

**COMPREHENSIVE MONTHLY REPORT**

**August 2012**

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

September 26, 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

**Hill International, Inc.**

One Penn Square West

30 South 15<sup>th</sup> Street

Philadelphia, PA 19102

**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 September 6, 2012 to conduct a monthly progress meeting for work performed in August 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 September 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 in 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 *September 6, 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 *August 31, 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 102 parcel packages required, 99 have been acquired.
- **Rail car Procurement - Monthly Progress Review Meeting No. 23** between WMATA and Kawasaki on the 7000 Series railcars was held on *August 9, 2012*, and the WMATA/PMOC Update Meeting was held on *August 14, 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 August 28, 2012 compared to the mitigation schedule completion date of March 22, 2012, a slippage of 158 calendar days. FDR meetings have been completed with the exception of train wayside

equipment. 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 will result in the final FDR meeting being held in early September with the FDR completion now being September 21, 2012. The approved FDR *Contract Deliverables Requirements List (CDRLs)* is at 39.1% completed and 52.1% in progress. The submission and acceptance of final design documentation remains. WMATA reported that they have filled the Senior Program Manager Position; Mr. Sachit Kakkar, *previously* with the Southeastern Pennsylvania Transportation Authority, *joined WMATA* on August 27, 2012.

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 64<sup>th</sup> 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 *August* 2012. The Tysons West Kiss & Ride Lot 100% design is not expected until *October 17*, 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. *MWAA reported during the September 6<sup>th</sup> Monthly Meeting that some improvements in schedule for the Draft Final Report have occurred and Battelle now expects to submit the Draft Final Report on September 28, 2012 with a presentation to follow a week later. WMATA has stated that they will not approve the interlocking into their system and the K-Line cutover cannot proceed until Battelle answers WMATA's remaining concerns regarding the Generation 4 track circuit modules.* The Project had been planning a September 15, 2012 cutover, but this will be delayed until at least mid-October.
- **Construction progress** is broken into two components: utility relocation (UR), which *remains at 99% complete*, and design-build (DB) construction, which is approximately 79% complete. Significant accomplishments for *August* included *completion of the track on the Tysons East Guideway, 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 three 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 testing.*

<b>CONSTRUCTION PROGRESS THROUGH JULY 2012</b>			
<b>GUIDEWAYS/ TRACKWAYS and SYSTEMS</b>	<b>% COMPLETE</b>	<b>STATIONS</b>	<b>% COMPLETE</b>
Tysons East Guideway	100%	Tysons East	57%
Tysons West Guideway	99%	Tysons Central 123	51%
O-3 (DCR) Trackway	99%	Tysons Central 7	39%
O-9 (DIAAH) Trackway	98%	Tysons West	42%
Systems	22%	Wiehle Avenue	63%
Trackwork	69%		

- **The DTP Schedule Update** with a data date of July 25, 2012 “Mitigation Schedule” showed a 5 calendar day decrease *which remained the same as reflected in the June 25, 2012 update.*
- **With regard to the West Falls Church Yard (WFCY) completion date**, DTP’s schedule update of July 25, 2012 *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 this Monthly Meeting that discussions and efforts between MWAA and DTP were underway to mitigate the delays.*

**Budget** status as of July 25, 2012 indicates that \$2,034,816,961 (73%, excluding the remaining contingency and finance charges) has been expended of the \$3,142,471,634 budget total. MWAA reports \$270,879,785 of the available contingency for the first eight contingency milestones have been drawn down to date with a remaining contingency balance of \$6,358,482 available through the eighth contingency phase. The current estimate of the contingency available at the end of construction is \$14.2M. **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.** In addition, the PMOC has been reviewing changes to the project scope since Preliminary Engineering that could be considered Concurrent Non-Project Activities (CNPAs). *The FTA/PMOC at a September 6<sup>th</sup> meeting with MWAA indicated that there was a potential \$23,861,089 that could be considered CNPAs. In addition, the FTA indicated that \$19,511,703 in additional cost would be taken up with the FTA Administrator for possible inclusion in the CNPAs.*

- MWAA’s estimate of the **Earned Value** for the Project through July is 78.2%.
- **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.*

The Full Time Equivalents (FTE) estimated total for *August* is *1,467* which is a decrease of *eight* from the *July* actual of *1,475*. 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**

<b>FFGA-MWAA Core Accountability Items</b>			
<b>Project Status:</b>		<b>Original at FFGA:</b>	<b>Current Estimate*:</b>
<b>Cost</b>	Cost Estimate	\$3.142B	\$3.142B
<b>Contingency</b>	Unallocated Contingency		
	Total Contingency (Allocated plus Unallocated)	\$297.76M	\$14.18M
<b>Schedule</b>	Revenue Service Date	December 1, 2014	January 7, 2014***
<b>Total Project Percent Complete</b>		Based on Expenditures**	73%
		Based on Earned Value	78.2%
<b>Major Issue</b>	<b>Status</b>	<b>Comments/Action/Planned Action</b>	
<b>Concurrent Non-Project Activities (CNPA)</b>	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. <i>MWAA and the FTA/PMOC discussed this tabulation following the September 6 monthly meeting.</i>	
<b>Contingency</b>	<i>Overall Project Contingency level may be insufficient.</i>	<i>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.</i>	
<b>Date of Next Quarterly Meeting:</b>		November 14, 2012	

Note: \* Through July 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 (\$98.4 million, of which \$52.8 million has been funded *through Phase 8 of the contingency drawdown schedule*, plus \$45.6 million, which has been obligated in *Phases 9-12*) 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 *July 25, 2012 remained at a -5 calendar variance to the contract schedule reflecting an SSCD of September 3, 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 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 *July 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.* 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 ongoing struggle to address the impacts of the March 2011 earthquake and tsunami in Japan continues to be a concern to the PMOC. *The completion of the Final Design Reviews (FDR) continues to lag. 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.* On December 21, 2011, WMATA approved a mitigation contract schedule that forecasts a conditional acceptance date of the 64<sup>th</sup> DCMP rail cars on June 12, 2015. This schedule does not meet the FFGA Revenue Service Date (RSD) date of December 1, 2014. *This issue remains a concern of the FTA and PMOC.*

# 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 July 2012. In this update DTP *again* reported a possible loss of 5 calendar days to the SSCD forecasted by DTP to occur on



September 3, 2013 which is the same as reported the previous month. 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 July 25, 2012 on August 24, 2012 and “Accepted as Noted” the schedule update, although was not in agreement with 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 8, resulting in a new total of \$276.24 million. Through July 2012, MWAA has utilized \$270.88 million resulting in a remaining balance of \$6.36 million. The contingency utilization reflects expended and obligated costs. MWAA allocated the remaining \$45.56 million to the contingency budget for Phases 9 through 12. With \$84.50 million in obligated contingency, this leaves a balance of \$7.82 million for Phases 9 through 12 and a grand total balance, as of the end of July 2012, of \$14.18 million in remaining 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 August 2012, there has been a cumulative total of 11,030,588 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 and remains under review by MWAA and WMATA. Comments are anticipated from WMATA by September 14, 2012.

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 are expected to be ready to issue for permit on September 19 and be permitted by *October 17, 2012. The systems design remains incomplete. The FTA requested MWAA to provide a table detailing the systems design status in subsequent monthly progress meeting handouts to enable oversight.*

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. Alstom committed to expedite the submission of an "Operating and Support Hazard Analysis" (OSHA) which they would provide in mid-September. Battelle said they would review the OSHA and address the other open items with a Draft Final Report by mid-October and a Final Report in November. The group pressed DTP/Alstom and Battelle to improve that schedule. *As a result, MWAA reported during the September 6<sup>th</sup> Monthly Meeting that some improvements in schedule have occurred and Battelle now expects to submit the Draft Final Report on September 28, 2012 with a presentation to follow a week later.* 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." The Project had been planning a September 15, 2012 cutover, but this will be delayed until at least mid-October.

## **b. Bidding and Construction Status**

Through *July 2012*, DTP has awarded \$422,941,992 worth of the \$437,278,511 federally funded Allowance Items Budget to subcontractors and suppliers with an \$88,296,368 overrun for 34 of 38 sub-contract packages awarded thus far. In addition, MWAA has Allowance Items recommended for Award, but not yet awarded, worth \$144.6 million, which is an additional \$45.7 million over budget. The \$45.7 million does not include the remaining allowance items yet to be awarded, including Pavilion and Pedestrian Finishes (C3), Specialties (including signage) (C3), Installation of Public Art (C7), Spare Parts (C11). The estimated value of these remaining items is *estimated by MWAA to be \$17,549,368 which represents a variance of \$12,299,425.*

Utility relocation is 99% complete, and DB construction is approximately 79% complete. Remaining utility relocation involves punch list work on traction power ductbanks and manholes and Dominion Virginia Power's (DVP) installation of power cables to *seven of the remaining* Traction Power Substation.

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; completed acoustical barrier panel installation at the Magarity and Pimmit Run Bridges; completed installing tiebacks for Support of Excavation (SOE) piles at the S&I Building foundation in the WFCY; continue installing SOE lagging for the Sound Cover Box (SCB) foundation at the WFCY; began micro-pile installation for the SCB foundation in the WFCY; completed paving over last section of the WFCY cut and cover tunnel and shifted the eastbound DCR traffic to the right to allow for completion of the left shoulder grading and paving.*

### **Systems Work**

- ***During K-Line Full Outage 8/3-6/12***

*Installing and configuring Intrusion Detection Warning System (IDW) for final cutover; installing Heater Control cabinets and fuse box disconnects; greased six switch machines; grounding fence posts and lower tension wire; installing ETS stands, panels and cables; began cable terminations not completed during outage; and installing contact rail heat tape not completed during outage.*

- ***During K-Line Full Outage 8/24-26/12***

*Converted the IDW System to its final configuration; installed snow melter cabinets and terminated cables; completed switch light modifications to the existing Fisher TPSS DC Panel and terminated cables in the existing DTS and Annunciator panels.*

- ***At the Fisher Ave TPSS/TCR#1***  
*Installing ATC equipment in the rack J2 (Local Control Panel); continued installing FIA devices and terminating cables in the Communications Room; installed conduit from the TCR to Communications Room for the data link wires; and terminated communications cables and installed the telephone gateway in Communications Room.*
  
- ***TPSS #1 (Plainfield St. – N91)***  
*Continued racking cables in electrical manholes and cable vaults; continued terminating and meggering Traction Power Cables to the contact rail; continued installing modified rectifier transformer bus duct and torque bolts; continued installing of ETS and Heater Control panels and cables; continued installing TPSS to the rectifier transformer, conduits and cable for the monitoring and control system; pulling cables from the RTU to the UPS, auxiliary transformer and ETS Relay Cabinet; continued terminating and meggered 500kcmil cables to feed power to TBS #2; repairing damaged fiberglass conduit stub-ups for OB sub-station return cables; terminating the 34.5kV cables from Vista Switch at the incoming line breakers; continued modifying the N91 transfer switch per Alstom Engineering Revision #31456-226-07; pulled (2) 10pr #20 ETS cables from TPSS to the future N3 track; maintained and refueled the temporary power generator daily; continued meggering Traction Power cables; installing heat tape fuse box disconnects and heater control cables; dressing and terminating negative return cables at the WZ-bonds; continued installing, testing and terminating ETS and Heater Control cables; continued grounding ETS and Heater Control cabinets and frames; continued installing TPSS to the rectifier transformer cable for the monitoring and control system; terminated previously pulled control cables from the rectifier transformer at the auxiliary transformer control box; began terminating the N3 Traction Power Cables and installing conduit seals; energized the TPSS permanent power on August 13, 2012; began phase and voltage testing of the low voltage panels.*
  
- ***Plainfield TCR and N91 Area of Control***  
*Continued pulling, meggering and terminating ATC cables for the WZ-bonds; installed switch machine 5A; installed 2 junction boxes for switch machine 5A and loops; performing trackside ATC punchlist work; pulled (2) 6 pair #22 ETS phone cables to the Communications Room; continued terminating ATC cables for the WZ-bond; pulled jumpers to the recently installed additional junction boxes per design change; installing IDW on the IB and OB barrier walls from 527+00 to 555+00; installing snow melter cabinet foundations; began phase and voltage testing of the low voltage panels; torque Communication Room and TPSS exterior ground bus bar bolts; continued installing FIA devices in the TCR and Communications Room and continued N91 voltage drop modifications in the TCR.*
  
- ***TBS #2 (Baldwin Drive – N92)***  
*Replaced cables in the TCR power racks per the N92 voltage drop modifications; pulled the 350 KCM cables into TBS from the cable vault; cutover to permanent*

power in conjunction with the TPSS #1 energization; continued installing heat tape fuse box disconnects; installed non-metallic covers in the base of the breaker cabinets and continued installing FIA devices.

- **Baldwin TCR and N92 Area of Control**

*Continued testing fiber optic cables; installed the new Automatic Transfer Switch; continued performing trackside ATC punchlist work; continued installing AC track circuits; pulled cross-bond cable between WZ-5 and WZ-16; installing switch lights on retaining walls; installing IDW on the IB and OB barrier walls; continued terminating FIA cables in the Communications Room; and continued pulling SCADA cabling from the TBS RTU to the Communications Room.*

- **TPSS #2 (Baldwin – N92)**

*DTP continued racking cables in the cable vault; terminating and meggering cables in TPSS; continued installing the modified rectifier transformer bus duct and supports; continued installation of jumpers at the bonded rail joints and installing ETS and Heater Control supports and panels; pulled trackside ETS and HC cables into cabinets for future termination; dressing and strapping Traction Power Sub-Station returns and installing conduit seals; continued installing heat tape fuse box disconnects; continued pulling ETS and HC cables into cabinets and testing same; continued installing ETS and HC cabinet grounding cables. MEC continued installing conduits from TPSS to the rectifier transformers. DTP continued labeling trackside traction power cables; and continued terminating ATC cables at the switch machines.*

- **Operations Area OP-4/5A (Tysons East Guideway/Station/I-495 Crossing)**

- Tysons East Station**

*Forming/reinforcing for Pavilion walls, pavilion base slab, pavilion elevator walls and pedestrian bridge support piers and station north and south retaining walls started pile cap of Pedestrian Bridge support #2; installing plumbing in the mezzanine rest rooms; installing equipment for elevators and escalators; installing electrical equipment, devices and raceway under the platform at the mezzanine level, TCR, AC Switchgear Room and TPSS #3; installing handrail inside emergency stairwell; assembling pedestrian bridge truss segments; installing platform canopy support structural steel; installing multi-conductor cable, wire and light fixtures throughout station; and installed escalators at Tysons East Pedestrian Bridge Pavilion.*

- Systems Work**

- **TBS #3 (Tysons East – N01)**

*Continued installing contact rail heat tape and power cable conduit seals; continued racking cables and installing aerial raceway covers; pulled ETS cables from TBS #3 to trackside locations; and continued installing ETS & HC frames and panels.*

- **Tysons East TCR and N01 Area of Control**

*Continued installing WZ-bonds and pulling ATC cables from track equipment locations to the TCR and terminating in the equipment racks.*

- **TPSS #3 (Tysons East Station – N01)**  
*Continued installation of aerial traction power raceway and cables.*
- **Operations Area OP-5 (Tysons Central 123 Station)**  
*Grouting precast platform decks; pavilion elevator walls & foundation, pedestrian bridge supports, retaining wall footer rebar and concrete construction; erecting canopy structural steel; started erecting lifting beam frame to support station elevators 1 and 2; continued plumbing installation for the public restrooms and service rooms; installing equipment, devices and raceways in the AC Switchgear Room, TPSS #4, battery room, and the communications raceway in the lower level and platform level service rooms; installing, adjusting, welding and caulking precast panels for service rooms; set escalator #3 and #4 trusses; and installing CMU walls in west service rooms.*

### **Systems Work**

- **TPSS #4 (Tysons 123 – N02)**  
*Continued installation of Traction Power aerial raceways on span 63 and installing ATC cable from the trackside equipment location to the TCR.*
- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure)**  
*Continued installation of the double crossover track between the Tysons 123 Station and the tunnel; continued electrical cabinets and light fixture installation at the East Ventilation Structure; continued installing fan sound attenuators, fan motor and louvers at the East vent Structure and continued installing light fixtures in NATM 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; continued installation of raceways and equipment in the TCR; continued communications conduit rough-ins in the WVS fan room level ventilation equipment and fan rooms; and installation of FIA Equipment in WVS Communications room and emergency egress stair #5.*
- **Operations Area OP-7 (Tysons Central 7 Station)**  
*Installing formwork and rebar for the south pavilion and north pavilion walls; poured South Pavilion Slab on Grade and South Pavilion Wall 1<sup>st</sup> lift; 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 electrical and communications ducts and drain pipe for the platform level east and west end service rooms and south pavilion; backfilling along barrier walls; installing waterproofing along barrier walls and TPSS #5; installing control equipment and motors for Escalator #1; installed escalator #1 and #2 trusses; installing UPS for AC Switch Gear Room; installing fire dampers, fans and tie-in ductwork in the service rooms and installing platform edge lights.*

### Systems Work

- **Tysons Central 7 TCR and N03 Area of Control**  
*Continued installation of cable tray and equipment racks in the TCR; installing conduit, panels, cable tray and equipment racks in the Communications Room and installing traction power aerial raceways.*
- **Operations Area OP-8 (Tysons West Station/Guideway)**  
*Installing forms and rebar at the North & South Pavilion foundations and walls; installing HVAC ductwork in mezzanine level service rooms; grouting and repairing exterior PCC wall and stair panels; installing VCT tile floors in mezzanine level TCR & COMM rooms; installing and welding precast panels and platform deck slabs; installing electrical raceways in the AC Switchgear Room; installing and insulating ductwork in ground level service rooms; and continue direct fixation track plinths west of the Tysons West Station.*

### Systems Work

- **Tysons West TCR and N04 Area of Control**  
*Continued installing panels, conduits, cable tray and equipment racks in the Communications Room.*
- **OP-9 (DIAAH)**  
*Continue closing remaining openings in retaining walls on the OB side between Hunter Mill Road and Difficult Run; continue installation of ballasted track between Trap Road and the Tysons West Guideway.*

### Systems Work

- **TPSS #7 (Wolf Trap – N05)**  
*Continued installation of the exterior lighting on the pre-cast screen walls.*
- **Chatham's Ford TCR and N93 Area of Control**  
*Continued pulling ATC cables from the track to the TCR.*
- **TPSS #9 (Hunter Mill – N94)**  
*Continued installing rectifier transformer bus duct and supports; continued installing and racking Traction Power cables from the track to the TPSS; continued terminating Traction Power cables in the TPSS; pulled ETS and HC cables from the track to the TPSS; and began installing conduits from the TPSS to rectifier transformer for control and monitoring system.*
- **Hunter Mill TCR and N94 Area of control**  
*Racking ATC cables in the TCR and began terminating; continued installing FIA and communications panels, conduits and equipment racks in Communications Room; installing FIA conduit in the TPSS; and pulled innerduct from the track to Communications Room.*
- **TPSS #10 (Sunset Hills – N95)**  
*Continued Traction Power cable installation from the track to the cable vault; mandrel conduits between EMH and modular buildings; mobilized for*

*FIA/Communications installation; continued installing and racking Traction Power cable from the track to cable vault; installing equipment racks, conduit and wiring for FIA/Communications in Communications Room; continued installation of the IDW system; continued terminating trackside traction power cables and mandrel and install string lines in the Traction Power jumper conduits.*

- ***Sunset Hills TCR and N95 Area of Control***

*Installing 4 foot ATC loops and WZ power bond leads; and hand dig to locate cross-bond conduits and signal conduits.*

- **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 dry fire protection pipe; grouting door frames in service rooms; wiring panels and lighting; completed installing standing seam metal roof panels for canopy; installing escalators 1 and 2 and elevators 1 and 2; installing FIA devices in service rooms; placing CCTV wire from the platform area to the Communications Room; installing downspouts and gutters; installing glass in Stair #3; rebar and concrete construction of walls at the south pavilion and pedestrian bridge piers #6 and #3; driving piles for retaining wall west of the pavilion along the eastbound Toll Road; and continued with ballasted track construction at the far west end of the tail track area.*

**Systems Work**

- ***TPSS #11 (Wiehle Ave – N06)***

*Continued trackside Traction Power (TP) cable terminations; tagging cables in the TPSS and terminating in breaker cabinets; wiring ETS relay cabinet; racking TP cables in electrical manholes; continued trackside TP cable terminations; continued terminating TP cables in the TPSS breaker cabinets; installed cross-bond conduit between WZ-2 and WZ-17; clear TP jumper conduits and began installing cable; installing rectifier transformer bus duct and supports; terminating (Huck Bolt) TP cables to contact rail; removed failed Auxiliary Transformer from enclosure; continued installing conduit, boxes and wiring for FIA/Communications;.*

- ***Wiehle TCR/N06 Area of Control***

*Continued installing, terminating and meggering trackside ATC cables from the TCR to WZ-bond locations; installing cables to the WZ-bonds; continued installing ATC equipment, i.e. WZ-bonds, loops and marker coils; terminating and meggering cables west of the Station; terminating ATC cables in the TCR; performing trackside ATC punchlist work; demobilizing part of the ATC crew until Delta completes work over Williams Transco Pipe Line; installing the IDW system on ROW fence; installed cross-bond cables between WZ-6 and WZ-19; pulled 6 pair cable from the track to the TCR for the IDW System.*



**c. Real Estate**

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through August 2012, 99 of the 102 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through August 2012. *The remaining three 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 ACQUIRED<sup>1</sup>**

(Number of parcel packages)

LOCATIONS	TOTAL	Period			To Date		
		Planned <sup>2</sup>	Actual	Var	Planned <sup>2</sup>	Actual	Var
Route 66 / DCR	1	0	0	0	1	1	0
Route 123	23	0	0	0	23	21	(2)
Route 7	53	0	0	0	52	51	(1)
DIAAH	26	0	0	0	26	26	0
<b>TOTAL</b>	<b>103</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>102</b>	<b>99</b>	<b>(3)</b>

- 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 August 2012, *the trial scheduled for mid-August was canceled due to a pending settlement (Parcel 54/117, KBS Tysons Dulles Plaza, LCC), one new Petition in Condemnation was filed (Parcel 81, CESC Commerce Executive park LLC), and four cases continues to work towards an Agreement after Certificate (Parcel 109, AG/ARC Plaza America; Parcel 125/JGB 1831 Wiehle Avenue, LLC; Parcel 86 Maximums Properties, LLC; and Parcel 90 Kaiser Foundation Health Plan).*

**d. Utility Coordination**

Utility relocation work continued through August 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 August 2012 includes the following:

- **Dulles Connector Road (DCR) East – (K-Line to Route 123)** – *DVP continued splicing 34.5 kV traction power cables in the DCR median between TPSS #2 and Chain Bridge Road. DVP energized their new power substation at Redfield and DVP switch at TPSS #1.*
- **Route 123 (DCR to Route 7) – All work completed.**
- **Route 7 (Spring Hill Road to Tyco/Westwood)** – *Lane continues punch list work on traction power conduits into manholes in front of the Ernst & Young wall.*
- **Route 7 (Tyco/Westwood to Dulles Toll Road)** – *DVP continued installing and splicing cables in manholes into TPSS #6. DVP energized the switch at TPSS #6 in mid-August.*
- **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.*

#### **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 64<sup>th</sup> 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 64<sup>th</sup> 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 64<sup>th</sup> 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 August 14, 2012, Kawasaki reported that it now anticipates that the Final Design Review (FDR) phase will be completed on October 17, 2012 compared to the mitigation schedule completion date of March 22, 2012; this represents a 208 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. 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 October 17, 2012, 208 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 contractual milestones for this railcar procurement are:

<b>Activity</b>	<b>Original Baseline Schedule Date</b>	<b>Mitigation Schedule Date</b>	<b>Actual Date</b>
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
Approval of A-Car Mock-up	October 24, 2011	March 8, 2012	April 24, 2012

Final Design Review Submission	October 31, 2011	February 1, 2012	February 1, 2012
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	
FAI Pilot Car Review		October 4, 2013	
Delivery of 4 Pilot Cars	September 16, 2013	February 20, 2014	
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	
Conditional acceptance of 64 <sup>th</sup> Car	January 15, 2015	June 12, 2015	

WMATA has developed an interim operations plan for dealing with the delay. 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.

#### **f. Safety and Quality Status**

MWAA participated in *six* safety walk downs with DTP during the month of *August*. All were related to Design-Build work. As of *August 31, 2012*, DTP had logged *11.030* million project man-hours with *383* first aid cases and *six* lost time cases. There have been a total of *839* incident investigation reports, *86* utility hits and *24* 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 *and it remains under review by MWAA and WMATA. Comments are anticipated from WMATA by September 14, 2012.*

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 is scheduled to be completed on September 14.* Submission of DCC No. 9 is scheduled for September 19, 2012.

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. It was a good effort and helped 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 is intended to be the model for the remaining construction submissions and remains a work in progress. 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.*

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 *August 21, 2012.* The next SCWG Meeting is scheduled for *September 18, 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 *August 2012*, MWAA and DTP performed the following QA audits/surveillances:

- *High Concrete Structures: DTP conducted an audit on August 7, 2012. There were three observations requiring a response.*

- *A & A Industrial (Tunnel Ventilation): DTP conducted an audit on August 8, 2012. There were four observations requiring a response.*
- *Contractor and Subcontractor Safety Programs: MWAA conducted an audit on August 15, 2012. There were no issues or observations and the audit is closed.*
- *Facchina Construction Company: MWAA conducted an audit on August 16, 2012. There were ten observations with eight requiring a response.*
- *Truland Walker-Seal (Communications): DTP conducted an audit on August 22, 2012. There were two observations and one recommendation. One observation requires a response.*

**MWAA QA Audit and Surveillance Schedule for September through December 2012**

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv.?	Lead
9/05-06/12	A	M.C. Dean (Late MEP)	Y	DTP
9/12-13/12	A	DTP Environmental	N	MWAA
9/12-03/12	A	Whiting-Turner (West Falls Church Yard)	Y	MWAA
9/19-20/12	A	Internal Audit by STV	N	STV
9/26-27/12	A	Lane Construction (Pedestrian Bridge Erection)	Y	MWAA
10/10-11/12	A	Reliance (Fire Suppression)	Y	DTP
10/17-18/12	A	Turner Construction (Shell Enclosure Trades)	Y	MWAA
10/24-25/12	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.*

### **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 27<sup>th</sup>. 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 will be reviewed by MWAA.

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 July 25, 2012 reflects a 5 day decrease which is the same as reflected in the June 25, 2012 DTP's schedule shows the Revenue Service Date to be January 7, 2014. MWAA completed its schedule review on August 24, 2012 and accepted it with a few exceptions, to include disagreement on 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.

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 not yet 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 July 25, 2012**

ACTION	WORK DAYS
<b>Total Excusable Days of Delay on Project Critical Path requested by DTP</b>	<b>69</b>
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 July 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.*

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

- Construction of the station structural and precast installation to support timely systems installations.
- Fabrication of precast panels and pedestrian bridges to support timely completion of the Stations, local and integrated testing, Certification of Occupancy impacting WMATA’s equipment installations.
- 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 July 2012 Schedule Update, DTP's Critical Path in their July 2012 Schedule Update originates with the fabrication of precast panels leading to installation of roofs for the pavilion service rooms. This 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 disagreed with DTP's Critical Path in the *July* 2012 Schedule Update as presented for the following reasons:

1. This path inaccurately shows the need of permanent power for local electrical and functional testing of the Redfield substation through the Tysons Ventilation system when temporary power will be available a month earlier.
2. DTP shows an excessive 6 week period for the local testing of the Tunnel West Ventilation System followed by 3 weeks of integrated testing.
3. DTP has revised the sequence of Series 24 (Level B & C) ATC testing, which does not have any physical constraints as it progresses from interlocking to interlocking, from concurrent to finish-to-start. This adds approximately 23 calendar days to this path. DTP has not explained the rationale behind this revision.
4. *DTP states in its narrative that it will be necessary to revisit the sequencing of WMATA's OCC tests to re-evaluate to see if schedule improvements can be realized. MWAA's analysis shows that such improvements can be readily identified, hence, should have been incorporated to meet the target SSCD.*
5. *DTP shows an 85 calendar day period for integrated SCADA and WMATA's OCC testing for the Tysons East Station, which is not justified.*

The PMOC agrees with MWAA’s assessment regarding the critical path. This latest schedule and review again demonstrates that MWAA continues to analyze the schedule carefully and to hold DTP accountable for changes made to the agreed schedule. The PMOC anticipates that new disagreements will continue to arise for claimed weather delays and change order impacts to the schedule as demonstrated by DTP’s *July 2012* schedule update.

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	June 2012	July 2012
Receipt of FFGA	03/03/09 <sup>1</sup>	03/10/09 <sup>A</sup>	03/10/09 <sup>A</sup>	03/10/09 <sup>A</sup>
Station Design Complete	10/21/09	02/18/11	10/28/11 <sup>A</sup>	10/28/11 <sup>A</sup>
Utility Relocation Complete	03/05/10	09/13/11	01/31/12 <sup>A</sup>	01/31/12 <sup>A</sup>
Aerial and Station Foundations Complete	3/4/11	09/01/11	07/23/11 <sup>A</sup>	07/23/11 <sup>A</sup>
NATM Tunnels Mined	01/29/11	12/03/10 <sup>A</sup>	12/03/10 <sup>A</sup>	12/03/10 <sup>A</sup>
K-Line Track Tie-In	12/23/11	03/28/12	10/14/11 <sup>A</sup>	10/14/11 <sup>A</sup>
<i>Guideway Complete</i>	<i>2/12/12</i>	<i>09/13/12</i>	<i>10/19/12</i>	<i>11/02/12</i>
<i>Train Control Installation Complete</i>	<i>10/26/12</i>	<i>10/29/12</i>	<i>12/07/12</i>	<i>12/11/12</i>
<i>Systems Testing Complete - Tysons East Station</i>	<i>07/24/12</i>	<i>02/21/13</i>	<i>02/13/13</i>	<i>03/12/13</i>
<i>Systems Testing Complete - Wiehle Ave Station</i>	<i>08/13/12</i>	<i>01/16/13</i>	<i>03/22/13</i>	<i>04/03/13</i>
<i>Systems Testing Complete - Central 7 Station</i>	<i>01/23/13</i>	<i>04/12/13</i>	<i>05/10/13</i>	<i>04/29/13</i>
<i>Systems Testing Complete - Tysons West Station</i>	<i>02/21/13</i>	<i>05/14/13</i>	<i>06/12/13</i>	<i>06/06/13</i>
<i>Systems Testing Complete - Tysons 123 Station</i>	<i>12/20/12</i>	<i>03/28/13</i>	<i>06/10/13</i>	<i>06/10/13</i>
Substantial Completion	07/31/13	07/31/13	09/03/13	09/03/13
<i>Completion - S&amp;I Bldg WFCY</i>	<i>NA</i>	<i>N/A *</i>	<i>01/3/14</i>	<i>01/30/14</i>
Revenue Operations – Target	11/27/13	01/20/14	01/07/14	01/07/14
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

<sup>A</sup> Actual Date    <sup>1</sup> Date was not met. 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.*

## 5. Project Cost

The SCC Budget and Expenditures summary for the period ending *July 25, 2012* is shown

below. Overall, approximately 71% of the budget (excluding contingency and finance charges) has been expended.

PROJECT SUMMARY BY SCC CODE - July 2012 Federal Only

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET <sup>1</sup>	EXPENDED TO DATE	ESTIMATE AT COMPLETION	CONTINGENCY TO DATE
10	Guideway and Track Elements	\$ 640,105,887	\$ 572,740,190	\$ 640,400,967	\$ 40,248,700
20	Stations	\$ 312,442,435	\$ 193,409,759	\$ 348,565,949	\$ 26,192,703
30	West Falls Church Yard	\$ 66,008,239	\$ 13,503,549	\$ 65,818,208	\$ 4,710,985
40	Site Work & Utility Relocation	\$ 229,210,478	\$ 219,885,680	\$ 267,838,453	\$ 16,350,511
50	Systems	\$ 322,497,304	\$ 184,030,563	\$ 319,105,104	\$ 22,494,251
60	Right of Way Acquisition	\$ 67,631,026	\$ 55,495,909	\$ 65,011,618	\$ 3,510,171
70	Vehicles	\$ 195,352,701	\$ 35,294,152	\$ 194,648,939	\$ 16,491,446
80	Professional Service – FD	\$ 727,904,138	\$ 676,658,236	\$ 788,713,475	\$ 57,688,716
90	Contingency Mgmt. Reserve <sup>2</sup>	\$ 71,334,856	\$ -	\$ 14,184,352	\$ 167,690,747
100	Finance Charge <sup>3</sup>	\$ 509,984,571	\$ 83,798,922	\$ 438,184,571	
<b>Total</b>		<b>\$ 3,142,471,635</b>	<b>\$ 2,034,816,961</b>	<b>\$ 3,142,471,635</b>	<b>\$ 355,378,231</b>

1. Current budget equals FFGA amount plus change orders CO-001-081, 083-115, 117, 120, 123, Directive Letters 001-038, 041, 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 \$14.18M 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: July 2012**

**MONTHLY COST REPORT - July 2012 Federal Only**

DESCRIPTION	FFGA AMOUNT (Original)	EXPENDITURE TO DATE <sup>1</sup>	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION	PERCENT OF EAC EXPENDED TO DATE
<b>FEDERAL (FFGA SCOPE)</b>					
<b>Design-Build</b>					
Firm Fixed Price	\$ 1,112,052,173	\$ 1,384,800,233	\$ 269,441,215	\$ 1,654,241,448	
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 69,080,243	\$ 3,679,019	\$ 72,759,262	
Firm Fixed Price Subtotal	\$ 1,177,161,581	\$ 1,453,880,476	\$ 273,120,234	\$ 1,727,000,710	
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 130,105,577	\$ 130,105,577	
Design-Build Contract Prices	\$ 1,607,361,398	\$ 1,453,880,476	\$ 403,225,811	\$ 1,857,106,287	
Indexed Commodity Escalation	\$ 77,469,926	\$ -	\$ 45,148,158	\$ 45,148,158	
<b>Design-Build Contract Total</b>	\$ 1,684,831,325	\$ 1,453,880,476	\$ 448,373,969	\$ 1,902,254,445	76%
<b>Utility Relocation</b>					
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	
<b>Utility Relocation Total</b>	\$ 92,736,233	\$ 122,141,388	\$ 8,407,768	\$ 130,549,155	94%
<b>Right of Way</b>					
<b>Right Of Way Total</b>	\$ 42,443,132	\$ 55,803,125	\$ 9,833,493	\$ 65,636,618	85%
<b>WMATA Agreement</b>					
Vehicles	\$ 195,138,329	\$ 35,294,152	\$ 159,354,786	\$ 194,648,939	
Construction and Procurement	\$ 31,484,799	\$ 5,114,280	\$ 22,983,836	\$ 28,098,117	
WMATA Force Account Startup	\$ 13,777,100	\$ 5,037,237	\$ 8,367,784	\$ 13,405,021	
Project Management and Final Design	\$ 31,235,400	\$ 23,173,995	\$ 12,309,557	\$ 35,483,552	
<b>WMATA Agreement Total</b>	\$ 271,635,628	\$ 68,619,664	\$ 203,015,964	\$ 271,635,628	25%
<b>Preliminary Engineering<sup>2,3</sup></b>					
<b>Preliminary Engineering Total</b>	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999	100%
<b>Airports Authority Services</b>					
General Conditions <sup>4</sup>	\$ 28,879,153	\$ 7,350,604	\$ 22,700,173	\$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 30,125,674	\$ 15,995,772	\$ 46,121,446	
Project Management Support	\$ 90,004,649	\$ 112,366,109	\$ 30,757,533	\$ 143,123,642	
<b>Airports Authority Services Total</b>	\$ 142,109,519	\$ 149,842,387	\$ 69,453,479	\$ 219,295,866	68%
<b>Contingency<sup>5</sup></b>					
<b>Contingency Total</b>	\$ 297,762,579	\$ -	\$ 14,184,352	\$ 14,184,352	
<b>Finance Costs<sup>6</sup></b>					
<b>Finance Costs Total</b>	\$ 509,984,571	\$ 83,798,922	\$ 354,385,649	\$ 438,184,571	
<b>Total Federal (FFGA Scope)</b>	\$ 3,142,471,635	\$ 2,034,816,961	\$ 1,107,654,674	\$ 3,142,471,635	73%

1. Reflects Paid costs through July 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: July 2012

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE <sup>1</sup>	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
<b>Sec 5309 New Starts Federal Funds</b>						
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 <sup>5</sup>	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
<b>Subtotal - New Starts</b>		<b>28.64%</b>	<b>\$ 900,000,000</b>	<b>\$ 520,282,364</b>	<b>57.81%</b>	<b>\$ 379,717,636</b>
<b>Other Federal Funds</b>						
<b>Sec 5307 Surface Transportation Program</b>						
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%	\$ -
<b>STP/Sec. 5307</b>		<b>2.39%</b>	<b>\$ 75,000,000</b>	<b>\$ 75,000,000</b>	<b>100%</b>	<b>\$ -</b>
<b>Local Funds</b>						
VTA 2000			\$ 51,700,000	\$ 51,700,000	100%	\$ -
Commonwealth Transportation Bonds <sup>2,5</sup>			\$ 125,000,000	\$ 113,600,000	91%	\$ 11,400,000
Fairfax County Funds <sup>3</sup>			\$ 523,750,000	\$ 319,846,062	61%	\$ 203,903,938
Dulles Toll Road Revenues <sup>2,4,5</sup>			\$ 1,467,021,634	\$ 954,388,535	65%	\$ 512,633,099
<b>Subtotal - Local Funds</b>		<b>68.97%</b>	<b>\$ 2,167,471,634</b>	<b>\$ 1,439,534,597</b>	<b>66.42%</b>	<b>\$ 727,937,037</b>
<b>Total Project Budget</b>		<b>100%</b>	<b>\$ 3,142,471,634</b>	<b>\$ 2,034,816,961</b>	<b>64.75%</b>	<b>\$ 1,107,654,673</b>
<b>Interrelated Highway Activities</b>						
<b>DTR Revenues/Commonwealth Funds<sup>3</sup></b>			<b>\$ 123,208,229</b>	<b>\$ 80,588,326</b>	<b>65.41%</b>	<b>\$ 42,619,903</b>
			<b>\$ 123,208,229</b>	<b>\$ 80,588,326</b>	<b>65.41%</b>	<b>\$ 42,619,903</b>
		<b>TOTAL</b>	<b>\$ 3,265,679,863</b>	<b>\$ 2,115,405,287</b>	<b>64.78%</b>	<b>\$ 1,150,274,576</b>

<sup>1</sup> Reflects costs through July 31, 2012

<sup>2</sup> 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.

<sup>3</sup> Includes Tax District Revenues (\$400 million) plus debt service costs allocated to Project Budget

<sup>4</sup> Includes pay-as-you-go revenues and bond proceeds

<sup>5</sup> 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.*

**Budget Risks:** Through July 25, 2012, MWAA reports that it has utilized \$270,879,785 of the \$251,000,000 available contingency for the first eight 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 \$6,358,482 available through the eighth contingency phase. The contingency utilization reflects expended costs. MWAA estimates that the third contingency phase, Utility Relocation Program, will be fully completed in the third quarter of 2012. MWAA reports that it has already obligated \$84,498,446 of the \$92,324,312 (\$46,762,579 original +\$45,561,733 contribution from finance savings) available for Phases 9 through 12 which leave a balance of \$7.825 million. As of July 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 \$14,184,352 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 10<sup>th</sup> 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 July 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 June 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.*

#### Summary Status of the Top Ten Project Risks

RISK NUMBER	RISK DESCRIPTION	RATING	RISK STATUS			
			SINCE INCLUSION ON TOP TEN LIST		OVER PAST 30 DAYS	
			COST	SCHEDULE	COST	SCHEDULE
R21	Additional Remote Monitoring and Control (RMC) of TPSS.	15	Increased	Increased	Unchanged	Unchanged
C39	Construction issues (WFCY delayed construction which effects opening of the system).	12	Decreased	Decreased	Unchanged	Unchanged
R23	Automatic Train Control (ATC) System Requirements per NTSB concerns and Other Systems Issues resulting from the Red line accident and NTSB safety report.	12	Unchanged	Unchanged	Unchanged	Unchanged
M27	Delay in Vehicle (Rail Car) Delivery beyond the specified FFGA ROD date of December 1, 2014.	12	Unchanged	Unchanged	Unchanged	Unchanged
C28	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.	12	Unchanged	Unchanged	Unchanged	Unchanged
C27	WMATA resource constraints delay system acceptance or operational testing resulting in additional costs.	10	Decreased	Decreased	<i>Decreased</i>	<i>Decreased</i>
C20	WMATA deliverables scope of work – including technical support and WMATA construction elements may exceed the budget and schedule.	10	Unchanged	Unchanged	Unchanged	Unchanged
D35	Incorporation of the Tysons - 123 Pavilion (Macerich) into the D/B Contract scope.	9	Unchanged	Unchanged	Unchanged	Unchanged
D34	WMATA Delay in reviewing/approving DTP design documents.	9	Unchanged	Unchanged	Unchanged	Unchanged
C21	Availability of track access for the Contractor to complete the K-Line connection work.	8	Unchanged	Unchanged	Unchanged	Unchanged

## 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. <b>Revision to PM-5.01 was provided at the August 22, 2012 QPRM.</b>	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 <sup>th</sup> . The PMOC provided review comments and a modified Top Ten List that will be revised by MWAA.	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:** *September 26, 2012* (reporting current through *August 2012*- Financials through *July 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.

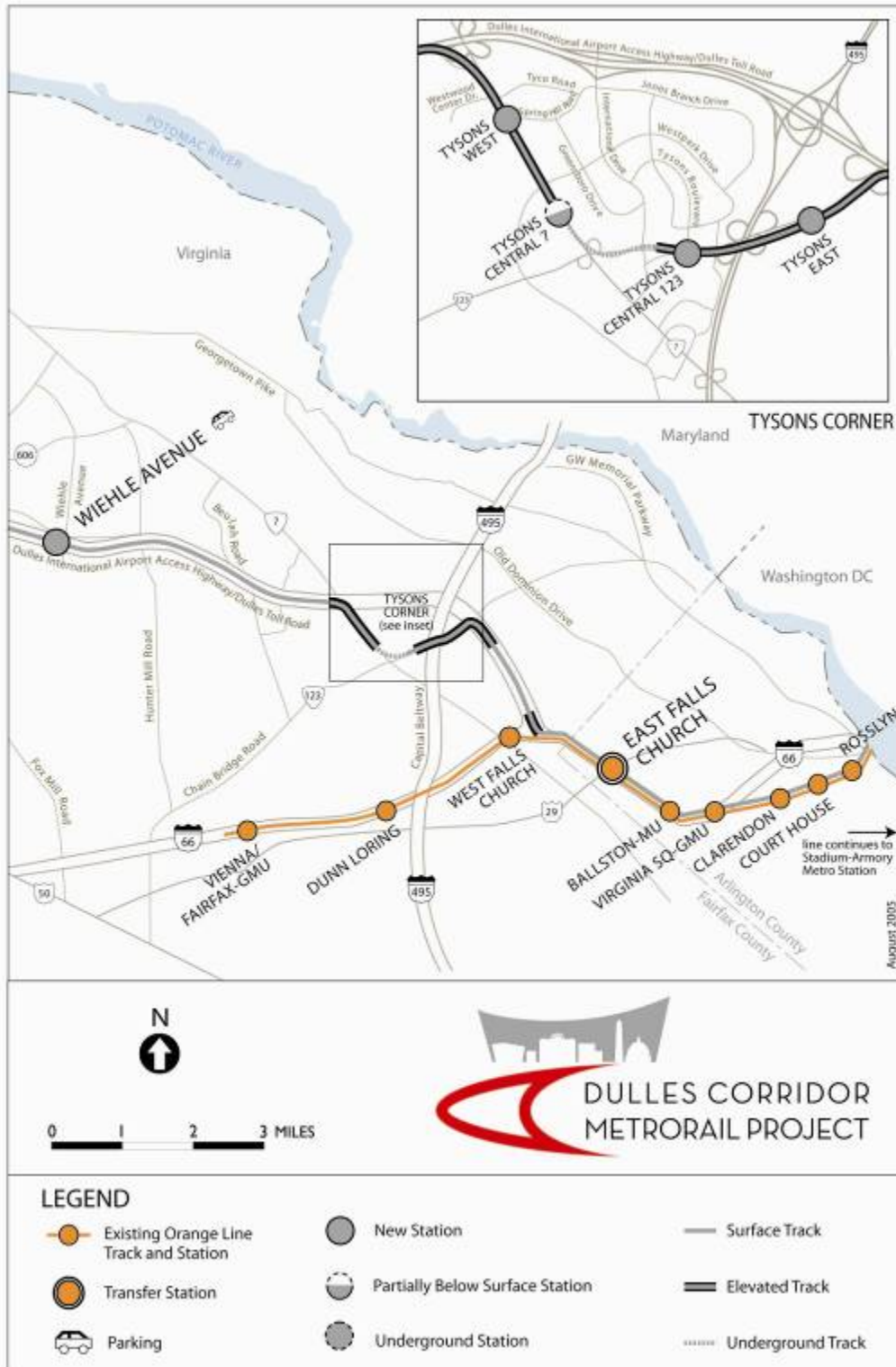
### Schedule

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
01/07/14	Revenue Service Date (RSD) <i>as of July 25, 2012</i>		
79.0%	Percent Complete Construction <i>as of July 30, 2012</i> .		
60.7%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
78.2%	MWAA's Estimate of Project Earned Value through <i>July 2012</i>		

**Cost**

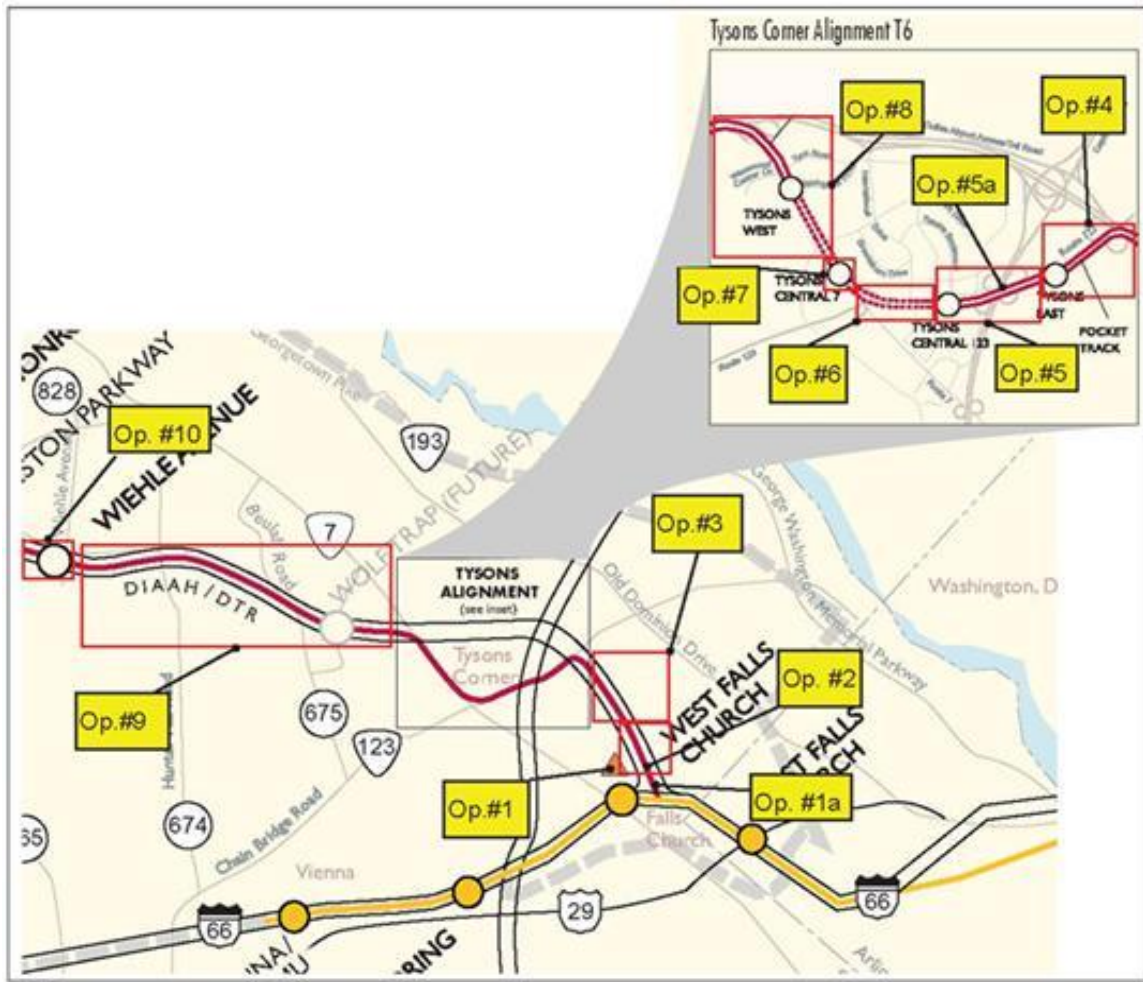
\$1.490 billion	Total Project Cost (\$YOE) at Approval to Enter PE
\$2.961 billion	Total Project Cost (\$YOE) at Approval to Enter Final Design
\$3.142 billion	Total Project Cost at date of report including \$510 million in Finance Costs
\$2.034 billion	Expenditures through <i>July 2012</i> from total project budget of \$3.142B
73%	Percent complete based on federal expenditures excluding contingency and finance charges through <i>July 2012</i> .
\$14.18 million	Total project contingency remaining (allocated and unallocated) through <i>July 2012</i> .

# Project Map





# Construction Operational Areas



## APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST

<b>Project Overview</b>	<b>Dulles Corridor Metrorail Project</b>		
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		
<b>Project Plans</b>	<i>Version</i>	<i>Review By FTA</i>	<b>Status</b>
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.

<b>Safety and Security Authority</b>	<b>Y/N</b>	<b>Notes/Status</b>
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 had a representative at the November 9, 2011 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.

<b>SSMP Monitoring</b>	<b>Y/N</b>	<b>Notes/Status</b>
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	

<b>Construction Safety</b>	<b>Y/N</b>	<b>Notes/Status</b>
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 383 first aid cases and six lost time cases in 11.030 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	

<b>Federal Railroad Administration</b>	<b>Y/N</b>	<b>Notes/Status</b>
If shared track: has grantee submitted its waiver request application to FRA? (Please identify specific regulations for which waivers are being requested)	N/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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