter and downspouts; continued SCADA testing to OCC.
TPSS #1 was energized July 30, 2012.*
 - **Plainfield TCR and N91 Area of Control**
Terminating Fire, Intrusion Alarm (FIA) control wires.
 - **Baldwin TCR and N92 Area of Control**
Continued ATC track circuit adjustments; terminating and labeling switch machine wiring; continued installation of the Intrusion Detection Warning System (IDW) on the OB barrier wall.
 - **TPSS #2 (Baldwin – N92)**
*Continued installing supports and conduit between the TPSS and the rectifier transformers; terminating rectifier cables in the distribution panel; continued terminating, meggering and labeling ETS, heater control and grounding cables in trackside cabinets.
TPSS #2 was energized on August 16, 2012.*
 - **TBS #2 (Baldwin Drive – N92)**
Continued track circuit adjustment testing.
 - **Operations Area OP-4/5A (Tysons East Guideway and Tysons East Station)** *Continued installation and grouting of acoustical barrier panels on the guideway; de-stressed rail east of the Tysons East Station; continued installing pavilion elevator steel frames; completed the pier cap for pedestrian bridge support #2; installing fire suppression piping; installing plumbing in the mezzanine rest rooms; installing equipment for elevators 1 thru 4 and escalators 1 thru 4; installing electrical equipment, devices and raceway under the platform at the mezzanine level, TCR, AC Switch Gear Room and TPSS #3; assembling pedestrian bridge truss segments and outfitting with electrical and architectural items; installing platform canopy structural steel and panels; installing V-frame curtain wall members at the mezzanine level exterior; and installing multi-conductor cable, wire and light fixtures throughout the station.*
- Systems Work**
- **TBS #3 (Tysons East – N01)**
Continued installing FIA conduits, boxes and devices; delivered and began installing the Remote Terminal Unit (RTU), network cabinet and associated conduits; performed post installation megger testing of ETS cables at the trackside; verified ETS cables and pulled slack from track to cable vault and configured Uninterruptable Power Source (UPS) to the communication with the RTU.
 - **Tysons East TCR and N01 Area of Control**
Continued installing WZ-bonds and terminating WZ-bond cables; continued rewiring for the ATC voltage drop issue per approved engineering change

request; dressing and terminating ATC cables in the TCR racks, running rack to rack cables.

- ***TPSS #3 (Tysons East Station – N01)***

Continued installation of traction power feeder cables from the TPSS to the guideway; continued installing traction power jumper cables; strapping previously pulled traction power cables; racking traction power cable in the TPSS; continued installation of traction power aerial raceway and covers for pulled cable; and continued installing rectifier transformers, bus duct and DC switchgear.

- **Operations Area OP-5 (Tysons Central 123 Station)**

Install forms and rebar for the pavilion elevator walls & foundation, pedestrian bridge supports and retaining wall footers; installing HVAC ductwork & insulation in intermediate level service rooms; erecting canopy structural steel; installing escalators #5 & #6; set platform to mezzanine escalators #1 & #2 and continued with installation of #3 & #4; pre-welding for polymer panels; installing equipment, devices and raceway in the AC Switch Gear Room, TPSS #4, battery room, communications raceway in lower level and platform level service rooms; and installing water lines in intermediate and mezzanine level service rooms.

Systems Work

- ***TPSS #4/TCR (Tysons 123 – N02)***

Delivered and installed TPSS switchgear and transformers; installing traction power raceway and equipment; installing traction power cables and terminating on the contact rail; continued installing trackside ATC equipment and continued ATC equipment cable termination in the TCR.

- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure)**

Completed installation of the double crossover track between the Tysons 123 Station and the tunnel; continued electrical cabinets and wiring installation at the east ventilation structure; continue installing duct damper at the east vent structure; continue ETS switch installations in the NATM tunnel; and continued contact rail installation in the IB tunnel.

- **Operations Area OP-6 (West Cut and Cover Tunnel)**

Continued interior room electrical panel and conduit installation at West Vent Structure (WVS); continued assembly of dampers and vent transitions at the WVS; and continued plumbing installations in the WVS.

- **Operations Area OP-7 (Tysons Central 7 Station)**

Installing formwork and rebar for the south pavilion and north pavilion walls; installing raceways, fixtures and devices for the AC and Communications Systems in the service rooms, under the platform, in TPSS #5 and to elevators #1 and #2; installing platform ETS boxes; installing electrical and communications ducts and drain pipe for the

platform level east and west end service rooms; installing platform edge lights; installing electrical embeds for north & south pavilions; installing elevators #1 & #2 equipment; pre-welding for polymer panel installation, installing panels and insulation and joint sealant; installing doors, frames and grout; began preparation for cleaner's room and restroom water lines in east service area; began installing cribbing for the pedestrian bridge truss assembly; erecting canopy structural steel; and poured south pavilion columns 2A & 2C, north pavilion columns 1A & 1C.

Systems Work

- **TPSS #5 (Tysons Central 7 Station-N03)**
Installing platform ETS panels; installing ETS and heater control support frames and panels; continued installation of FIA equipment; and rerouting FIA conduits.
- **Operations Area OP-8 (Tysons West Station/Guideway)**
Installing forms and rebar at the North & South Pavilion foundations and walls; installing electrical raceway in the Communications Room; installing electrical raceways in the AC Switchgear Room and intermediate level service rooms; insulating and grouting the connections between the precast panels and the pier at the pavilion walkway opening; and guideway continue cable trough installations and direct fixation track plinth and rail installation west of the station.

Systems Work

- **TPSS #6 (Tysons West Station –N04)**
Began installing rectifier transformer bus ducts and installing FIA conduit. TPSS #6 was energized on August 3, 2012.
- **Tysons West TCR and N04 Area of Control**
Installing cable tray grounding; delivered and began installing equipment racks; and hung storage cabinet.
- **OP-9 (DIAAH)**
Continue closing remaining openings in retaining walls on the OB side between Hunter Mill Road and Difficult Run; continue to surface, line and tamp track, install contact rail and coverboard on the IB track between Trap Road and the Tysons West Guideway; and continued setting contact rail on the OB track between Trap Road and the Tysons West Guideway.

Systems Work

- **TPSS #7 (Wolf Trap – N05)**
Installing cable racks in manholes and began installing the rectifier transformer bus duct.
- **TPSS #8 (Chatham's Ford – N93)**
Racking traction power cable in the cable vault; continued terminating traction power cables in the DC switchgear; pulling low voltage cables from the track to

the TPSS; and installing traction power conduit seals and terminating traction power cable at the trackside.

- ***Chatham's Ford TCR and N93 Area of Control***
Megger testing of ATC cables; continued installing IDW system; installing local cables and hoses for WZ-6, WZ-19, WZ-20 and WZ-21; installing 4' loops for WZ-5 and WZ-15, mounted WZ-17 TJ to wall; and set foundations for signals 2, 4, 6 and 8.
- ***TPSS #9 (Hunter Mill – N94)***
Installing ETS and heater control support frames and terminating sub-station return cables at the trackside; pulled two ETS cables from the track to the TPSS. TPSS #9 was energized on September 27, 2012.
- ***TPSS #10 (Sunset Hills – N95)***
Installing fiber optic cable to the TPSS. TPSS #10 was energized on September 27, 2012.
- ***Sunset Hills TCR and N95 Area of Control***
Pulling WZ cables and began terminating at WZ-4; installing contact rail heat tape and continued installing ETS & heater control support frames and panels at the trackside; continued installing rectifier transformer bus duct and supports; clearing and mandreling (removing obstructions from ducts) blocked conduits between the TCR and MH 95-02C; and pulling ATC cables from the track to the TCR.
- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)**
Installing conduit for communications switch boxes and TEL-LAN in the plenum, east service rooms, and the Kiosk; installing multi conductor cable and wiring in the AC Switchgear Room; installing panels, transformers and equipment cabinets in AC room and throughout the station; installing frames for the platform's suspended ceiling and the canopy's suspended ceiling panels; installing wiring panels and lighting; installing elevators #1 & #2 cabs; installing fire suppression system; installing FIA devices in service rooms; installing CCTV wire from the platform area to the Communications Room; continued assembling pedestrian bridge truss segments; began paver tile and granite platform edge installation; install forms and rebar for the north and south pavilion/pedestrian bridge and bridge support columns #6 & #3; and poured the south pavilion elevated slab.

Systems Work

- ***TPSS #11 (Wiehle Ave – N06)***
Installing fiber optic cable to the TPSS. TPSS #11 was energized on September 14, 2012.
- ***Wiehle TCR/N06 Area of Control***
Labeling ATC cables; adjusting switch machines, repositioning signal N06-44; and adjusting marker coils.

c. Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *September 2012*, 99 of the 103 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *September 2012*. *Three of the four remaining parcels* have been delayed due to protracted negotiations with the owners and Fairfax County regarding deed language and other modifications needed to finalize the deeds and agreements.

PARCELS ACQUIRED¹
(Number of parcel packages)

LOCATIONS	TOTAL	Period			To Date		
		Planned ²	Actual	Var	Planned ²	Actual	Var
Route 66 / DCR	1	0	0	0	1	1	0
Route 123	23	0	0	0	23	21	(2)
Route 7	53	1	0	(1)	53	51	(2)
DIAAH	26	0	0	0	26	26	0
TOTAL	103	1	0	(1)	103	99	(4)

- Notes:
1. Parcels acquired through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 39 parcels for which Certificates of Take have been filed.
 2. Planned values are based on the March 31, 2011 Property Acquisition Status Update. One additional acquisition was added in June 2012 to be completed in September 2012.

Condemnation Status

Thirty-nine parcel packages have been obtained with the filing of thirty-three Certificates of Take. *In September 2012, two new trials were scheduled (Parcel 03, West Group Properties, LLC and Parcel 81, CESC Commerce Executive Park LLC), two cases are in finalization (Parcel 54/117 KBS Tysons Dulles Plaza, LLC and Parcel 68 Carrington Community Association, Inc.)* and four cases continues to work towards an Agreement after Certificate (Parcel 109, AG/ARC Plaza America; Parcel 125/JGB 1831 Wiehle Avenue, LLC; Parcels 86/186 Maximums Properties, LLC; and Parcel 90 Kaiser Foundation Health Plan).

d. Utility Coordination

Utility relocation work continued through *September 2012* and is considered to be 99% complete. DTP’s utility relocation design team continues to address conflicts or field conditions when required and to coordinate all modifications with the A&R D-B contract requirements. Installation of facilities for each third party utility has been completed in Tysons Corner and all utility companies have completed the local tie-in conduits and cables required to modify their circuits in compliance with the overall Project utility design. All UR work along Route 7 is complete. Traction Power duct bank and DVP power installations continue.

Specific utility relocation work completed and continuing through *September 2012* includes the following:

- **Dulles Connector Road (DCR) East – (K-Line to Route 123)** – *No work this period.*
- **Dulles Connector Road (DCR) to Route 7** - *DVP commenced installation of traction power cables in ductbanks and splicing in manholes along Route 123 between I-495 ramp and Tysons East Station and between International Drive and Route 7 ramps.*
- **Route 7 (Tyco/Westwood to the DCR)** – *No work this period.*
- **Route 7 (Tyco/Westwood to Spring Hill Road)** – *Lane completed punch list work on traction power conduits into manholes in front of the Ernst & Young wall. DVP continued pulling cables and splicing in manholes to TPSS #5.*
- **DIAAH West - (Route 7 to Wiehle Avenue)** – *DVP continued installation of 34.5 kV traction power cables in ductbanks and splicing cables in manholes along the westbound DIAAH between TPSS #7 and TPSS #8. DVP installed switches, pulled and terminated cables on September 14, 2012. Wiehle Avenue Station AC Switchgear was energized on September 14, 2012.*

e. Vehicle Procurement

WMATA is procuring the 64 rail cars required for the project. WMATA is also procuring 300 replacement rail cars under the same contract. The WMATA and MWAA Boards agreed to share the development costs associated with the railcar procurement equally.

WMATA awarded a contract to Kawasaki on July 27, 2010. The manufacturer's proposed schedule showed the 64th car would be delivered by September 12, 2014 based on a July 12, 2010 Notice-to-Proceed (NTP), but WMATA did not issue the NTP until August 16, 2010, resulting in the conditional acceptance of the 64th rail car on January 15, 2015, six weeks beyond the FFGA completion date of December 1, 2014.

On December 3, 2010, WMATA confirmed in a letter to MWAA that "sufficient resources including railcars will be available to support dynamic testing and initial revenue service in accordance with the Project's current schedule." WMATA confirmed that cars from the existing fleet would be made available for dynamic testing on the Dulles Extension. Since there would be a gap in the delivery of the 7000 Series rail car delivery and the revenue service date, WMATA outlined its strategies for being able to support initial revenue service using the existing WMATA fleet.

On March 16, 2011, Kawasaki formally notified WMATA of potential delays that they believe would be considered excusable under the terms of the contract due to the earthquake/tsunami in Japan on March 11, 2011. On December 21, 2011, WMATA approved Kawasaki's Mitigation Schedule with a June 12, 2015 delivery date for the 64th railcar, which is more than six months beyond the FFGA completion date for the DCMP.

MWAA formally informed the FTA Regional Administrator in a letter dated January 31, 2012. In this letter, MWAA writes “WMATA has stated that they would be able to provide sufficient rail cars from their existing fleet to begin service on the extension until the new Kawasaki rail cars are available. Therefore, we expect no impact to the FFGA, other than the late delivery of the rail cars.” The PMOC continues to monitor WMATA’s daily railcar availability statistics to see if WMATA is improving railcar availability. WMATA has developed an interim operating plan for dealing with the delay. However, the plan calls for using six-car trains in lieu of a mix of six- and eight-car trains. This issue remains a concern of the FTA and PMOC. WMATA submitted this interim operating plan as part of the Rail Fleet Management Plan (RFMP). WMATA submitted RFMP Rev. 4F dated April 18, 2012 to the FTA on May 4, 2012. FTA and WMATA met to address this issue and WMATA prepared revisions to their RFMP and submitted RFMP Rev-4G to the FTA on August 3, 2012. FTA is reviewing the latest submission.

The Conceptual Design Review phase for the 7000 (7K) Series railcars was completed on January 31, 2011 and the program moved into the Preliminary Design Review (PDR) phase. All PDRs were completed on March 16, 2012, more than eleven months past the original baseline schedule date of March 30, 2011. At the 7K Monthly Progress Review meeting held on *October 11, 2012*, Kawasaki reported that it now anticipates that the Final Design Review (FDR) phase will be completed on *November 8, 2012* compared to the mitigation schedule completion date of March 22, 2012; this represents a 227 calendar day delay. On June 27, 2012, Kawasaki introduced a new supplier for the train wayside control equipment to WMATA. The new supplier is Ansaldo who is also the supplier of ATC; therefore, WMATA does not foresee any major problems. *A design working session for the train wayside equipment was held on October 2, 2012.* In order to mitigate the delay in the FDR process, Kawasaki has been performing work on the prototype railcars in Japan at risk pending completion of the FDRs.

As noted in the schedule table below, the actual completion date of the A-Car mock-up was April 24, 2012, forty-six calendar days beyond the mitigation schedule completion date. Master Test Plan, Revision B was submitted for review on May 29, 2012 and the Test Master Plan was approved on July 19, 2012. As noted above, the completion of Final Design Reviews is now anticipated to be on *November 8, 2012*, 227 calendar days beyond the mitigation schedule. The Carbody/Truck First Article Inspection Approval is now anticipated to be completed in November 2012, which is 92 calendar days behind schedule.

The key milestones for this railcar procurement are:

Activity	Original Baseline Schedule Date	Mitigation Schedule Date	Actual Date
Notice to Proceed	July 12, 2010	---	August 16, 2010
Preliminary Design Review Submission	March 31, 2011	March 31, 2011	March 31, 2011
Preliminary Design Review Complete	May 1, 2011	January 18, 2012	March 16, 2012
Approval of Master Test Plan	August 23, 2011	February 7, 2012	July 19, 2012

Activity	Original Baseline Schedule Date	Mitigation Schedule Date	Actual Date
Approval of A-Car <i>Hard</i> Mock-up	October 24, 2011	March 8, 2012	April 24, 2012
Final Design Review Submission	October 31, 2011	February 1, 2012	February 1, 2012
<i>First Manual Submission (Draft)</i>			<i>June 13, 2012</i>
<i>Completion of HVAC Unit DVR</i>			<i>August 10, 2012</i>
<i>Completion of Propulsion DVR</i>			<i>September 21, 2012</i>
<i>Completion of ATC DVR</i>			<i>October 10, 2012</i>
<i>Completion of Communications DVR</i>			<i>October 19, 2012</i>
<i>Completion of Network DVR</i>			<i>October 19, 2012</i>
Final Design Review Complete	December 1, 2012	March 22, 2012	
Carbody/Truck First Article Inspection Approval	March 30, 2012	August 1, 2012	
Final Assembly Prototype Car		November 20, 2012	
<i>Completion of Prototype Cars #1,2,3 &4</i>		<i>January 8, 2013</i>	
<i>Begin Car Level Qualification Testing in Japan</i>		<i>January 21, 2013</i>	
<i>Begin Production of Pilot Cars #1,2,3 &4 at KMM</i>		<i>February 13, 2013</i>	
<i>Begin Pilot Car Testing at KMM</i>		<i>March 28, 2013</i>	
<i>Completion of KMM Test Track</i>		<i>May 1, 2013</i>	
<i>Approval Climate Room Testing</i>		<i>May 9, 2013</i>	
<i>Completion & Approval of Pilot Car Production Activities</i>		<i>May 9, 2013</i>	
<i>Completion & Approval of FAI Activities</i>		<i>July 31, 2013</i>	
<i>Completion of Prototype Car Review (Prior to Shipment from Japan)</i>		<i>July 31, 2013</i>	
<i>Ship Prototype Car shells from Japan to USA</i>		<i>August 2013</i>	
<i>Completion of Pilot Car Testing at KMM</i>		<i>August 12, 2013</i>	
FAI Pilot Car Review		October 4, 2013	
<i>Completion of On-site Test</i>		<i>January 6, 2014</i>	
Delivery of 4 Pilot Cars to WMATA	September 16, 2013	February 20, 2014	

Activity	Original Baseline Schedule Date	Mitigation Schedule Date	Actual Date
<i>Delivery of first 4 Production Cars to WMATA</i>		<i>February 20, 2014</i>	
Conditional acceptance of 4 Pilot Cars	March 16, 2014	August 14, 2014	
Conditional Acceptance of first 4 Production Cars	March 16, 2014	August 14, 2014	
<i>Final Manual Submission (Draft)</i>		<i>April 17, 2014</i>	
Conditional acceptance of 64 th Car	January 15, 2015	June 12, 2015	

WMATA is *developing* an interim operations plan for dealing with the delay in delivery of the additional railcars. However, the plan calls for no eight-car trains and all six-car trains. This issue remains a concern of the FTA and PMOC. The PMOC continues to monitor both the progress of the procurement and WMATA's management. At the May 9 WMATA Quarterly meeting, WMATA pledged to meet with FTA to review alternative operating plans. FTA met with WMATA on July 3, 2012 to discuss the Interim Operating Plan. WMATA reviewed the current plan and resubmitted it as part of RFMP Rev-4G on August 3, 2012 for FTA's review. *FTA accepted the RFMP on October 11, 2012, with the caveat that WMATA Board still needs to adopt an operating plan for the Silver Line and submit it to FTA for review. The first presentation of the plan to the Board is expected on December 6, 2012.*

f. Safety and Quality Status

MWAA participated in *seven* safety walk downs with DTP during the month of *September*. All were related to Design-Build work. As of *September 30, 2012*, DTP had logged *11.286* million project man-hours with *412* first aid cases and six lost time cases. There have been a total of *873* incident investigation reports, *88* utility hits and *25* vehicular accidents.

Revision 5 of the Safety Critical Items List (SCIL) was reviewed and all comments resolved. MWAA received the SCIL for K99 (West Falls Church Yard) on December 21, 2011, separately from the entire SCIL for review and comment. MWAA provided comments back to DTP on the K99 SCIL on February 14, 2012 and a meeting to discuss the SCIL was conducted on March 26, 2012. Follow-up comments were officially sent to DTP on May 11, 2012 and the comment resolution process continued. DTP and MWAA met again in June to refine the K99 SCIL. DTP submitted SCIL Revision 6 to include the WFCY on August 6, 2012. *Comments were received from WMATA on September 21, 2012. MWAA expects to complete its review and return the SCIL to DTP by October 10, 2012 for incorporation of comments.*

DTP and MWAA continue to meet every two weeks to review the status of issued for construction designs (including subcontractor designs) and to determine the status of sign-offs of the Design Conformance Checklist (DCC) and Construction/Procurement/Installation Conformance Checklist (CCC) items related to all issued for construction designs. The FTA and PMOC continue to express concern with the lack of progress on both the DCC and CCC

submissions. Submission No. 8 of the DCC was received on June 15 and MWAA completed its review on August 3, 2012 and comments were forwarded to DTP. WMATA selected an additional 50 line items for MWAA to review. *This additional MWAA review was completed and accepted on September 25, 2012. The associated Corrective Action Request (CAR DTP-25-11) was closed with the acceptance. DTP's Submittal No. 9 was submitted to MWAA on October 5, 2012 and is currently under review.*

A preliminary walk-down of K98 (K-Line Tie-in) was conducted by MWAA, WMATA, DTP and the PMOC on December 14, 2011 in an effort to refine the CCC process and expectations of each partner prior to the CCC No. 4 submission. *This inspection intended to help identify what documentation support MWAA and WMATA would need from DTP to validate sign-off acceptance. CCC No. 4 covering the K98 interface was submitted on March 19, 2012 with backup records and was reviewed and returned to DTP with comments on May 14, 2012. This CCC was intended to be the model for the remaining construction submissions. DTP submitted CCC No. 4 (Revision 5) on July 25, 2012 and on August 1, 2012 MWAA received construction inspection records that support the CCC certificate. Workshops (WMATA/MWAA/DTP) continue to be held to review and discuss construction records needed to support CCC certification. This CCC remained a work in progress for ten months without the desired result. On September 25, 2012 at the bi-weekly SCIL meeting, DTP made a suggestion regarding development of the CCC for N92, N91 and K98. This suggestion will be presented in a DTP letter to MWAA and may include DTP procedure changes. The DTP suggestion will adopt the FTA Green Book Means of Verification as the basis for CCC signoff. DTP will also address the previous CCC update #4 in their letter. DTP expects to complete civil CCC items with a scheduled walkdown to occur in Segment N92 on October 22, 2012.*

The PMOC anticipates push back by WMATA on this approach since the Greenbook relies heavily on visual inspections without detailed support data. It appears to the PMOC that a compromise may be in order that would include visual inspections and a next day follow-up joint MWAA/WMATA audit of related DTP files as requested by select authorized inspecting officials.

Regular weekly visits to work sites by safety representatives from DTP, MWAA and WMATA continue. The Tri-State Oversight (TOC) and the FTA's on-site PMOC representative continue to meet monthly with the Safety/Security Certification Working Group (SCWG) and continue ongoing involvement in the certification process. The SCWG held its regular monthly meeting on *September 18, 2012*. The next SCWG Meeting is scheduled for *October 16, 2012*.

MWAA transmitted Revision 5 of the DTP System Safety/Security Certification Management Plan to the FTA on December 8, 2010. MWAA submitted its Safety and Security Management Plan, Revision 8, to the FTA on February 17, 2011. An FTA/PMOC Safety/Security Program Review Meeting was conducted with all stakeholders on April 29, 2011. FTA explained the requirement for a complete SSMP for the Dulles Corridor project that would carry through start-up, pre-revenue operations and to the Revenue Service Date.

MWAA and WMATA agreed to jointly develop a revised SSMP that will cover the roles and responsibilities of both MWAA and WMATA.

MWAA submitted Draft SSMP Rev. 9 to the FTA, PMOC, WMATA and TOC on September 30, 2011. A follow-up meeting was conducted with all parties on January 27, 2012 to review the progress made thus far. WMATA completed its revision of its SSCPP in March 2012. The SSCPP was subsequently incorporated as Appendix E into SSMP Revision 9 and MWAA and WMATA approved the revised SSMP on March 20 and 22, 2012 respectively. The PMOC reviewed the completed revision and provided comments to the FTA on April 5, 2012. The FTA accepted the SSMP on April 13, 2012.

During *September 2012*, MWAA and DTP performed the following QA audits/surveillances:

- *M.C. Dean (MEP): DTP conducted an audit on September 5, 2012. There was one observation and two recommendations. A response was not required.*
- *DTP Environmental: MWAA conducted an audit on September 12, 2012. There were three observations and five recommendations. A response was not required.*
- *Whiting-Turner (WFCY): MWAA conducted an audit on September 13, 2012. A CAR was written and there were nine observations. Six observations require a response.*

MWAA QA Audit and Surveillance Schedule for October through December 2012

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv.?	Lead
10/10-11/12	A	Reliance (Fire Suppression)	Y	DTP
10/24-25/12	A	Turner Construction (Shell Enclosure Trades)	Y	MWAA
11/5-6/12	A	Lane Construction (Pedestrian Bridge Erection)	Y	MWAA
11/12-13/12	A	Whiting-Turner (Stonework, Tile & Pavers)	Y	DTP
12/05-06/12	A	Subcontract to be Awarded (Pedestrian Bridges & Pavilion Finishes)	Y	DTP
12/05-06/12	A	DTP System Safety/Security Program	N	MWAA
12/12-13/12	A	DTP Startup and Test Program	N	MWAA

Use of Existing Foundations

As a result of the USDOT Office of Inspector General’s audit report of the Dulles Project dated July 26, 2012, testing of the foundations installed in the 1970’s by VDOT for the future extension of the Silver Line, MWAA will conduct tests to determine the effects, if any,

of stray current on the service life of the steel piles that made up those foundations. To assure that the existing steel piles to be re-used for the Dulles Extension provide a minimum of a fifty year service life, MWAA is undertaking stray current tests to calculate the piles' corrosion rate and estimate their remaining service life. The following table contains a summary of the actions to be taken to estimate the remaining service life of the re-used steel piles. Russell Corrosion Consultants, Inc. was employed by MWAA to develop a Corrosion Test Plan and to oversee implementation of that plan. Russell developed a Draft Corrosion Testing Plan, and numerous comment resolution meetings were conducted during August with all partners. A Final Plan was submitted to MWAA on September 14, 2012 for review and acceptance. *MWAA accepted the plan and submitted it to the FTA for review and approval via MWAA Letter No. 07403 dated September 24, 2012. WMATA reviewed and accepted the plan on October 5, 2012 via an email. FTA has requested that WMATA formally approve the plan via letter. The FTA reported that it has reviewed the plan and will provide an approval letter. A Site Specific Work Plan was submitted to WMATA for review and approval on October 10, 2012.*

OIG Report Follow-up Action Items

	Action Item	Due Date	Comments
1	Provide a copy to the OIG of the final stray current test plan MWAA will implement, including a plan for accounting for untested locations and for collecting baseline track-to-earth resistance measurements	As soon as the plan become available	
2	Provide documentation to OIG on actions taken on the stray current testing	10 days after action is completed	
3	Provide documentation to OIG on actions taken on corrosion protection measures installation plan	10 days after action is completed	
4	Provide documentation to OIG on actions taken pertaining to the rail car delivery schedule	10 days after action is completed	

3. Project Management Plan and Sub-plans

The FTA accepted MWAA's **Project Management Plan (PMP)** Version 7.0 Final on February 14, 2011. FTA requested MWAA update its PMP to include the start-up and testing phase. MWAA submitted its Version 8.0 Draft to the FTA on May 1, 2012. The PMOC provided its draft review and comments to the FTA on June 11, 2012. On July 9, 2012 the FTA sent comments to MWAA and requested a PMP Version 8.0 Final or a PMP Version 9.0 be submitted by November 1, 2012.

- MWAA submitted a revised **Quality Program Plan (QPP)**, Revision 7 to FTA on January 7, 2010. MWAA reported that three Project Management Procedures were updated in the period from April through June 2011. No new QPP procedure updates were made during the period from July through January 2012.
- MWAA's **Real Estate Acquisition Management Plan (RAMP)**, Revision 2, dated September 15, 2009, has been reviewed by the PMOC with a recommendation that the FTA concur, with comments, with the revised RAMP. On January 21, 2010, the FTA provided comments to MWAA, and MWAA staff has revised Procedure PM-3.01 (Monitoring the Design-Build Contractor Property Acquisition Services). DTP revised their Procedure PIQ-5.1 (Property Acquisition Coordination) on November 1, 2010.

The FTA requested MWAA to update its **Risk and Contingency Management Plan (RCMP)**, formerly called a Risk Management Plan (RMP), along with their Project Management Procedures to address Directive Letters and Contingency Drawdown Procedures. MWAA submitted the revised RCMP Rev. 3 on March 28, 2012, and the PMOC recommended FTA acceptance. The FTA accepted RCMP Rev. 3 as well as revised Project Management Procedure PM 5.07, Rev. 4, on April 13, 2012. MWAA updated the Risk Register Assessment on June 30, 2012 and submitted it to the FTA and PMOC on August 27th. A discussion was held during the PMOC's September 6 monthly meeting. The PMOC provided review comments and a modified Top Ten Risk List that was reviewed by MWAA. *MWAA provided a submittal dated October 3, 2012 of its review and proposed changes to the FTA/PMOC for review and approval.*

Since WMATA, rather than MWAA, will be the operator of the completed project, the WMATA **Rail Fleet Management Plan (RFMP)** is the applicable document. The FTA accepted a WMATA RFMP on September 25, 2007. However, WMATA updated the RFMP to reflect the 7000 Series Rail Car procurement and submitted a draft copy dated February 26, 2010 to the FTA for review and comment. The PMOC issued its Spot Report on its review of the draft RFMP on March 11, 2010, finding the plan to be deficient in many areas. The FTA, PMOC and WMATA continued the review and comment reconciliation process of various draft revisions. FTA and the PMOC provided some additional comments and WMATA's RFMP Rev. 4E dated March 14, 2012 was submitted to the FTA on April 10, 2012. FTA's comments on that revision were submitted to WMATA on April 12 with the request that the comments are incorporated and the final document then be formally submitted to the FTA Regional Administrator. WMATA submitted RFMP Rev. 4F dated April 18, 2012 to the FTA on May 4, 2012. FTA and WMATA met on July 3, 2012 to address the issue of the Dulles Interim Operations Plan. WMATA has revised their RFMP and RFMP Rev 4_G was submitted to the FTA on August 3, 2012. It is under review.

Safety and Security Management Plan (SSMP) see Section 2f.

4. Project Schedule

Mainline - The project "Mitigation Schedule" update with a data date of August 25, 2012 reflects an -8 calendar day negative float compared to a -5 day negative float reflected in the July 25, 2012 DTP's schedule shows the Revenue Service Date to be January 10, 2014. MWAA

completed its schedule review of the schedule update with a data date of August 25, 2012 on September 20, 2012 and “Accepted as Noted” the schedule update, to include the critical path. The PMOC remains confident that the project can be completed before the FFGA RSD of December 1, 2014. The WFCY Schedule reflects a 41 day calendar loss which MWAA believes can be mitigated during the coming months. WFCY activities and completion dates are only overlaid on the master mainline schedule and not connected to the mainline critical path or SSCD. *DTP’s September 25, 2012 schedule update reflects a full recovery of the negative float. However, this schedule update has not yet been analyzed.*

This mitigation schedule supersedes the previously approved recovery schedule with a data date of December 25, 2010 that was finally settled in mid-September 2011 but does not relieve DTP from their obligations to the earlier recovery schedule. MWAA reported during the July 10, 2012 Monthly Update Meeting that RFC160 and RFC161 related to the mitigation schedule has been settled along with the language on June 15, 2012. However, the official final approval has *still not* been provided to date.

MWAA and DTP continue the ongoing and ever changing deliberation process of determining weather related excusable delay days as reflected in the table below. As a result, the SSCD has been adjusted to August 29, 2013.

Excusable Days of Delay through August 25, 2012

ACTION	WORK DAYS
Total Excusable Days of Delay on Project Critical Path requested by DTP	69
Contractually Identified	25
Retracted by DTP	16
Denied by MWAA/Disputed by DTP	7
Under evaluation by MWAA	0
Granted by MWAA	21

The schedule-related issues regarding the delivery of rail cars are discussed in section 2.f. Vehicle Procurement above.

West Falls Church Yard - The WFCY Civil/Site work final design was completed and issued for permit in October 2010. The S&I Building Issued for Permit (IFP) drawings were submitted to DGS on May 3, 2011 and they issued a permit on September 15, 2011. The Sound Cover Box IFP drawings were submitted to DGS on May 18, 2011 and DGS issued a permit on September 7, 2011.

MWAA and DTP agreed to a target completion date of December 20, 2013. DTP’s schedule update of August 25, 2012 shows this targeted WFCY completion date of December 20, 2013 and also reflects a -41 calendar day variance which yields a forecast completion date of January 30, 2014. MWAA and DTP are investigating ways to mitigate the WFCY schedule negative float. MWAA and WMATA are also considering parts of the WFCY expansion that may not be needed to support the RSD should the Project be unable to regain the negative float. *DTP’s*

September 25, 2012 schedule update reflects a full recovery of the negative float. However, this schedule update has not yet been analyzed.

Other problem areas with potential delays identified by MWAA include the following:

- Construction of the station structural and precast installation.
- Fabrication of precast panels and pedestrian bridges to support timely completion of the Stations, local and integrated testing.
- Construction of trackwork and wayside installations leading to readiness for dynamic testing.
- Installations of DVP's ductbanks, manholes, switch pads at TPSS wayside, cable pulls, splicing and terminations etc. for systems' permanent power.
- Construction of trackwork to support timely installation of cable troughs for systems cable pulling.
- Obtaining required weekend outages from WMATA for K-Line systems testing.
- WMATA systems upgrade programs could have other technical scope changes impacting Traction Power, Automatic Train Control, and Communications.
- Testing and installation scope and schedule.

a. Critical Path Evaluation

Since November 1, 2011, the Project is managed utilizing the work plan set forth in MWAA's November 1, 2011 Directive Letter to implement a Mitigation Schedule with a data date of October 25, 2011.

In DTP's *August 2012 Schedule Update*, Critical Path No. 1, fabrication of precast panels by DTP's subcontractor for Tysons East Station's south pavilion, has a -8 calendar day float for achieving SSCD on September 6, 2013. This path originates with fabrication of precast panels leading to installation of roofs for the pavilion service rooms. The roof installation is followed by installation of elevator precast panels and roof, installation of elevators and local and integrated supervisory control and data acquisition (SCADA) testing for the station. This releases the site for WMATA's OCC tests leading to full system performance demonstration and SSCD.

MWAA agreed with DTP's Critical Path No. 1. DTP is apparently working double shifts and coordinating with subcontractors to evaluate work-arounds to mitigate these delays.

The PMOC agrees with MWAA's assessment regarding the critical path. MWAA continues to *carefully* analyze the schedule and *continues to* hold DTP accountable for changes made to the agreed schedule. *These efforts are proving to be fruitful as DTP's September schedule (not yet analyzed) reflects a full recovery for both the mainline railroad and the WFCY. Nonetheless,* the PMOC anticipates that new disagreements will continue to arise for claimed weather delays and change order impacts.

The following table compares the milestone dates relative to the approved baseline schedule. The PMOC concurs with MWAA's assessment of the updated schedule.

MILESTONE	June 2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	July 2012	August 2012
Receipt of FFGA	03/03/09	03/10/09 ^A	03/10/09 ^A	03/10/09 ^A
Station Design Complete	10/21/09	02/18/11	10/28/11 ^A	10/28/11 ^A
Utility Relocation Complete	03/05/10	09/13/11	01/31/12 ^A	01/31/12 ^A
Aerial and Station Foundations Complete	3/4/11	09/01/11	07/23/11 ^A	07/23/11 ^A
NATM Tunnels Mined	01/29/11	12/03/10 ^A	12/03/10 ^A	12/03/10 ^A
K-Line Track Tie-In	12/23/11	03/28/12	10/14/11 ^A	10/14/11 ^A
Guideway Complete	2/12/12	09/13/12	11/02/12	11/13/12
Train Control Installation Complete	10/26/12	10/29/12	12/11/12	01/09/13
Systems Testing Complete - Tysons East Station	07/24/12	02/21/13	03/12/13	03/15/13
Systems Testing Complete - Wiehle Ave Station	08/13/12	01/16/13	04/03/13	04/03/13
Systems Testing Complete - Central 7 Station	01/23/13	04/12/13	04/29/13	05/07/13
Systems Testing Complete - Tysons West Station	02/21/13	05/14/13	06/06/13	06/06/13
Systems Testing Complete - Tysons 123 Station	12/20/12	03/28/13	06/10/13	06/05/13
Substantial Completion	07/31/13	07/31/13	09/03/13	09/06/13
Completion - WFCY	NA	N/A *	01/30/14	01/30/14
Revenue Operations – Target	11/27/13	01/02/14	01/07/14	01/10/14
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

^A Actual Date. See narrative in section D.1.3. *Agreed Target Date is 12/20/13.

b. Important Activities – 90-Day Look Ahead

The important milestones scheduled for the next 90 days include:

- Completion of Tysons West Kiss and Ride Lot designs/permitting.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- Property acquisition for the DIAAH Trackway and the Wiehle Avenue Station and Tail track (OP-9 and 10).
- Complete train control equipment installation.
- K98 ATC circuits cutover.
- *Complete energization of the remaining six Traction Power Substations/Tie Breaker Stations.*

5. Project Cost

The SCC Budget and Expenditures summary for the period ending *August 25, 2012* is shown below. Overall, approximately 75% of the budget (excluding contingency and finance charges) has been expended.

PROJECT SUMMARY BY SCC CODE – August 2012 Federal Only

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION	CONTINGENCY TO DATE
10	Guideway and Track Elements	\$ 640,105,887	\$ 582,501,865	\$ 640,400,967	\$ 40,248,700
20	Stations	\$ 312,442,435	\$ 209,154,218	\$ 348,565,949	\$ 26,192,703
30	West Falls Church Yard	\$ 69,008,239	\$ 14,569,749	\$ 68,818,208	\$ 7,710,985
40	Site Work & Utility Relocation	\$ 229,210,478	\$ 214,579,322	\$ 267,838,453	\$ 16,350,511
50	Systems	\$ 322,572,252	\$ 206,767,514	\$ 319,180,052	\$ 22,569,199
60	Right of Way Acquisition	\$ 67,631,026	\$ 55,781,070	\$ 62,310,611	\$ 809,164
70	Vehicles	\$ 195,352,701	\$ 57,343,261	\$ 194,648,939	\$ 16,491,446
80	Professional Service – FD	\$ 730,404,138	\$ 686,077,171	\$ 791,213,475	\$ 60,188,716
90	Contingency Mgmt. Reserve ²	\$ 65,759,908	\$ -	\$ 11,310,411	\$ 167,690,747
100	Finance Charge ³	\$ 509,984,571	\$ 83,798,922	\$ 438,184,571	
Total		\$ 3,142,471,635	\$ 2,110,573,092	\$ 3,142,471,635	\$ 358,252,172

1. Current budget equals FFGA amount plus change orders CO-001-081, 083-115, 117, 120, 123, Directive Letters 001-039, 041, UR-CO-001,, 042, UR-CO-001-039.-

2. Estimate at Completion for Contingency reflects the amount approved for utilization per PM-5.07 Rev. 4.

3. The Estimate at Completion for Finance Charge has been adjusted for an underrun of \$71.8M. This underrun is expected to be authorized by the end of 2012.

General Comments:

Per FTA's direction during the quarterly progress review meeting held on 5/9/2012, the overruns, as of May 2012, of \$45,561,733 on the Allowance subcontracts awarded and yet to be transferred to Firm Fixed Price were obligated in June 2012.

a. Explanation of Variances

The major variances in the project budget are associated in seven categories as noted below and remain unchanged from last month:

1. SCC10 – Guideway and Track Elements has been reduced approximately \$26.1 million due to the decision by the DB contractor to self-perform the NATM tunnel work. In so doing, \$29.2 million was transferred out of the direct account to other accounts including predominantly SCC80 for the professional services portion of the subcontract budget. This was offset by scope additions and other budget transfers, the most notable being the adjustment for the revised federal/non-federal split, the addition of the directive letter for crossing the Beltway during construction of the HOT Lanes Project by VDOT and the addition of sales tax to permanent materials.
2. SCC20 – Stations has been increased by approximately \$31.3 million. The decision by the Airports Authority to remove the Wiehle Avenue Parking Garage – Allowance Item C-2, due to the Fairfax County Joint Development project, allowed the transfer of \$29.1 million out of the direct account into the unallocated contingency account. This was offset by a combination of add and subtract change orders, the most notable addition being the transfer from the tunnel subcontract. In addition, the allowance item for stations finishes and MEP increased over budget.
3. SCC30 – WFC Yard has increased by approximately \$14.0 million due to delay in progressing the design and additional requirements requested by WMATA.
4. SCC40 – Site work and Utility Relocation has been increased by approximately \$34.9 million as a result of a combination of change events (change orders, directive letters and scope transfers) and cost overruns. The forecast adjustments are predominantly due to cost overruns in utility relocations.
5. SCC50 -- Systems has increased by \$40.65 million due to additional WMATA requirements for Traction Power Remote Monitoring, Emergency Trip Station/Amber Light Warning System and requirements for Communications.

6. SCC60 – Right of Way Acquisition experienced nearly \$19.0 million increases primarily due to adjustment of project cost for the revised federal/non-federal split along Route 7.
7. SCC70 – Vehicles has been reduced by \$16.45 million due to actual bid prices.
8. SCC80 – Professional Services increased approximately \$70.8 million due to a combination of change events (\$17.8 million) and forecast adjustments (\$53.2 million). The change events are numerous with the most significant being the transfer from the tunnel subcontract and the addition of design for the HOT Lanes and WFCY. The forecast adjustment is predominantly attributed to higher project management costs for MWAA, PMSS and VDOT. In addition, WMATA budget transfers are treated as forecast adjustments.
9. SCC90 – Contingency Management Reserve estimate at completion of \$11.31M is available for future use with the transfer of the Finance Costs under run of \$71.8M to be authorized by year's end. The PMOC is of the opinion that the contingency reserve still needs to be increased considering that MWAA expects the remaining overrun for Allowance Items totals \$12.299M and there remain a large backlog of unsettled claims. MWAA has indicated that the Allowance Items overrun will be funded by the additional funding of \$150M approved by the MWAA Board in June 2012.

b. Monthly Cost Report – August 2012 Federal Only

DESCRIPTION	FFGA AMOUNT (Original)	EXPENDITURE TO DATE ¹	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION	PERCENT OF EAC EXPENDED TO DATE ⁷
FEDERAL (FFGA SCOPE)					
Design-Build					
Firm Fixed Price	\$ 1,112,052,173	\$ 1,428,158,296	\$ 231,557,736	\$ 1,659,716,032	
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 70,035,611	\$ 2,723,652	\$ 72,759,262	
	Firm Fixed Price Subtotal	\$ 1,177,161,581	\$ 1,498,193,907	\$ 234,281,387	\$ 1,732,475,294
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 130,105,577	\$ 130,105,577	
	Design-Build Contract Prices	\$ 1,607,361,398	\$ 1,498,193,907	\$ 364,386,964	\$ 1,862,580,871
Indexed Commodity Escalation	\$ 77,469,926	\$ -	\$ 45,248,522	\$ 45,248,522	
	Design-Build Contract Total	\$ 1,684,831,325	\$ 1,498,193,907	\$ 409,635,486	\$ 1,907,829,393
					79%
Utility Relocation					
Utility Work	\$ 84,312,807	\$ 101,705,695	\$ 8,544,820	\$ 110,250,515	
Terf Tax	\$ -	\$ -	\$ 0	\$ 0	
Project Management and Final Design	\$ 8,423,426	\$ 20,435,693	\$ (137,053)	\$ 20,298,640	
	Utility Relocation Total	\$ 92,736,233	\$ 122,141,388	\$ 8,407,768	\$ 130,549,155
					94%
Right of Way					
	Right Of Way Total	\$ 42,443,132	\$ 56,093,426	\$ 6,842,185	\$ 62,935,611
					89%
WMATA Agreement					
Vehicles	\$ 195,138,329	\$ 57,343,261	\$ 137,305,677	\$ 194,648,939	
Construction and Procurement	\$ 31,484,799	\$ 9,777,481	\$ 18,320,636	\$ 28,098,117	
WMATA Force Account Startup	\$ 13,777,100	\$ 6,643,797	\$ 6,761,224	\$ 13,405,021	
Project Management and Final Design	\$ 31,235,400	\$ 25,292,374	\$ 10,191,178	\$ 35,483,552	
	WMATA Agreement Total	\$ 271,635,628	\$ 99,056,913	\$ 172,578,715	\$ 271,635,628
					36%
Preliminary Engineering^{2,3}					
	Preliminary Engineering Total	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999
					100%
Airports Authority Services					
General Conditions ⁴	\$ 28,879,153	\$ 7,350,604	\$ 22,700,173	\$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 30,818,709	\$ 15,302,737	\$ 46,121,446	
Project Management Support	\$ 90,004,649	\$ 112,388,225	\$ 30,735,417	\$ 143,123,642	
	Airports Authority Services Total	\$ 142,109,519	\$ 150,557,538	\$ 68,738,328	\$ 219,295,866
					69%
Contingency⁵					
	Contingency Total	\$ 297,762,579	\$ -	\$ 11,310,411	\$ 11,310,411
Finance Costs					
	Finance Costs Total	\$ 509,984,571	\$ 83,798,922	\$ 354,385,649	\$ 438,184,571
Total Federal (FFGA Scope)	\$ 3,142,471,635	\$ 2,110,573,092	\$ 1,031,898,542	\$ 3,142,471,635	75%

1. Reflects Paid costs through August 31, 2012.

2. Preliminary Engineering Period (PE) - Prior to August 1, 2007.

3. Preliminary Engineering actuals have been agreed to be \$100,730,999. This is \$237,646 under the original budget of \$100,968,646. The under run is transferred to unallocated contingency.

4. The line item marked General Conditions includes Temporary Facilities Development, Hazardous Material Remediation, and Miscellaneous Access Roads.

5. Estimate at Completion for Contingency reflects the amount approved for utilization per PM-5.07 Rev. 4.

6. The Estimate at Completion for Finance Charge has been adjusted for an underrun of \$71.8M. This underrun is expected to be authorized by the end of 2012.

General Comments:

Per FTA's direction during the quarterly progress review meeting held on 5/9/2012, the overruns on the Allowance subcontracts awarded and yet to be transferred to Firm Fixed Price are obligated.

c. Project Funding Sources: August 2012

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE ¹	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
Sec 5309 New Starts Federal Funds						
Preliminary Engineering Grants			\$ 54,412,526	\$ 54,412,526	100%	\$ -
Final Design Grant	VA-03-0113-00		\$ 159,001,838	\$ 159,001,838	100%	\$ -
ARRA Construction Grant	VA-36-0001-00		\$ 77,260,000	\$ 77,260,000	100%	\$ -
FFGA Construction Grant	VA-03-0113-02		\$ 28,809,000	\$ 28,809,000	100%	\$ -
FFGA Construction Grant	VA-03-0113-03		\$ 85,000,000	\$ 85,000,000	100%	\$ -
FFGA Construction Grant ⁵	VA-03-0113-04		\$ 115,799,000	\$ 115,799,000	100%	\$ -
FFGA Construction Grant (amendment for FTA review)	VA-03-0113-05		\$ 90,832,000	\$ -	0%	\$ 90,832,000
FFGA Balance	Planned		\$ 288,885,636	\$ -	0%	\$ 288,885,636
Subtotal - New Starts		28.64%	\$ 900,000,000	\$ 520,282,364	57.81%	\$ 379,717,636
Other Federal Funds						
Sec 5307 Surface Transportation Program						
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 47,218,109	100%	\$ -
Construction Grant	VA-95-X056-02		\$ 21,281,890	\$ 21,281,890	100%	\$ -
Construction Grant	VA-95-X056-03		\$ 6,500,001	\$ 6,500,001	100%	\$ -
STP/Sec. 5307		2.39%	\$ 75,000,000	\$ 75,000,000	100%	\$ -
Local Funds						
VTA 2000			\$ 51,700,000	\$ 51,700,000	100%	\$ -
Commonwealth Transportation Bonds ^{2,5}			\$ 125,000,000	\$ 113,600,000	91%	\$ 11,400,000
Fairfax County Funds ³			\$ 523,750,000	\$ 319,846,062	61%	\$ 203,903,938
Dulles Toll Road Revenues ^{2,4,5}			\$ 1,467,021,634	\$ 1,030,144,666	70%	\$ 436,876,968
Subtotal - Local Funds		68.97%	\$ 2,167,471,634	\$ 1,515,290,728	69.91%	\$ 652,180,906
Total Project Budget		100%	\$ 3,142,471,634	\$ 2,110,573,092	67.16%	\$ 1,031,898,542
Interrelated Highway Activities						
DTR Revenues/Commonwealth Funds ³			\$ 123,208,229	\$ 81,073,785	65.80%	\$ 42,134,444
TOTAL			\$ 3,265,679,863	\$ 2,191,646,877	67.11%	\$ 1,074,032,986

¹ Reflects costs through August 31, 2012.

² In January 2010, \$23.6 million previously identified as pay-go Dulles Toll Road (DTR) Revenues were reclassified as Commonwealth Transportation Board (CTB) funds, reducing the contribution from DTR revenues and increasing the contribution from CTB funds.

³ Includes Tax District Revenues (\$400 million) plus debt service costs allocated to Project Budget.

⁴ Includes pay-as-you-go revenues and bond proceeds.

⁵ Expenditures includes accruals.

6. Project Risks

In August 2008, FTA directed the PMOC to resume the risk process and to prepare a report that combines the requirements of PG-40: Subtasks PG-40E, PG-40F, and PG-40G. These subtasks are to identify the framework for primary and secondary mitigation of project cost and schedule. A draft PG-40EFG report was prepared and the Risk Register was updated. The documents were shared with MWAA and a workshop was held on August 26-27, 2008 to review the Risk Register, reach a consensus on the top ten costs and schedule risks and to identify MWAA's cost, schedule and secondary mitigation procedures. The PMOC issued the Final PG-40EFG spot report on October 6, 2008.

The PMOC reviewed MWAA's updated Risk Assessment dated April 15, 2011. A series of meetings during the following eleven months led to submission of RCMP Revision 2c on March 5, 2012. The FTA and PMOC provided comments on March 16, 2012 and MWAA submitted RCMP Rev. 3 to the FTA for approval by letter dated March 28, 2012. The FTA approved the

RCMP on April 13, 2012. In June 2012, MWAA updated the Risk Register. This document and a recommendation to update the Top Ten Risks were forwarded to the FTA and the PMOC for review on August 27, 2012. FTA, the PMOC and MWAA discussed this issue during the PMOC's September monthly site visit. The PMOC provided review comments and a modified Top Ten List that will be reviewed by MWAA. *MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the FTA/PMOC for review and approval.*

Budget Risks: Through *August 25, 2012*, MWAA reports that it has utilized \$283,718,726 of the \$261,000,000 available contingency for the first *nine* contingency milestones. MWAA has allocated \$26.24 million of the \$71.8 million in finance cost savings to the current phase bringing the remaining balance of \$3,519,541 available through the *ninth* contingency phase. The contingency utilization reflects expended costs. MWAA estimates that the third contingency phase, Utility Relocation Program, will be fully completed in the *fourth* quarter of 2012. MWAA reports that it has already obligated \$74,533,446 of the \$82,324,312 (\$36,762,579 original +\$45,561,733 contribution from finance savings) available for Phases 10 through 12 which leave a balance of \$7.790 million. As of *August 25, 2012*, of the \$297,762,579 total project contingency plus a contribution of \$71,800,000 from finance cost savings, the project has a total of \$11,310,411 available. To address potential budget overruns, the PMOC had concluded that MWAA needed to replenish the Project contingency and actively pursue items that may be additional scope (non-FFGA) and billed to the responsible parties. MWAA's transfer of the \$71.8M reduction in the finance cost savings to Contingency has improved the Project Contingency situation. At the July 10th update meeting, MWAA indicated that this transfer will not occur until year's end with the new MWAA budget.

MWAA submitted a tabulation of possible CNPAs that could further improve the Contingency on July 6, 2012 with a total value of approximately \$63.9 million. This tabulation was reviewed by the FTA and PMOC and additional information was requested from MWAA on July 30, 2012. The revised tabulation of CNPAs was submitted on August 10, 2012. MWAA and the FTA/PMOC discussed this tabulation following the September 7 monthly meeting. The FTA/PMOC indicated that there was a potential \$23,861,089 that could be considered CNPAs. FTA indicated that \$19,511,703 in additional cost would be taken up with the FTA Administrator for possible inclusion in the CNPAs.

MWAA acknowledges that WMATA will contribute no funding, that the FTA and VDOT budgets are fixed, and that the local funding partners bear a percentage of the non-FFGA budget overruns; all principles understand their financial responsibility and all budget overruns will be managed according to the agreed funding plan.

Schedule Risks: With regard to Schedule Contingency, MWAA and DTP previously agreed to a zero loss recovery schedule with a data date of December 25, 2010. This recovery schedule had a mitigation period of fourteen months, extending from January 2011 through February 2012 to recover 113 calendar days of the total of 510 calendar days. MWAA and DTP are now working off a new Mitigation Schedule with a data date of October 25, 2011 that was accepted "as noted" on November 23, 2011. Through *August 2012*, MWAA has granted DTP time extensions of 21 work days reducing the available contingency from 510 to 481 calendar days. These agreed excusable weather delays have a relatively minor impact to the FFGA completion

date and also protect against DTP conducting costly constructive acceleration to make up the 21 working days.

Top Ten Risks: The following are the Project’s Top 10 Cost and Schedule Risks from the RCMP dated December 2011 and transmitted on March 5, 2012, and updated for the month of August 2012, along with their status. As noted earlier in this report, MWAA updated the Risk Register Assessment on June 30, 2012 and submitted it to the FTA and PMOC on August 27. FTA, the PMOC, and MWAA discussed this issue during the PMOC’s September monthly site visit. The PMOC provided review comments and a modified Top Ten List that will be reviewed by MWAA. MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the FTA/PMOC for review and approval.

Summary Status of the Proposed Top Ten Project Risks, August 2012

RISK NUMBER	RISK DESCRIPTION	RISK STATUS			
		SINCE INCLUSION ON TOP TEN LIST		Since July 2012 Update	
		COST	SCHEDULE	COST	SCHEDULE
R23	Automatic Train Control (ATC) System Requirements per NTSB concerns and Other Systems Issues resulting from the Red line accident and NTSB safety report.	Unchanged	Unchanged	Unchanged	Unchanged
M27	Delay in Vehicle (Rail Car) Delivery beyond the specified FFGA ROD date of December 1, 2014.	Unchanged	Unchanged	Unchanged	Unchanged
C27	WMATA resource constraints delay system acceptance or operational testing resulting in additional costs.	Decreased	Decreased	Unchanged	Unchanged
C20	WMATA deliverables scope of work – including technical support and WMATA construction elements may exceed the budget and schedule.	Unchanged	Unchanged	Unchanged	Unchanged
C39	Other construction issues (WFCY delayed construction which effects opening of the system).	Decreased	Decreased	<i>Increased</i>	<i>Increased</i>
D34	WMATA Delay in reviewing/approving DTP shop drawings and systems test plans and reports.	Unchanged	Unchanged	Unchanged	Unchanged
C21	Availability of track access for the Contractor to complete the K-Line connection work.	Unchanged	Unchanged	Unchanged	Unchanged
C40	Other Construction issues (station finishes)	<i>New</i>	<i>New</i>	<i>New</i>	<i>New</i>
D41	Powell proposed NDC Breaker not accepted by WMATA	<i>New</i>	<i>New</i>	<i>New</i>	<i>New</i>
C41	Completion of the installation of upgrade for the new (proposed) communication center at the Carmen Turner Building by WMATA to support integration testing to meet the Project ROD.	Decreased	Decreased	<i>Decreased</i>	<i>Decreased</i>

7. Action Items

MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
2	2A.04	Update Procedures PM5.01 (Processing DB Changes) and PM5.07(Management of Project Contingency)	Procedures need to include Directive Letters and Contingency Drawdowns.	Y	Y	Y	These Procedures in support of RCMP need to be updated to include Directive Letters, Contingency Drawdown and top management control of contingency. PM-5.07, Rev. 4 was submitted with RCMP Rev.3 and accepted by the FTA. <i>Revision to PM-5.01 was provided at the August 22, 2012 QPRM.</i>	C
2	2A.05	Submit Updated Risk Register developed in June 2012	FTA and PMOC need to review the updated document.	Y	N	N	The updated Risk Register Assessment was sent to the FTA and PMOC on August 27 th . The PMOC provided review comments and a modified Top Ten List that will be revised by MWAA. <i>MWAA provided a submittal dated October 3, 2012 of its review and proposed changes to the FTA/PMOC for review and approval.</i>	R
2	2A.06	Determine Federal Budget CNPAs.	Items have been charged to the Federal portion of the Project Budget that may be CNPAs.	Y	N	N	Over the past six months MWAA has submitted costs that they believe are CNPAs. The FTA and PMOC have reviewed these lists with the most recent dated August 10, 2012 which were discussed on September 6, 2012. FTA/PMOC indicated that there is a potential for \$23.86M that could be considered CNPAs, with an additional \$19.51M to be taken up with the FTA Administrator.	R

KEY ITEM

Subtask 2A
Subtask 2B

CLIN 0002A – PMP Review
CLIN 0002 – On-Site Monitoring

LEGEND

PRIORITY (PR)

1- Most Critical
2- Critical
3- Least Critical

GRANTEE ACTION

D – Remedial Action Developed
A – Remedial Action Approved
I – Action Implemented

PMO CONTRACTOR STATUS

R – Review On-going
C – Completed – No further review required

Note – Items marked with a ‘C’ in the ‘PMO Contractor Status’ column will be dropped from future reports.

APPENDICES

APPENDIX A – LIST OF ACRONYMS

AAC	Agreement After Certificate
AMEP	Architectural/Mechanical/Electrical/Plumbing
ARRA	American Reinvestment and Recovery Act
ASSHTO	American Association of State Highway and Transportation Officials
BFMP	Bus Fleet Management Plan
CAR	Corrective Action Request
CCC	Construction/Procurement/Installation Conformance Checklist
CD	Calendar Days
<i>CDRL</i>	<i>Contract Deliverables Requirements List (7K Railcars)</i>
CNPA	Concurrent Non-Project Activities
CPM	Critical Path Method
CR	Communications Room
CTI	CTI Consultants, Inc.
CY	Calendar Year
DB	Design-Build
DCC	Design Conformance Checklist
DCN	Design Change Notice
DCR	Dulles Connector Road
DF	Direct Fixation
DGS	(Virginia) Department of General Services
DIAAH	Dulles International Airport Access Highway
DR	Deficiency Report
DTP	Dulles Transit Partners, LLC
DTR	Dulles Toll Road
DVP	Dominion Virginia Power
<i>ETS</i>	<i>Emergency Trip Station</i>
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FTE	Full Time Equivalent
FY	Fiscal Year
HOT	High Occupancy Toll
<i>IDW</i>	<i>Intrusion Detection Warning System</i>
IFC	Issued For Construction
IFP	Issued for Proposal
IRR	Issue Requiring Resolution
KSA	KSA, INC – Producer of Concrete Crossties
MH	Manhole
MCI	A communication company now owned by Verizon
MEP	Mechanical, Electrical and Plumbing
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
ORD	Operational Readiness Date

PDA	Pile Driving Analysis
PDR	Preliminary Design Review (7K Railcars)
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor
PMSS	Project Management Support Services
PMP	Project Management Plan
QA	Quality Assurance
QC	Quality Control
QPP	Quality Program Plan
RAMP	Real Estate Acquisition Management Plan
RCMP	Risk and Contingency Management Plan
RFC	Request for Change
RFMP	Rail Fleet Management Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROE	Right-of-Entry
ROW	Right-of-Way
RSD	Revenue Service Date (synonymous with Revenue Operations Date)
SCC	Standard Cost Category
SCIL	Safety and Security Certifiable Items List
SOE	Support of Excavation
SSCD	Scheduled Substantial Completion Date
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan
STP	Surface Transportation Program
TBD	To Be Determined
TOC	Tri-state Oversight Committee
TPSS	Traction Power Substation
UR	Utility Relocation
VDOT	Virginia Department of Transportation
W&OD	Washington and Old Dominion
WFC	West Falls Church
WFCY	West Falls Church Yard
WMATA	Washington Metropolitan Area Transit Authority

APPENDIX B -- PROJECT OVERVIEW AND MAP

Project Overview

Date: *October 23, 2012* (reporting current through *September 2012*- Financials through *August 2012*)

Project Name: Dulles Corridor Metrorail Project – Extension to Wiehle Avenue

Grantee: Metropolitan Washington Airports Authority (MWAA)

FTA Regional Contact: Brian Glenn, P.E.

FTA Headquarters Contact: Dale Wegner, P.E.

Scope

- **Description:** MWAA The Project is the initial 11.7-miles of the LPA, which will run from the current Metrorail Orange Line near the West Falls Church (WFC) station to Wiehle Avenue in Reston, providing direct service to the commercial and office center of Tysons Corner. The Project will be constructed in or parallel to the Dulles Connector Road, Routes 123 and 7 through Tysons Corner, and the Dulles International Airport Access Highway (DIAAH). It will include five new passenger stations, one 2,300-car parking facility (provided through a joint development agreement at Wiehle Avenue Station), improvements to the existing WFC Service and Inspection Yard, tail tracks outbound of the interim terminus station at Wiehle Avenue, and the procurement of 64 rail cars.
- **Guideway:** Phase 1 is approximately 11.7 miles in length consisting of two tracks.
- **Stations:** There are five stations in Phase 1. Each station will include a kiss-n-ride area; bus drop-off facilities; station platforms with benches, canopies, ticket vending machines; and other amenities.
- **Support Facilities:** There will be a modification to the West Falls Church Yard and service building. A tail track will be constructed beyond the Wiehle Avenue Station.
- **Vehicles:** The Project will include the purchase of sixty-four vehicles for Phase 1 that will be procured by WMATA.

Ridership

The Project is estimated to carry 69,700 average weekday riders during opening year.

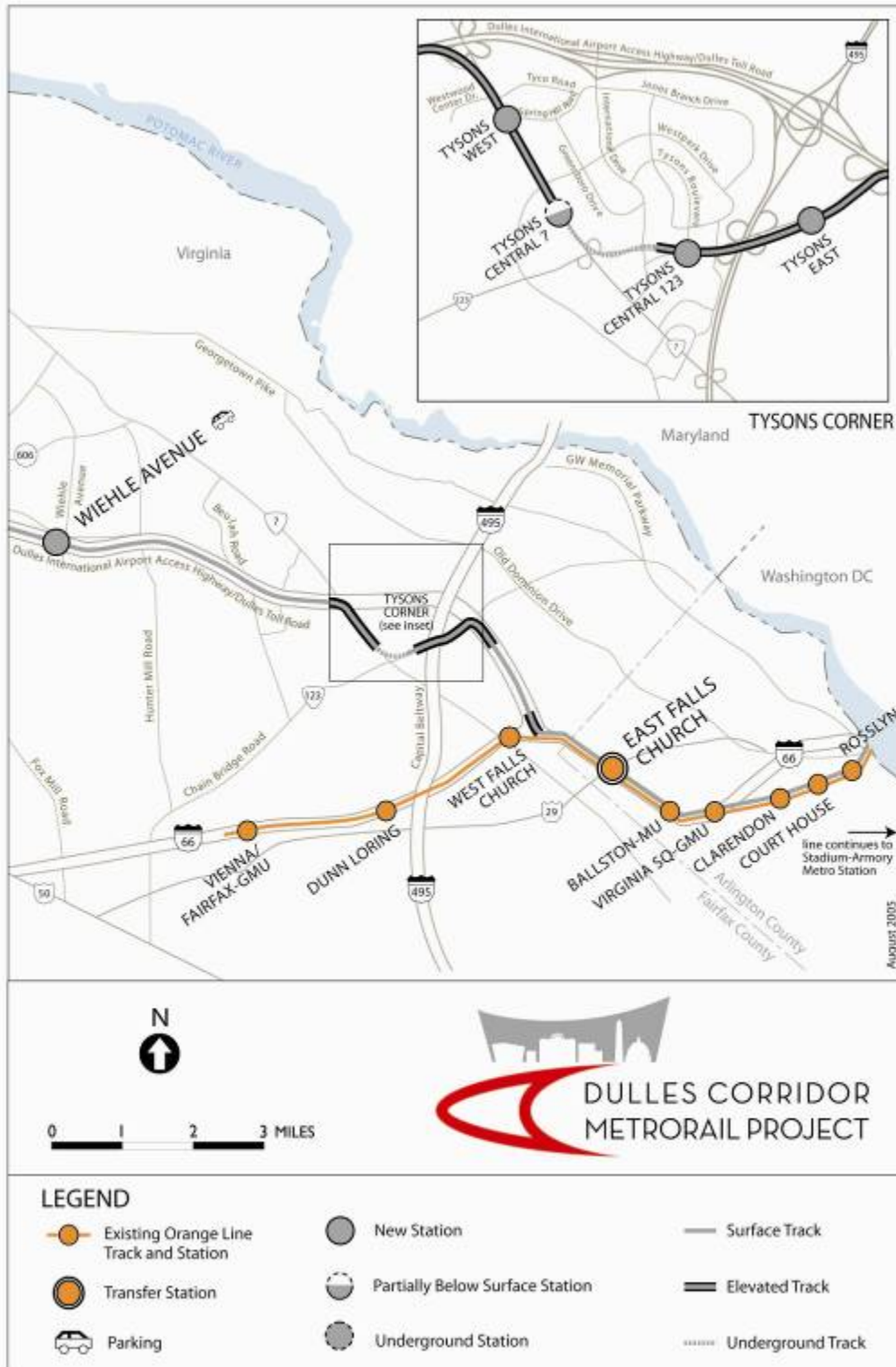
Schedule

06/10/04	Approval to Enter PE	2011	Estimated Rev Ops at Entry to PE
05/12/08	Approval to Enter FD	12/04/13	Estimated Rev Ops at Entry to FD
03/10/09	FFGA signed	12/01/14	Estimated Rev Ops at FFGA
01/10/14	Revenue Service Date (RSD) <i>as of August 25, 2012</i>		
82.0%	Percent Complete Construction <i>as of August 31, 2012.</i>		
62.1%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
79.8%	MWAA's Estimate of Project Earned Value through <i>August 2012</i>		

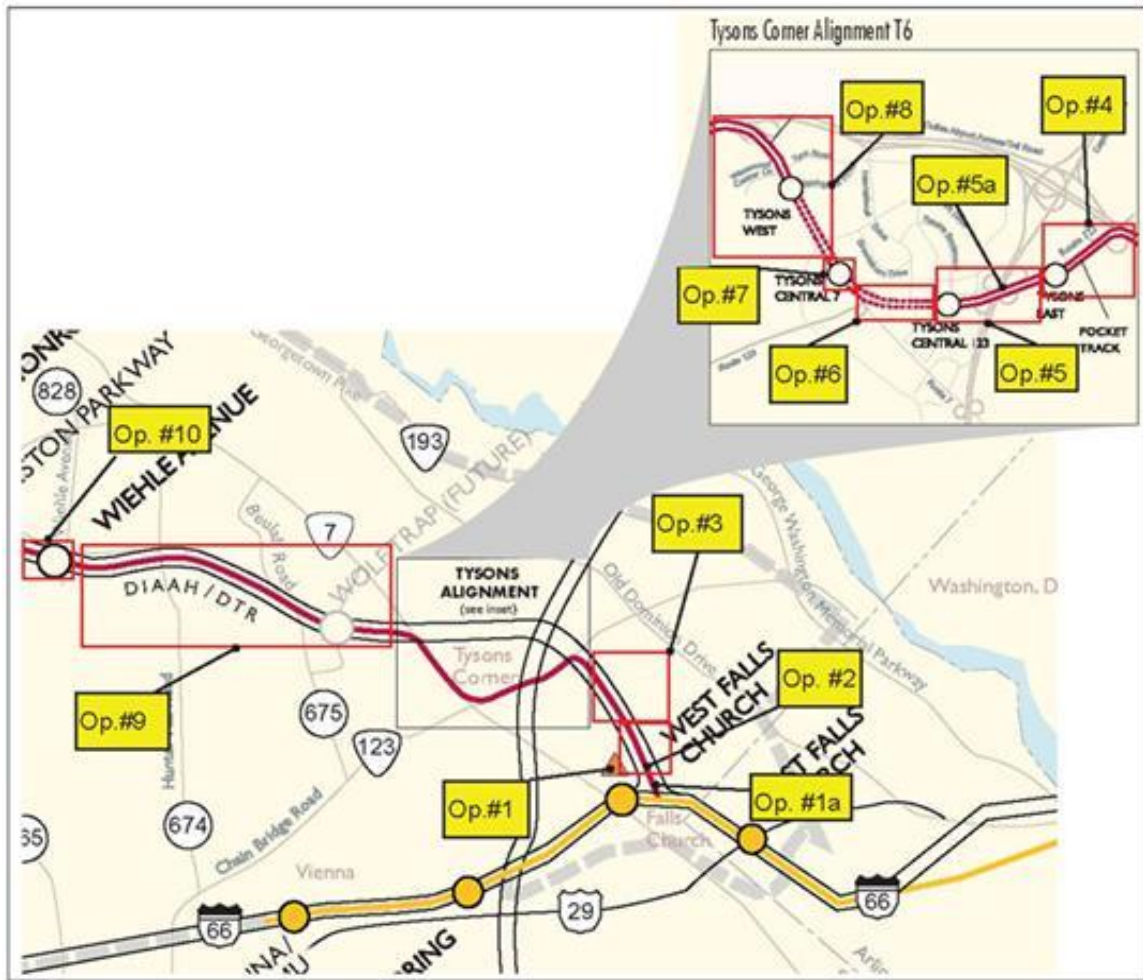
Cost

\$1.490 billion	Total Project Cost (\$YOE) at Approval to Enter PE
\$2.961 billion	Total Project Cost (\$YOE) at Approval to Enter Final Design
\$3.142 billion	Total Project Cost at date of report including \$510 million in Finance Costs
\$2.110 billion	Expenditures through <i>August 2012</i> from total project budget of \$3.142B
75%	Percent complete based on federal expenditures excluding contingency and finance charges through <i>August 2012</i> .
\$11.31 million	Total project contingency remaining (allocated and unallocated) through <i>August 2012</i> .

Project Map



Construction Operational Areas



APPENDIX C – MWAAs SAFETY AND SECURITY CHECKLIST

Project Overview	Dulles Corridor Metrorail Project		
Project Mode (Rail, Bus, BRT, multimode)	Rail		
Project Phase (Preliminary Engineering, Design, Construction, or Start-up)	Design and Construction		
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGG, etc)	Design/Build		
Project Plans	Version	Review By FTA	Status
Safety and Security Management Plan	3/20/12	4/20/12	Accepted. MWAA's SSMP Rev.9 dated March 2012 was submitted for review in March 2012 and accepted by the FTA on April 13, 2012.
Safety and Security Certification Plan			WMATA's SSCPP March 2012 Revision is included as Appendix E to MWAA's SSMP Revision 9, which was accepted by the FTA on April 13, 2012.
System Safety Program Plan	1/20/2011		In response to FTA's Safety and Security Oversight Audit of TOC/WMATA and TOC Triennial Review findings, WMATA submitted an updated SSPP dated January 20, 2011, which was approved by TOC on February 22, 2011 with minor comments to be addressed in the next revision.
System Security Plan or Security and Emergency Preparedness Plan (SEPP)			WMATA submitted a revised SEPP to TOC in March 2010. TOC approved the SEPP on August 2, 2010.
Construction Safety and Security Plan			Addressed in PMP Version 8 was submitted on May 1, 2012 and is under revision.

Safety and Security Authority	Y/N	Notes/Status
Is the grantee subject to 49 CFR Part 659 State Safety Oversight requirements?	Y	Tri-State Oversight Committee (TOC)
Has the State designated an oversight agency as per Part 659.9?	Y	Tri-State Oversight Committee (TOC)
Has the oversight agency reviewed and approved the grantee's SSPP as per 659.17?	N	An updated WMATA SSPP dated January 20, 2011 was approved by TOC on February 22, 2011.
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	Y	Approved on August 2, 2010
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	TOC was not represented at the August 22, 2012 QPRM.
Has the grantee submitted its safety certification plan to the oversight agency?	N	Plan in progress. TOC participates in monthly meetings.
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	WMATA will be operator.

SSMP Monitoring	Y/N	Notes/Status
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	Y	
Grantee reviews the SSMP and related project plans to determine if updates are necessary?	Y	
Does the grantee implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	N	WMATA will be operator.
Does the grantee maintain a regularly scheduled report on the status of safety and security activities?	N	WMATA will be operator.
Has the grantee established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	N	WMATA will be operator.
Does the grantee update the safety and security responsibility matrix/organizational chart as necessary?	N	WMATA will be operator.
Has the grantee allocated sufficient resources to oversee or carry out safety and security activities?	N	WMATA will be operator.
Has the grantee developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	Y	

Does the grantee implement regularly scheduled meetings to track to resolution any identified hazards and/or vulnerabilities?	Y	
Does the grantee monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	Design and Construction only. WMATA participates
Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	N	MWAA's letter of September 7, 2011 to WMATA indicated that they believed that such an evaluation is not required but that they would support WMATA if it chooses to conduct such an analysis.
Has the grantee ensured the development of safety design criteria?	Y	
Has the grantee ensured the development of security design criteria?	Y	
Has the grantee ensured conformance with safety and security requirements in design?	Y	
Has the grantee verified conformance with safety and security requirements in equipment and materials procurement?	Y	
Has the grantee verified construction specification conformance?	Y	
Has the grantee identified safety and security critical tests to be performed prior to passenger operations?	Y	In progress.
Has the grantee verified conformance with safety and security requirements during testing, inspection and start-up phases?	N	After SSCD
Does the grantee evaluated change orders, design waivers, or test variances for potential hazards and /or vulnerabilities?	Y	
Has the grantee ensured the performance of safety and security analyses for proposed work-arounds?	Y	
Has the grantee demonstrated through meetings or other methods, the integration of safety and security in the following: • Activation Plan and Procedures • Integrated Test Plan and Procedures • Operations and Maintenance Plan • Emergency Operations Plan	N	In progress with WMATA.
Has the grantee issued final safety and security certification?	N	
Has the grantee issued the final safety and security verification report?	N	

Construction Safety	Y/N	Notes/Status
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	DTP's Construction Safety, Health and Security Plan accepted on January 6, 2009.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	
Provide the grantee's OSHA statistics compared to the national average for the same type of work. If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	Y	DTP has recorded 384 first aid cases and six lost time cases in 11.286 million project man-hours, which is below the national average.
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	

Federal Railroad Administration	Y/N	Notes/Status
If shared track: has grantee submitted its waiver request application to FRA? (Please identify specific regulations for which waivers are being requested)	N/A	Heavy Rail Transit Project. No FRA involvement.
If shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	N/A	
Is the Collision Hazard Analysis underway?	N/A	
Other FRA required Hazard Analysis – Fencing, etc.?	N/A	
Does the project have Quiet Zones?	N/A	
Does FRA attend the Quarterly Review Meetings?	N/A	

APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW

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