

COMPREHENSIVE MONTHLY REPORT

January 2013

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

March 1, 2013

PMOC Contract Number: DTFT60-09-D-00016

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

OPs Referenced: 01, 25

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Length of Time PMOC Assigned to Project: 12.0 years

Length of Time PMOC Lead Assigned to Project: 5.0 years

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EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *February 7, 2013* to conduct a monthly progress meeting for work performed in *January 2013*. The full time on-site PMOC representative 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 *February 2013*. Future PMOC monthly progress meetings are planned to occur during the first week of each month.

1. Project Description

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

2. Project Status Summary

The FTA and PMOC met with MWAA on *February 7, 2013* to conduct a monthly progress review meeting and supplemental information was obtained from MWAA during the following weeks. The status of information is as of *January 31, 2013*, 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 104 parcel packages required, 99 have been acquired.
- **Rail car Procurement** - Monthly Progress Review Meeting No. 29 between WMATA and Kawasaki on the 7000 Series railcars was held on *February 14, 2013 at the Jackson Graham Building* and the WMATA/PMOC 7K Rail Car Update Meeting was held *later in the morning on February 14, 2013 at WMATA headquarters*. The current Final Design Review (FDR) completion date is reported by Kawasaki remains *February 28, 2013* compared to the mitigation schedule completion date of *March 22, 2012*, a slippage of 343 calendar days. The completion of the Design Validation Review (DVR) is also expected on that date. FDR meetings have been completed. The approved FDR Contract Deliverables Requirements List (CDRLs) is at 69.5% *have been completed and approved*, with 30.5% in progress (i.e. *previously submitted and undergoing WMATA review*).

Kawasaki expects to have all the CDRLs submitted to WMATA by February 15th. At the reported level of completion, the PMOC is of the opinion that the February 28, 2013 date for the completion of the FDRs is a realistic estimate. At the January 15th meeting WMATA noted that remaining elements to be completed for FDRs is primarily correcting documentation and that there is agreement on the design elements. WMATA personnel are leaving for Japan on Monday, February 18, 2013 for meeting and further DVRs.

On October 20, 2011, WMATA approved Kawasaki's Master Program Schedule (Baseline). WMATA subsequently approved Kawasaki's Mitigation Schedule, due to the March 2011 tsunami/earthquake, on December 21, 2011; it has a June 12, 2015 conditional acceptance date for the 64th railcar, which is more than six months beyond the FFGA's Revenue Service Date (RSD). MWAA informed the FTA's Region III Administrator of the delay by letter on January 31, 2012. The delivery of the first four production cars is forecasted to be February 20, 2014, and the conditional acceptance of the first four production cars is forecasted to be August 14, 2014.

- **Design progress** - Overall project design *is now 100% complete as of February 5, 2013 with the issuance of the DGS permit for the Tysons West Kiss & Ride Lot.* 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 with permitting expected to be complete in February 2013.
- **MWAA issued a NTP** on January 24, 2011 to an independent third-party consultant, Battelle, to review Alstom's safety analysis of their Generation 4 track circuit modules proposed for use on the Dulles Extension. Battelle issued a letter dated September 25, 2012 stating that "As of September 24, 2012, Battelle completed the audit/review of all documentation provided throughout this program...all issues identified by Battelle throughout this assessment have been adequately resolved and closed." Battelle submitted the Draft Final Report on October 5, 2012 and presented it to MWAA and WMATA on October 18, 2012. MWAA received the Final Battelle Report on November 16, 2012. WMATA provided a letter dated November 19, 2012 stating that "the Alstom Generation 4 track circuit is accepted for service provided the system fulfills the requirements of Project specifications section 16919 – ATC System Reliability, Availability, Maintainability and Safety Program".
- **Construction progress** is broken into two components: utility relocation (UR), which remains at 99% complete, and design-build (DB) construction, which is approximately 88% complete. Significant accomplishments in *January* included *completion of platform, mezzanine and precast panel work on all five stations; continued finalizing of ballasted and direct fixation trackwork installation on the Tysons West Guideway and along the DIAAH; continued progress with the testing of Traction Power Substations and installation of Communications Systems and static testing of the Automatic Train Control systems.* The Project also continued to make progress on the K-Line tie-in ATC testing.

CONSTRUCTION PROGRESS THROUGH JANUARY 2013			
GUIDEWAYS/ TRACKWAYS and SYSTEMS	% COMPLETE	STATIONS	% COMPLETE
O-3 (DCR) Trackway	100%	Tysons East	70%
Tysons East Guideway	100%	Tysons Central 123	64%
Tysons West Guideway	100%	Tysons Central 7	52%
O-9 (DIAAH) Trackway	100%	Tysons West	50%
Systems	33%	Wiehle Avenue	80%
Trackwork	96%	WFCY	25%

- **The DTP Schedule Update** with a data date of *December 25, 2012* “Mitigation Schedule” showed a -8 calendar day variance with a *September 6, 2013* SSCD as compared to the -5 calendar day variance reflected in the November 25, 2012 update. The current forecast *RSD is January 10, 2014*.
- **With regard to the West Falls Church Yard (WFCY) completion date**, DTP’s schedule update of *December 25, 2012 continued to* reflect a -10 calendar day variance to the targeted completion date of December 20, 2013, resulting in a forecast completion date of December 30, 2013.
- **Budget** status as of *December 25, 2012* indicates that \$2,296,135,246 (82%, excluding the remaining contingency and finance charges) has been expended of the \$3,142,471,635 budget total. MWAA reports \$282,588,064 of the available contingency for the first nine contingency milestones have been drawn down to date with a balance of \$8,986,220 available through the ninth contingency phase. The current estimate of the contingency available at the end of construction is \$16.77M. The federal portion of the Allowance Items recommended for award and yet to be transferred to the Firm Fixed Price is estimated to be \$34.73 million over budget. With the completion of the award of all contracts for Allowance Items, \$35.74M of the original FFGA amount of \$77.47M budgeted for Indexed Commodity Escalation has been transferred to the Firm Fixed Price. During October 2012, the project re-assessed the commodity escalation estimate at completion (EAC) and transferred the under-run of \$19.0 million to contingency.
- MWAA’s estimate of the **Earned Value** for the Project through *December* is 87.1%.
- **Risk** - MWAA submitted RCMP Rev. 3 to the FTA for approval by letter dated March 28, 2012. The FTA approved the RCMP on April 13, 2012. In June 2012, MWAA updated the Risk Register. This document and a recommendation to update the Top Ten Risks were forwarded to the FTA and the PMOC for review on August 2012. FTA, the PMOC and MWAA discussed this issue during the PMOC’s September monthly site visit. The PMOC provided review comments and a modified Top Ten List that will be reviewed by MWAA. On September 30, 2012, MWAA issued a revised list of Top Ten Risks. FTA’s letter of November 29, 2012 approved the September 30 revised Top Ten Risks. These risks will now be reviewed on a quarterly basis. *A revised list of Top Ten Risks dated December 2012 was submitted to the FTA via letter dated January 22, 2013 and is under review by the PMOC and FTA.*
- **The Full Time Equivalent (FTE) estimated total for January is 1,237 which is a decrease of 175 from the December actual of 1,412.** A fluctuation is to be expected with the winding down of

design and civil construction, the ramping up of systems installation and testing and winter weather. However, MWAA, FTA and the PMOC are questioning what may be a premature decline in FTEs.

- **Core Accountability Items**

FFGA-MWAA Core Accountability Items			
Project Status:		Original at FFGA:	Current Estimate*:
Cost	Cost Estimate	\$3.142B	\$3.142B
Contingency	Unallocated Contingency		
	Total Contingency (Allocated plus Unallocated)	\$297.76M	\$16.78M
Schedule	Revenue Service Date	December 1, 2014	January 10, 2014***
Total Project Percent Complete		Based on Expenditures**	82%
		Based on Earned Value	87.10%
Major Issue	Status	Comments/Action/Planned Action	
Concurrent Non-Project Activities (CNPA) -- Project Partners have added activities to the Project that may not be part of the FFGA-funded scope of work.	The FTA identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA's letter of November 28, 2012 corrected the total to \$40.38M.	MWAA will provide FTA details of how they will address budget and drawdown adjustments for the identified CNPAs.	
Contingency -- Overall Project Contingency level may be insufficient.	MWAA acknowledges a \$71.8 million in available Finance Charges savings that could be added to the contingency. MWAA completed the review of "Indexed Commodity Escalation" charges and identified approximately \$19 million in savings.	<i>The \$71.8 million savings in Finance Charges was incorporated into the 2013 MWAA Budget on December 12, 2012 and added to Project contingency. The transfer of the \$19 million savings in "Indexed Commodity Escalation" did not require Board action and was transferred to contingency.</i>	
Date of Next Quarterly Meeting:		February 13, 2013	

Note: * Through January 2013

** Excluding remaining contingency and finance charges

*** Contingent upon WFCY not needing to be complete

3. PMOC's Assessment of Project Status

In its monthly report for June 2011, the PMOC 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 in order to address potential budget overruns caused in part by scope of work issues. 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 FTA identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA provided a response on November 28, 2012 acknowledging the FTA letter and identifying an additional \$3.7 million to increase the value of the CNPAs to \$40.38 million. *MWAA is preparing the documentation to demonstrate the refund of any previous drawdowns of federal funds to pay for these expenses.*

The estimated cost overruns of the Allowance Items is \$146.7million, of which \$86.6 million has been funded through Phase 9 of the contingency drawdown schedule, *plus \$60.1 million that has been obligated in Phases 10-12.* In July 2012, MWAA transferred \$71.8 million in savings from the Finance Charges to Contingency. FTA requested MWAA to review the balance of Commodity Escalation funds to determine if any surplus could be used for Contingency, if needed. In October 2012, MWAA identified \$19.0 million from under-run Commodity Escalation that could be made available for Contingency. The combined \$90.80 million addresses the current contingency shortfall. In addition, FTA and MWAA agreed that all future change orders will be discussed and agreed upon before payment is made using FFGA funds.

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 *December 25, 2012* reflected a -8 calendar variance to the contract schedule reflecting an SSCD of *September 6, 2013.*

DTP has incorporated the West Falls Church Yard construction into the mitigation schedule with a completion date of December 20, 2013. DTP's *December 25, 2012* schedule update *remained at -10* calendar day variance to the targeted completion date of December 20, 2013. It remains the PMOC's opinion that the Project will be in revenue service within the FFGA specified date of December 1, 2014.

Kawasaki's Mitigation Schedule based on the impacts of the March 2011 tsunami/earthquake forecasts a conditional acceptance date of the 64th DCMP rail cars on June 12, 2015. Final Design Reviews (FDR) continue to lag, but in order to mitigate the delay in FDR completion, Kawasaki and WMATA have undertaken design validation reviews and Kawasaki is manufacturing the prototype cars at risk in Japan. All the final design review meetings have been held and the completion of the submittal of the final design documentation is reported by Kawasaki to be by February 28, 2013. That date appears to be realistic based on the current status of the documents.

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. PMSS also hired Mr. Leo Himmel to serve as the Project's Team 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. PMP Version 8.0 was transmitted to the FTA on November 8, 2012. *The PMOC reviewed this submission and found it acceptable with the exception of the inclusion of draft organization charts, Figures 2-4 and 2-5. FTA's email of January 4, 2013 requested the updated organization charts, which MWAA submitted on January 23, 2013. The FTA's letter of January 25, 2013 approved PMP Version 8.0 Final.*

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 *December* 2012. In this update, DTP reported a possible loss of *eight* calendar days to the SSCD forecasted by DTP to occur on *September 6, 2013*. The WFCY schedule update *continued* to reflect a -10 calendar day variance to the target date of December 20, 2013. 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 *December 25, 2012* on *January 23, 2013* stating the schedule was “not accepted.” 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 \$71.8 million in finance cost savings to contingency budget. In October 2012, MWAA identified \$19.0 million in forecast under-run commodity escalation that could be transferred to the contingency budget. Through *December* 2012, MWAA has utilized \$282.59 million resulting in a remaining balance of \$8.98 million through contingency Phase 9. With \$89.20 million in obligated contingency, this leaves a balance of \$7.79 million for Phases 10 through 12 and a grand total balance, as of the end of *December* 2012, of \$16.77 million in contingency *estimated to remain at project completion*.
- 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 *January* 2013, there has been a cumulative total of *12,162,800* hours worked with six lost time accidents.

DTP submitted the Safety and Security Certifiable Items List (SCIL) Revision 6 to include the WFCY on August 6, 2012. Comments were received from WMATA on September 21, 2012. MWAA completed its review and issued Letter No. 07547 dated October 24, 2012 identifying comments needing to be addressed. DTP responded by letter on November 30, 2012 and MWAA and DTP met on December 18, 2012 to discuss the open comments further. *DTP subsequently resubmitted the SCIL Revision 6, which was approved “as noted” on February 5, 2013.*

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, which 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 fourth* quarter of 2012 on *January 30, 2013*.

2. Project Scope

a. Design Status

The Tysons West Station Kiss and Ride Lot *permit was issued on February 5, 2013 which now completes DTP’s civil design work with the receipt of permit approvals on all station designs, and Issued for Construction (IFC) drawings for all five stations. The systems design was completed in January 2013 and all systems design is now complete as reflected below.*

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

Regarding Automatic Train Control, MWAA issued a NTP on January 24, 2011 to an independent third-party consultant, Battelle, to review Alstom’s safety analysis of their Generation 4 track circuit modules proposed for use on the Dulles Extension Battelle submitted the Draft Final Report on October 5, 2012 and made a Power Point presentation to all partners on October 18, 2012. The presentation and Report was well received by WMATA and MWAA.

MWAA received the Final Battelle Report on November 16, 2012. WMATA provided a letter dated November 19, 2012 stating that “the Alstom Generation 4 track circuit is accepted for service provided the system fulfills the requirements of Project specifications section 16919 – ATC System Reliability, Availability, Maintainability and Safety Program”. MWAA wrote Letter No. 07687 dated November 30, 2012 to DTP stating that “As a condition of acceptance, WMATA has requested copies of the documents reviewed by Battelle. The list of documents is attached. DTP is requested to provide copies of these documents, in electronic format, to the Airports Authority.” *Battelle and DTP gathered and submitted the requested documents to MWAA and WMATA on January 14, 2013. MWAA wrote Letter No. 07877 dated January 23, 2013 to WMATA stating “with the provision of the aforementioned documents to WMATA, the Airports Authority considers all of the tasks related to the Independent Review and Assessment of Alstom’s Generation 4 Safety Analysis by Battelle to be complete.”*

b. Bidding and Construction Status

DTP has awarded all of the thirty-seven Allowance subcontract packages. Through *December 2012*, MWAAs has transferred \$504,501,657 worth of the \$374,517,062 federally funded Allowance Items Budget with an overrun of \$113,362,548 to the firm fixed price contract. In addition, MWAAs has Allowance Items recommended for Award, but not yet transferred to the firm fixed price contract, worth \$64.22 million, which is an additional \$34.73 million over budget. The \$34.73 million does not include Installation of Public Art (C7) and Spare Parts (C11), since these are being procured outside the Allowance Items.

Utility relocation is 99% complete, and DB construction is approximately 88% complete. Remaining utility relocation involves continued installation of plastic distribution piping near TPSS #10 by Washington Gas.

The following are the major accomplishments of the DB contractor during *January 2013*:

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

Continued rebar and concrete construction of the West Falls Church Yard (WFCY) Service and Inspection (S&I) Building foundation basement walls and pile caps; completed the direct fixation track and plinth construction in the WFCY lead tunnel; completed installing Support of Excavation (SOE) and lagging for the sound cover box foundation at the WFCY; continued micro-pile installation for the Sound Cover Box (SCB) foundation in the WFCY; completed placing concrete for the SCB foundation and walls at the west end (A-Line) at the WFCY; continued rebar and concrete construction for the SCB foundation along the outer loop track; Powell commenced installation and checkout testing inside the TPSS facility at the WFCY; completed placing track subgrade at the ladder track area; and mobilized the track welding plant and commenced welding ladder track rail strings at the WFCY.

Systems Work

- **K/N Line Junction**

Labeling Emergency Trip Station (ETS) cables in trackside transition boxes and verifying ID plates on junction boxes.

- **K-Line Track Outage**

Continued traffic locking and line circuit tests, Intrusion Detection Warning System (IDW) testing and snow melter testing during single track outages on January 5 and January 26, 2013.

- **Fisher TPSS/TCR (Train Control Room)**

Replacing RTU components in the Train Control Room.

- **TPSS #1 (Plainfield St. – N91)**

Strapping cross bond cables to non-metallic unistrut; pulled power cables from the substation to the trackside; and energized the first section of contact rail in N91 on January 30, 2013.

- **Plainfield TCR and N91 Area of Control**
Continued core drilling and saw cutting cable trough covers for conduit penetrations.
- **TBS #2 (Baldwin Drive – N92)**
Updating RTU software, pretesting ETS phones; programming network cabinet Cisco switches, troubleshooting network phones in the Tie Breaker Station (TBS) and Train Control and Communications Rooms; megger tested power cables between the TBS and TCR; and grounding electrical manhole rigs and covers.
- **Baldwin TCR and N92 Area of Control**
Verifying proper equipment installation in the TCR; continued core drilling and saw cutting cable trough cover for conduit penetrations; relocated wall mounted signal #2; strapping cross bond cables to non-metallic unistrut; and grounding electrical manhole rings and covers.
- **Operations Area OP-4/5A (Tysons East Guideway and Tysons East Station)**
Continued trackwork punch list work on the guideway; in the station installing control cables and equipment for elevators; installing wiring across the pedestrian bridge to the pavilion; installing pavilion escalators and wiring equipment in the elevator machine room; installing fire protection pipe; installing pavilion canopy steel; installing station metal door frames; installing SCADA, FIA and Communication raceways and cable throughout the station; installing cable, wire and light fixtures throughout the station; installing glass in the platform canopy curtain wall and elevators; installing pedestrian bridge suspended ceiling; and installing louvers controls in TPSS #3.

Systems Work

- **Tysons East TCR and N01 Area of Control**
Torquing and marking bolts for the WZ-bond leads; and site cleanup.
- **TPSS #3 (Tysons East Station – N01)**
Terminating heater control cables in the trackside cabinets and megger testing; connecting alternating fan controls.
- **Operations Area OP-5 (Tysons Central 123 Station)**
Continued installing elevators and escalators; continued installing domestic water lines; installing communications conduits; installing equipment, devices and raceways in the AC SWGR Room, TPSS #4, battery room; installing precast pavilion walls; continued assembly of the pedestrian bridge sections, associated conduit and metal roofing and set bridge trusses from pavilion to station; installing tube steel in access start #6; and installing canopy roof decking and welding steel support.

Systems Work

- **TPSS #4/TCR (Tysons 123 – N02)**
Continued terminating control cables in the ETS relay cabinet; and continued pulling ETS cables and racking in the cable trays.

- **Tysons 123 TCR and N02 Area of Control**
Installing ATC cables along the N2 south side tunnel wall; installing trackside conduit and ETS cables; and installing hangers in the tunnel for fiber optic cable.
- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure)**
Erecting tubular steel backup frames to support the architectural sight proof louvers at the entrance to the east vent structure; cutting, labeling and terminating cable pulled to fusible safety switches; placed ductbank concrete for the vent structure to the Dominion Virginia Power box; installing panels, labeling and terminating fan control wires; and performed startup testing of the tunnel vent fans.
- **Operations Area OP-6 (West Cut and Cover Tunnel)**
Installing conduit and cables for the N1 and N2 trackside marker coils; preparing to install fiber optic cables; and terminated cables at the west vent panel electrical room.
- **Operations Area OP-7 (Tysons Central 7 Station)**
Installing fire protection pipe in the mezzanine level rooms; installing raceways, fixtures and devices for the Air Conditioning (AC) and Communications Systems in the AC SWGR room, service rooms, under platform, in the TPSS #5, elevators, pedestrian bridges and in the pavilions; installing escalators and elevators in the pavilions; installing door frames; installing canopy skylights and acoustical metal decking; installing electrical raceways and cables for the pavilions; installing pedestrian bridge ceilings; installing waterproofing membrane above the north and south pavilion's service rooms; installing suspended ceiling panels under the mezzanine; installing ceiling panels at the platform and intermediate levels; installing station elevators and escalators; installing platform edge sealant; and installing fireproof sealant in various openings around conduit and at CMU wall gaps.

Systems Work

- **TPSS #5 (Tysons Central 7 Station-N03)**
Installing equipment grounding cables; terminating rectifier control cables; and dressing cables in the aerial raceways.
- **Tysons Central 7 TCR and N03 Area of Control**
Pulled and terminated ATC cables in junction boxes; dressing ATC and remote monitoring cables in the plenum; installing marker coils and cables; pulling and terminating cables in the AC switchboard room network cabinet; terminating analog and digital phone cables in the communications room; and completed installing rack to rack wiring.
- **Operations Area OP-8 (Tysons West Station/Guideway)**
Continued installation of cable troughs and contact rail on the guideway west of the station; continue grading, installing storm drains, subgrade and paving work within the median of the Route 7 eastbound between the DTR and Gosnell Road; continue track punch list work on the guideway; in the station – installing communications conduits; pulling public address speaker

wiring; installing electrical raceway and light fixtures in the AC switchgear room and intermediate level service rooms, mezzanine and under the platform; pulling feeder cables for AC switchboard #1; installing doors for public restrooms; testing TCR equipment; painting mezzanine level curtain wall steel framework; installing supports for mezzanine level glass curtain wall glazing; installing the platform granite edge; installing canopy skylight frames; repairing north pavilion precast panels; installing and terminating cables for the pavilion escalators; and set pedestrian bridges to the north and south pavilions.

Systems Work

- **TPSS #6 (Tysons West Station –N04)**
Continued pulling negative traction power cables; continued terminating traction power cables at the contact rail; and installing ETS cables.
- **Tysons West TCR and N04 Area of Control**
Installing communications cables in the ground level service rooms.
- **OP-9 (DIAAH)**
Continued track punch list work between Hunter Mill Road and Difficult Run; continued rebar and concrete construction of the barrier walls; and continued removal of jersey barriers and installation of permanent guardrails at various locations along the east and westbound DIAAH.

Systems Work

- **Wolf Trap TCR and N05 Area of Control**
Grounding fence posts; and installing IDW conduit and cable around fence gates.
- **TPSS #8 (Chatham's Ford – N93)**
Continued repairing encased heat trace conduit damaged by the track tamper; and continued terminating cables in the ETS and remote monitoring cabinets.
- **TPSS #10 (Sunset Hills – N95)**
Continued to verify ETS terminations and labeling and grounding of ETS and HC frames; terminating 34.5kV cables in the AC switchgear; continued grounding the rectifier transformer conduit bus duct supports; and continued cable terminations and labeling in the ETS remote monitoring and ETS phone cabinets.
- **TPSS #11 (Wiehle Avenue – N06)**
Continued grounding manholes covers and ETS frames; installed cable trough covers; installing additional ETS and HC conduit supports, verifying terminations and labeling; and megger testing and terminating ETS phone cables.
- **Wiehle TCR/N06 Area of Control**
Continued core drilling and saw cutting cable trough covers for the ETS and HC conduit penetrations; and IDW punch list work.

- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)**

Installing precast platform pavers; installing conduit for communications switch boxes and TEL-LAN and emergency circuits in the plenum, west service rooms, the Kiosk and pedestrian bridges; installing multi-conductor cable and wiring in the AC Switchgear Room, panels, transformers and equipment cabinets in AC room and throughout the station; installing wiring panels and lighting; applying waterproofing on the mezzanine deck; installing electrical raceways for the south pavilion; installing the south pavilion canopy; installing escalators and elevators at the south pavilion; installing Fire and Intrusion Alarm (FIA) devices in service rooms; installing fire line pipe; installing the sprinkler system in the platform ceiling; and installing ceiling supports on the platform level and for the canopy on the mezzanine level.

c. Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *January 2013*, 99 of the 104 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *January 2013*. Three of the four remaining parcels have been delayed due to protracted negotiations with the owners and Fairfax County regarding deed language and other modifications needed to finalize the deeds and agreements.

PARCELS ACQUIRED¹
(Number of parcel packages)

LOCATION	TOTAL	Period			To Date		
		Planned ²	Actual	Var	Planned ²	Actual	Var
I-66 / DCR	1	0	0	0	1	1	0
Route 123	23	0	0	0	23	21	(2)
Route 7	54	0	0	0	53	51	(2)
DIAAH	26	0	0	0	26	26	0
TOTAL	104	0	0	0	103	99	(4)

Notes: 1. Parcels acquired through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 39 parcels for which Certificates of Take have been filed.

2. Planned values are based on the March 31, 2011 Property Acquisition Status Update. One additional acquisition was added in June 2012 was to be completed in September 2012 and another was added in October 2012 to be completed in February 2013.

Condemnation Status

Thirty-nine parcel packages have been obtained with the filing of thirty-three Certificates of Take. In *January 2013*, it was reported that one case had the Final Order entered in *December (Parcel 90 Kaiser Foundation Health Plan)* and *four* cases are in finalization (Parcel 125, JBG 1831 Wiehle Avenue, LLC; Parcel 86/186 Maximums Properties, LLC; Parcel 81, CESC Commerce Executive Park, LLC and Parcel 3, West Group Properties, LLC). *A trial date of March 11, 2013 has been set with regard to Parcel 3(West Group Properties, LLC).*

Property Turnover to WMATA

MWAA has been conducting meetings with VDOT, Fairfax County and WMATA regarding the required transfer of property to WMATA that is expected to take place at some time between Substantial Completion and Revenue Service.

d. Utility Coordination

Utility relocation work continued through *January 2013* and is considered to be 99% complete. 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 were completed in December 2012. Washington Gas continues its replacement of old steel transmission piping with new plastic transmission piping near TPSS No. 10.

e. Vehicle Procurement

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

WMATA awarded a contract to Kawasaki on July 27, 2010. The manufacturer's proposed schedule showed the 64th car would be delivered by September 12, 2014 based on a July 12, 2010 Notice-to-Proceed (NTP), but WMATA did not issue the NTP until August 16, 2010, resulting in the conditional acceptance of the 64th rail car on January 15, 2015, six weeks beyond the FFGA completion date of December 1, 2014. The delivery of the first four production cars is forecasted to be February 20, 2014, and the conditional acceptance of the first four production cars is forecasted to be August 14, 2014.

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

On March 16, 2011, Kawasaki formally notified WMATA of potential delays that they believe would be considered excusable under the terms of the contract due to the earthquake/tsunami in Japan on March 11, 2011. On December 21, 2011, WMATA approved Kawasaki's Mitigation Schedule with a June 12, 2015 delivery date for the 64th railcar, which is more than six months beyond the FFGA completion date for the DCMP. MWAA formally informed the FTA Regional Administrator in a letter dated January 31, 2012. In this letter, MWAA writes "WMATA has stated that they would be able to provide sufficient rail cars from their existing fleet to begin service on the extension until the new Kawasaki rail cars are available. Therefore, we expect no impact to the FFGA, other than the late delivery of the rail cars." The PMOC continues to monitor WMATA's

daily railcar availability statistics to see if WMATA is improving railcar availability. WMATA 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 approved RFMP Rev-4G on October 11, 2012 with the proviso that that WMATA keep the FTA informed of the operating plan for the startup of the Dulles service.

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 *January 10, 2013*, Kawasaki reported that it still anticipates that the Final Design Review (FDR) phase will be completed on February 28, 2013 compared to the mitigation schedule completion date of March 22, 2012; this represents a 343 calendar day delay. *At the February 14, 2013 PMOC 7K Update Meeting, WMATA indicated that Kawasaki expected to complete its submission of revised CDRLs by February 15, 2013, and that the completion of the FDRs is on track for a February 28, 2013 completion.* 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 February 28, 2013 which is 343 calendar days beyond the mitigation schedule. The Carbody/Truck First Article Inspection Approval *was* completed on December 25, 2012, which was 117 calendar days behind schedule. The final assembly of the prototype *cars* is now anticipated on *March 15, 2013* which is 56 calendar days behind the mitigation schedule.

The key milestones for this railcar procurement are:

Item #	Description	Approved Baseline MPS Dates	Latest Approved MPS Dates (October 2012 update)	Actual and Current Forecast Dates
1	<i>Soft Mock up</i>	12/17/10	-	<i>4/28/11A</i>
2	<i>CDR Completion</i>	12/14/10	-	<i>6/30/11A</i>
3	<i>PDR Completion</i>	3/30/11	-	<i>3/16/12A</i>
4	<i>Hard Mock up</i>	10/4/11	-	<i>4/24/12A</i>
5	<i>Completion of HVAC Unit DVR</i>	NA	NA	<i>8/10/12A</i>
6	<i>Completion of Propulsion DVR</i>	NA	NA	<i>9/21/12A</i>
7	<i>Completion of ATC DVR</i>	NA	NA	<i>10/10/12A</i>
8	<i>Completion of Communications DVR</i>	NA	NA	<i>10/19/12A</i>
9	<i>Completion of Network DVR</i>	NA	NA	<i>10/19/12A</i>

Item #	Description	Approved Baseline MPS Dates	Latest Approved MPS Dates (October 2012 update)	Actual and Current Forecast Dates
10	<i>Begin Production of Pilot Cars #1, 2, 3 and 4 at KMM</i>	9/10/13	-	12/17/12A
11	FDR Completion	10/24/11	11/8/12	2/28/13
12	Begin Car Level Qualification Testing in Japan	10/30/12	2/13/13	3/10/13
13	Completion of Prototype Cars #1, 2, 3, and 4	10/29/12	2/12/13	3/15/13
14	Completion of KMM Test Track	NA	NA	5/21/13
15	Approval Climate Room Testing	2/15/13	5/31/13	5/9/13
16	Completion and Approval of Pilot Car Production Activities	9/30/13	5/31/13	5/9/13
17	Begin Pilot Car Testing at KMM	10/1/13	7/8/13	6/28/13
18	First Manual submission (DRAFT)	8/30/13	7/26/13	6/29/13
19	Completion of Pilot Car Testing at KMM	10/17/13	10/2/13	8/12/13
20	Completion of Prototype Car Review (Prior to Ship out from Japan)	5/14/13	7/31/13	9/30/13
21	Completion of Pilot Car FAI	10/21/13	10/3/13	10/4/13
22	Ship out of Prototype cars from Japan to USA	6/15/13	8/31/13	10/2013
23	Completion and Approval of FAI Activities	12/11/13	12/12/13	11/30/13
24	Delivery of first 4 Pilot Cars to WMATA	2/20/14	2/20/14	2/20/14
25	Delivery of first 4 production Cars to WMATA	2/11/14	2/20/14	2/20/14
26	Final Manual submission (DRAFT)	5/12/14	4/4/14	4/17/14
27	Conditional Acceptance of first 4 pilot Cars	8/14/14	8/14/14	8/14/14
28	Conditional Acceptance of first 4 Production Cars	8/14/14	8/14/14	8/14/14
29	Completion of On-site Test (After Burn-In)	2/19/15	2/19/15	2/14/15
30	Conditional Acceptance of 64th Production Car	6/12/15	6/12/15	6/12/15

Note: **Bold Activities/Dates** are contractual and contain a penalty for non-performance.

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

f. Safety and Quality Status

MWAA participated in *five* safety walk downs with DTP during the month of *January*. All were related to Design-Build work. As of *January 31, 2013*, DTP had logged *12.163* million project man-hours with *475* first aid cases and six lost time cases. There have been a total of *994* incident investigation reports, *90* utility hits and *41* vehicular accidents.

DTP submitted *Safety and Security Certifiable Items List (SCIL) Revision 6* to include the WFCY on August 6, 2012. Comments were received from WMATA on September 21, 2012. MWAA completed its review and issued Letter No. 07547 dated October 24, 2012 identifying three issues needing to be addressed. DTP responded by letter on November 30th and MWAA and DTP met on December 18th to discuss the issues further. *DTP subsequently resubmitted the SCIL Revision 6, which was approved “as noted” on February 5, 2013.*

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. *From month to month, the FTA and PMOC continue to express concern with the lack of progress on both the DCC and CCC submissions.*

DTP’s Submittal No. 9 was submitted to MWAA on October 5, 2012. *MWAA completed its review and accepted Submittal No. 9 on January 18, 2013. DCC Submittal No. 10 was submitted on January 7, 2013 and is currently under review.* The 100% DCC completion, with the exclusion of the WFCY, is anticipated by the end of the 1st Quarter of 2013.

DTP submitted CCC No. 4 (Revision 5) on July 25, 2012 in conjunction with a December 2012 preliminary walk-down of K-98 that was to serve as a prototype for future CCCs. Workshops (WMATA/MWAA/DTP) continued to be held to review and discuss construction records needed to support CCC certification. This CCC remained a work in progress for ten months without the desired result.

As a result, DTP proposed changes to the Project Quality Procedures to simplify the sign-off process and to combine the CCC approvals with the newly developed walk-down schedule developed in the joint turnover workshops. DTP outlined their proposed procedure (PPQ 01.06.04) in DTP Letter No. 01646 dated October 16, 2012 as follows:

“The master SCIL (with integral CCC) will be updated by DTP prior to a Team segment walk-down with the appropriate visual/measurement/testing (VMT) methodology. During the walk-down, MWAA and WMATA will have the opportunity to confirm the signoff and, if necessary, comment on the VMT approval. DTP will then update the Master SCIL with the documentation numbers for each validated SCIL item. During the biweekly DTP/MWAA SCIL Progress Meeting, any issues, comments, or discrepancies can be discussed and resolved, prior to DTP updating the SCIL to incorporate MWAA approval. The Master SCIL will be transmitted periodically, or as necessary, to MWAA with a progress summary issued at the monthly SCWG meeting. (A new attachment, 6.2, will describe the VMT methodology.)”

The PMOC noted some measure of pushback by WMATA on this approach since the Green book relies heavily on visual inspections without detailed support data. It appears to the PMOC that a compromise may be in order. All partners are currently trying to work out the support data issue. MWAA officially responded to the above noted proposal via Letter No. 07631 dated November 27, 2012. The letter requested refinements to the procedure change that will be followed by a review meeting between MWAA, WMATA and DTP before the procedure is formally resubmitted for approval.

DTP had been attempting to submit interim partial checklists in support of the joint walk-down inspections held in November through January. However, DTP was unable to obtain timely sign-offs needed to meet the aggressive walk-down schedule and submission of CCC No. 5 was again delayed to late February 2013. As a result, MWAA wrote Letter No. 07935 dated February 6, 2013, which disapproved the VMT methodology and directed that the checklist process be disconnected from the walk-down inspection process. A meeting with DTP was held to discuss the matter that resulted in a revised procedure that refined the VMT process on February 8, 2013. MWAA, DTP and WMATA continue to discuss the revised procedure.

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. *In addition, the TOC has begun attending the Monthly and Quarterly DCMP progress update meetings.* The SCWG held its regular monthly meeting on *January 15, 2013.* The next SCWG Meeting is scheduled for *February 19, 2013.*

MWAA submitted its Safety and Security Management Plan, Revision 8, to the FTA on February 17, 2011. MWAA and WMATA agreed to jointly develop a revised SSMP that would 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. 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 *January 2013*, MWAA and DTP performed the following QA audit/surveillances:

- *DTP System Safety/Security Program: MWAA planned to conduct this audit on January 23, 2013 but decided to move the audit to sometime in March after DTP submits a revised Program.*

MWAA QA Audit and Surveillance Schedule for February through April 2013

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv	Lead
2/13/13	S	The Punch List Process	N	MWAA
2/20-21/13	A	Crystal Metalworks	Y	DTP
2/27-28/13	A	DTP System Safety/Security Program	N	MWAA
<i>TBD</i>	<i>S</i>	<i>Permanent Equipment Facilities</i>	<i>Y</i>	<i>MWAA</i>
3/6-7/13	A	Whiting-Turner (WFCY)	Y	DTP
3/27-28/13	A	DTP Startup and Testing	N	MWAA
4/10-11/13	A	Facchina Construction Co. (Pedestrian Bridges/Pavilions)	Y	MWAA
4/24-25/13	A	Facchina Construction Co. (Late C6)	Y	MWAA

Use of Existing Foundations

As a result of the USDOT Office of Inspector General’s audit report of the Dulles Project dated July 26, 2012, testing of the foundations installed in the 1970’s by VDOT for the future extension of the Silver Line, MWAA will conduct tests to determine the effects, if any, of stray current on the service life of the steel piles that made up those foundations. To assure that the existing steel piles to be re-used for the Dulles Extension provide a minimum of a fifty year service life, MWAA is undertaking stray current tests to calculate the piles’ corrosion rate and estimate their remaining service life. The following table contains a summary of the actions to be taken to estimate the remaining service life of the re-used steel piles. Russell Corrosion Consultants, Inc. was employed by MWAA to develop a Corrosion Test Plan and to oversee implementation of that plan. Russell developed a Draft Corrosion Testing Plan, and numerous comment resolution meetings were conducted during August with all partners. A Final Plan was submitted to MWAA on September 14, 2012 for review and acceptance. MWAA accepted the plan and submitted it to the FTA for review and approval via MWAA Letter No. 07403 dated September 24, 2012. WMATA reviewed and accepted the plan on October 5, 2012 via an email. FTA has requested that WMATA formally approve the plan via letter. *This has not yet occurred.* The FTA reviewed the plan and provided an acceptance letter dated November 1, 2012. A Site Specific Work Plan was submitted to WMATA for review and approval on October 10, 2012 and was subsequently approved on November 9, 2012. A planning meeting with all partners was conducted on November 20, 2012. It was a productive meeting that was well attended by all partners. Coordination of the night access and necessary escorts was discussed. UTRS, under the oversight of Russell Corrosion Consultants and CTI Special Inspection and MWAA/QA, began work on December 11, 2012. As of January 8, 2013, the contractor has completed the Vertical Test Facility (VTF) installation at both piers 3-IB and 5-IB. The test plan now calls for the VTFs to be left to settle for 30 days, after which the specified testing will commence. *MWAA reported that it anticipates that UTRS will complete the track-to-earth testing by February 22, 2013 and then the VTF stray current testing utilizing the VTFs will commence. However, the completion of the track-to-earth testing is dependent upon dry weather.*

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. *PMP* Version 8 Final was submitted to the FTA on November 8, 2012. *The PMOC reviewed this submission and found it acceptable with the exception of the inclusion of draft organization charts, Figures 2-4 and 2-5. FTA's email of January 4, 2013 requested the updated organization charts, which MWAA submitted on January 23, 2013. The FTA approved PMP Version 8.0 Final on January 25, 2013.*

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

- The FTA requested MWAA to update its **Risk and Contingency Management Plan (RCMP)**, formerly called a Risk Management Plan (RMP), along with their Project Management Procedures to address Directive Letters and Contingency Drawdown Procedures. MWAA submitted the revised RCMP Rev. 3 on March 28, 2012, and the PMOC recommended FTA acceptance. The FTA accepted RCMP Rev. 3 as well as revised Project Management Procedure PM 5.07, Rev. 4, on April 13, 2012. MWAA updated the Risk Register Assessment on June 30, 2012 and submitted it to the FTA and PMOC on August 27th. A discussion was held during the PMOC's September 6 monthly meeting. The PMOC provided review comments and a modified Top Ten Risk List that was reviewed by MWAA. MWAA provided a submittal dated October 3, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. The FTA approved the revised Top Ten Risks by letter dated November 29, 2012. It was agreed that the top ten risks would be reviewed and revised as needed on a quarterly basis. *A revised list of Top Ten Risks dated December 2012 was submitted to the FTA via letter dated January 22, 2013 and is under review by the PMOC and FTA.*

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. FTA letter dated October 11, 2012 *conditionally* approved the RFMP with the proviso that WMATA keep the FTA informed of the operating plan for the startup of the Dulles service. *With the proposed change in the eastern turnaround moving from Stadium-Armory Station to Largo Town Center Station, FTA requested an updated RFMP once the WMATA Board formally adopts this operating change, which is expected in March 2013.*

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

4. Project Schedule

Mainline - The project "Mitigation Schedule" update with a data date of *December 25, 2012* reflects a -8 calendar day variance compared to a -5 variance reflected in the *November 25, 2012*. DTP's schedule shows the Revenue Service Date to be *January 10, 2014*. MWAA completed its schedule review of the schedule update with a data date of *December 25, 2012* on *January 23, 2013* and determined it to be "not accepted." *MWAA Letter No. 07849 stated that this was "largely due to the incorporation of the unapproved Commissioning and Integration Testing Schedule as a significant portion of the remaining activities" despite MWAA's rejection of that testing schedule. MWAA also stated that "DTP also*

continues to ignore specifications by adding activities, deleting activities, changing relationships, using constraints, and changing durations contrary to...contract requirements.”

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. The official final approval was finally provided on December 6, 2012.

MWAA and DTP continue the ongoing 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. However, DTP’S assessment has reported an additional 15 calendar days of weather delay that if approved would move the SSCD to September 13, 2013.

MWAA’s Report of Excusable Work Days of Delay through *December 25, 2012*

ACTION	WORK DAYS
Total Excusable Days of Delay on Project Critical Path requested by DTP	73
Contractually Identified	27
Retracted by DTP	16
Denied by MWAA/Disputed by DTP	8
Under evaluation by MWAA	0
Granted by MWAA	22

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 *December 25, 2012 again* reflected a -10 calendar day variance to the targeted date (to December 30, 2013). It should be noted that WFCY activities and completion dates are only overlaid on the master mainline schedule and not connected to the mainline critical path or SSCD and does not include systems integration into the mainline system. MWAA and WMATA *continue* considering parts of the WFCY expansion that may not be needed to support the RSD should the Project be unable to achieve the target date. WMATA has noted that the storage tracks are most critical to WMATA’s needs to support start-up and operation. The PMOC remains confident that the project can be completed before the FFGA RSD of December 1, 2014. *It is the PMOC’s opinion that SSCD can be achieved by September 30, 2013. RSD is dependent upon the completion of WMATA’s schedule associated with the Rail Activation Plan (RAP).*

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

- Kone’s work related to elevators and escalators in stations and pavilions falling behind schedule.
- *WMATA required points of testing for acceptance are now up to 700 points per location, necessitating an increased number of resources in order to avoid any adverse impact if something in the field is not wired correctly or if there is an abnormality in the software program.*
- DGS availability for walk-downs and inspections.
- 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.

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 *December 2012 Schedule Update*, the Critical Path No.1 has a -8 days of float and starts with *SCADA testing project wide, safe braking at Tysons East Station and Tysons Central 123 Station, dynamic testing at Plainfield Street to Tysons Central 123 Station, and ends with the System Performance Demonstration.* MWAA noted that *even though the path itself may be acceptable, its assessment does not agree with the way the remaining tasks are being sequenced and represented.* DTP has been asked to resubmit the *Commissioning and Integrated Testing Schedule, which is the key component of the remaining tasks.*

The PMOC agrees with MWAA’s assessment regarding the critical path. MWAA continues to carefully analyze the schedule and continues to hold DTP accountable for changes made to the agreed schedule.

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	November 2012	December 2012
Receipt of FFGA	03/03/09	03/10/09 ^A	03/10/09 ^A	03/10/09 ^A
Station Design Complete	10/21/09	02/18/11	10/28/11 ^A	10/28/11 ^A
Utility Relocation Complete	03/05/10	09/13/11	01/31/12 ^A	01/31/12 ^A
Aerial and Station Foundations Complete	3/4/11	09/01/11	07/23/11 ^A	07/23/11 ^A
NATM Tunnels Mined	01/29/11	12/03/10 ^A	12/03/10 ^A	12/03/10 ^A
K-Line Track Tie-In	12/23/11	03/28/12	10/14/11 ^A	10/14/11 ^A
Guideway Complete	2/12/12	09/13/12	11/26/12 ^A	11/26/12 ^A
Train Control Installation Complete	10/26/12	10/29/12	02/28/13	02/05/13
Systems Testing Complete - Tysons East Station	07/24/12	02/21/13	05/03/13	05/20/13
Systems Testing Complete - Wiehle Ave Station	08/13/12	01/16/13	06/06/13	06/21/13
Systems Testing Complete - Central 7 Station	01/23/13	04/12/13	07/08/13	06/21/13
Systems Testing Complete - Tysons West Station	02/21/13	05/14/13	07/12/13	07/11/13
Systems Testing Complete - Tysons 123 Station	12/20/12	03/28/13	07/17/13	07/09/13
Substantial Completion	07/31/13	07/31/13	09/03/13	09/06/13

MILESTONE	June 2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	November 2012	December 2012
Completion - WFCY	NA	N/A *	<i>12/30/13</i>	<i>12/30/13</i>
Revenue Operations – Target	11/27/13	01/02/14	<i>01/07/14</i>	<i>01/10/14</i>
FPGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

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

b. Important Activities – 90-Day Look Ahead

The important milestones scheduled for the next 90 days include:

- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- Property acquisition for the DIAAH Trackway and the Wiehle Avenue Station and Tail track (OP-9 and 10).
- Complete train control equipment installation.
- K98 ATC circuits cutover.
- Complete energization of the remaining two Traction Power Substations/Tie Breaker Stations.
- *Begin N-Line dynamic train testing.*
- *Complete 3rd rail initial energizations between Tysons East Station and Wiehle Avenue.*

5. Project Cost

The SCC Budget and Expenditures summary for the period ending *December 25, 2012* is shown below. Overall, approximately 82% of the budget (excluding contingency and finance charges) has been expended.

PROJECT SUMMARY BY SCC CODE – DECEMBER 2012 FEDERAL ONLY

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION	CONTINGENCY TO DATE
10	Guideway and Track Elements	\$ 639,851,120	\$ 615,160,593	\$ 630,162,611	\$ 40,020,254
20	Stations	\$ 308,807,208	\$ 252,380,922	\$ 350,900,460	\$ 26,192,703
30	West Falls Church Yard	\$ 71,180,798	\$ 21,269,963	\$ 70,965,618	\$ 7,771,036
40	Site Work & Utility Relocation	\$ 230,276,104	\$ 206,336,310	\$ 261,027,878	\$ 7,944,677
50	Systems	\$ 323,755,138	\$ 264,597,071	\$ 320,166,083	\$ 23,911,775
60	Right of Way Acquisition	\$ 67,631,026	\$ 56,294,723	\$ 62,310,611	\$ 809,164
70	Vehicles	\$ 195,352,701	\$ 57,343,261	\$ 194,648,939	\$ 16,491,446
80	Professional Service – FD	\$ 731,075,861	\$ 719,620,967	\$ 797,327,775	\$ 66,289,707
90	Contingency Mgmt. Reserve ²	\$ 64,557,107	\$ -	\$ 16,777,089	\$ 167,690,747
100	Finance Charge ³	\$ 509,984,571	\$ 103,131,435	\$ 438,184,571	\$ -
Subtotal		\$ 3,142,471,635	\$ 2,296,135,246	\$ 3,142,471,635	\$ 357,121,511

1. Current budget equals FFGA amount plus change orders CO-001-081, 083-115, 117, 119-128, Directive Letters 001-045, UR-CO-001-039

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

3. The transfer of Finance Costs under-run of \$71.8 million to the contingency was approved in December 2012.

General Comments:

1. 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.

a. Explanation of Variances

The major variances in the *FFGA* project budget are associated in seven categories as noted below:

1. SCC10 – Guideway and Track Elements has been reduced approximately \$36.33 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 \$33.87 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 \$19.17 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 \$28.06 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 \$41.15 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 \$16.36 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 \$16.98 million due to actual bid prices.
 8. SCC80 – Professional Services increased approximately \$98.85 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.
- SCC90 – Contingency Management Reserve estimate at completion of \$16.78 million is available for future use with the transfer of the Finance Costs under run of \$71.8M *which was authorized by the MWAA Board in December 2012*. The PMOC is of the opinion that the contingency reserve still needs to be increased considering that *there are seventeen Design-Build Change Orders totaling \$19.65M under evaluation and three Utility Relocation Change Orders totaling \$5.93M under evaluation. In addition, there remain eighty-eight Design-Build Potential Change Orders and five Utility Relocation Subcontractor Changes under review.*

b. Monthly Cost Report, December 2012 Federal Only

DESCRIPTION	FFGA AMOUNT (Original)	EXPENDITURE TO DATE ¹	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION	PERCENT OF EAC EXPENDED TO DATE
FEDERAL (FFGA SCOPE)					
Design-Build					
Firm Fixed Price	\$ 1,112,052,173	\$ 1,577,136,819	\$ 152,579,821	\$ 1,729,716,640	
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 73,753,162	\$ 1,483,098	\$ 75,236,260	
	Firm Fixed Price Subtotal	\$ 1,177,161,581	\$ 1,650,889,981	\$ 154,062,919	\$ 1,804,952,900
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 77,016,252	\$ 77,016,252	
	Design-Build Contract Prices	\$ 1,607,361,398	\$ 1,650,889,981	\$ 231,079,171	\$ 1,881,969,152
Indexed Commodity Escalation	\$ 77,469,926	\$ -	\$ 22,727,025	\$ 22,727,025	
	Design-Build Contract Total	\$ 1,684,831,325	\$ 1,650,889,981	\$ 253,806,196	\$ 1,904,696,177
					87%
Utility Relocation					
Utility Work	\$ 84,312,807	\$ 95,622,941	\$ 6,851,536	\$ 102,474,477	
Terf Tax	\$ -	\$ -	\$ 0	\$ 0	
Project Management and Final Design	\$ 8,423,426	\$ 25,406,699	\$ 334,517	\$ 25,741,216	
	Utility Relocation Total	\$ 92,736,233	\$ 121,029,640	\$ 7,186,053	\$ 128,215,693
					94%
Right of Way					
	Right Of Way Total	\$ 42,443,132	\$ 56,616,846	\$ 6,318,765	\$ 62,935,611
					90%
WMATA Agreement					
Vehicles	\$ 195,138,329	\$ 57,343,261	\$ 137,305,677	\$ 194,648,939	
Construction and Procurement	\$ 31,484,799	\$ 9,777,481	\$ 18,320,636	\$ 28,098,117	
WMATA Force Account Startup	\$ 13,777,100	\$ 6,643,797	\$ 6,761,224	\$ 13,405,021	
Project Management and Final Design ²	\$ 31,235,400	\$ 25,292,374	\$ 10,191,178	\$ 35,483,552	
	WMATA Agreement Total	\$ 271,635,628	\$ 99,056,913	\$ 172,578,715	\$ 271,635,628
					36%
Preliminary Engineering^{2,3}					
	Preliminary Engineering Total	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999
					100%
Airports Authority Services					
General Conditions ⁴	\$ 28,879,153	\$ 10,838,512	\$ 19,212,266	\$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 32,767,742	\$ 13,353,704	\$ 46,121,446	
Project Management Support	\$ 90,004,649	\$ 121,073,178	\$ 22,050,463	\$ 143,123,642	
	Airports Authority Services Total	\$ 142,109,519	\$ 164,679,432	\$ 54,616,434	\$ 219,295,866
					75%
Contingency⁵					
	Contingency Total	\$ 297,762,579	\$ -	\$ 16,777,089	\$ 16,777,089
Finance Costs⁶					
	Finance Costs Total	\$ 509,984,571	\$ 103,131,435	\$ 335,053,136	\$ 438,184,571
Total Federal (FFGA Scope)	\$ 3,142,471,635	\$ 2,296,135,246	\$ 846,336,389	\$ 3,142,471,635	82%

1 Reflects Paid costs through December 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, Miscellaneous Access Roads and Wiehle Ave Garage.

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

6 The Estimate at Completion for Finance Costs includes \$71.8 million in allocated contingency.

General Comments:

1. 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: December 2012

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE ¹	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING	
Sec 5309 New Starts Federal Funds							
Preliminary Engineering Grants			\$ 54,412,526	\$ 54,412,526	100%	\$ -	
Final Design Grant	VA-03-0113-00		\$ 159,001,838	\$ 159,001,838	100%	\$ -	
ARRA Construction Grant	VA-36-0001-00		\$ 77,260,000	\$ 77,260,000	100%	\$ -	
FFGA Construction Grant	VA-03-0113-02		\$ 28,809,000	\$ 28,809,000	100%	\$ -	
FFGA Construction Grant	VA-03-0113-03		\$ 85,000,000	\$ 85,000,000	100%	\$ -	
FFGA Construction Grant	VA-03-0113-04		\$ 115,799,000	\$ 115,799,000	100%	\$ -	
FFGA Construction Grant ⁵	VA-03-0113-05		\$ 90,832,000	\$ 90,832,000	100%	\$ -	
FFGA Balance	Planned		\$ 288,885,636	\$ -	0%	\$ 288,885,636	
Subtotal - New Starts		28.64%	\$ 900,000,000	\$ 611,114,364	67.90%	\$ 288,885,636	
Other Federal Funds							
Sec 5307 Surface Transportation Program							
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 47,218,109	100%	\$ -	
Construction Grant	VA-95-X056-02		\$ 21,281,890	\$ 21,281,890	100%	\$ -	
Construction Grant	VA-95-X056-03		\$ 6,500,001	\$ 6,500,001	100%	\$ -	
STP/Sec. 5307		2.39%	\$ 75,000,000	\$ 75,000,000	100%	\$ -	
Local Funds							
VTA 2000							
			\$ 51,700,000	\$ 51,700,000	100%	\$ -	
Commonwealth Transportation Bonds ^{2,5}							
			\$ 125,000,000	\$ 125,000,000	100%	\$ -	
Fairfax County Funds ³							
			\$ 523,750,000	\$ 369,089,733	70%	\$ 154,660,267	
Dulles Toll Road Revenues ^{2,4,5}							
			\$ 1,467,021,634	\$ 1,064,231,149	73%	\$ 402,790,485	
Subtotal - Local Funds		68.97%	\$ 2,167,471,634	\$ 1,610,020,882	74.28%	\$ 557,450,752	
Total Project Budget		100%	\$ 3,142,471,634	\$ 2,296,135,246	73.07%	\$ 846,336,388	
Interrelated Highway Activities							
			\$ 201,408,229	\$ 99,479,000	49.39%	\$ 101,929,229	
DTR Revenues/Commonwealth Funds³			\$ 201,408,229	\$ 99,479,000	49.39%	\$ 101,929,229	
			Total	\$ 3,343,879,863	\$ 2,395,614,246	71.64%	\$ 948,265,617

¹ Reflects costs through December 31, 2012.

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

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

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

⁵ Expenditures includes accruals.

6. Project Risks

The PMOC reviewed MWAA's updated Risk Assessment dated April 15, 2011. A series of meetings during the following eleven months led to submission of RCMP Revision 2c on March 5, 2012. The FTA and PMOC provided comments on March 16, 2012 and MWAA submitted RCMP Rev. 3 to the FTA for approval by letter dated March 28, 2012. The FTA approved the RCMP on April 13, 2012. In June 2012, MWAA updated the Risk Register. This document and a recommendation to update the Top Ten Risks were forwarded to the FTA and the PMOC for review on August 27, 2012. FTA, the PMOC and MWAA discussed this issue during the PMOC's September monthly site visit. The PMOC provided review comments and a modified Top Ten List that will be reviewed by MWAA. MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. FTA approved the revised Top Ten Risks by letter dated November 29, 2012. *MWAA submitted a list of revised Top Ten Risks dated December 2012 on January 22, 2013, which is under review.*

Budget Risks: MWAA has allocated \$71.8 million in finance cost savings and \$19 million of Commodity Escalation under run monies to Contingency. *This brings the total Contingency to \$388,562,579.* Through *December 25, 2012*, MWAA reports that it has utilized \$282,588,064 of the \$291,574,579 available contingency for the first nine contingency milestones leaving a balance of \$8,986,220. For phases 10 through 12 MWAA reports obligating \$89,197,429 of the available \$96,988,295 leaving an available balance of \$7,790,868. Therefore, as of *December 25, 2012*, the project has an estimated balance at project completion of \$16,777,089. MWAA's transfer \$90,800,000 to contingency has improved the Project Contingency situation. However, the project must be diligent in its efforts to identify additional contingency monies and to control the project overrun costs. *As noted elsewhere in this report, there are significant Design-Build and Utility Relocation Change Orders under evaluation and a large number of Potential Change Orders (88) and Utility Relocation Subcontractor Changes (5) still under review.*

MWAA submitted a tabulation of possible *Concurrent Non-Project Activities* (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. The FTA subsequently identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA's letter of November 28, 2012 corrected the total for CNPAs to \$40.38M, citing inconsistencies in the FTA numbers and requesting verification. *MWAA is currently developing the documentation to confirm the refund of any federal funds previously drawn down to pay for these ineligible costs.*

MWAA acknowledges that WMATA will contribute no funding, that the FTA and VDOT budgets are fixed, and that the local funding partners bear *their share* 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 *December 2012*, MWAA has granted DTP time extensions of 30 calendar days reducing the available contingency from 510 to 480 calendar days. MWAA reports having denied nine claimed weather delay days that DTP continues to pursue. However, DTP'S assessment has reported an additional 15 calendar days of weather delay that if approved would move the SSCD to September 13, 2013. *In the PMOC's opinion*, some of the arguments made by MWAA appear to be weak, i.e. night shift weather delays can only be considered on the day the shift would have ended, despite weather impacts incurred on the front end of the shift. If more denied potential excusable weather delays continue to mount without solid arguments, MWAA may be at risk of a DTP self-imposed constructive acceleration to meet the required completion date

Top Ten Risks: MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the *Top Ten Risks* for review and approval. FTA approved the revised Top Ten Risks by letter dated November 29, 2012. MWAA submitted a list of revised Top Ten Risks dated December 2012 on January 22, 2013, which is under review.

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

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

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.05	Submit Updated Risk Register developed in June 2012	FTA and PMOC need to review the updated document.	Y	Y	Y	The updated Risk Register Assessment was sent to the FTA and PMOC on August 27 th . The PMOC provided review comments and a modified Top Ten List that will be revised by MWAA. MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. FTA issued an approval letter on November 29, 2012.	C
2	2A.06	Determine Federal Budget CNPAs.	Items have been charged to the Federal portion of the Project Budget that may be CNPAs.	Y	Y	Y	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. The FTA subsequently identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA's letter of November 28, 2012 corrected the total to \$40.38M.	C

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
ATC	Automatic Train Control
BFMP	Bus Fleet Management Plan
CAR	Corrective Action Request
CCC	Construction/Procurement/Installation Conformance Checklist
CD	Calendar Days
CDRL	Contract Deliverables Requirements List
CMU	Concrete Masonry Units
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
ETS	Emergency Trip Station
FFGA	Full Funding Grant Agreement
FIA	Fire and Intrusion Alarm
FTA	Federal Transit Administration
FTE	Full Time Equivalent
FY	Fiscal Year
HC	Heater Cable
HOT	High Occupancy Toll
IDW	Intrusion Detection Warning System
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
<i>RAP</i>	<i>Rail Activation Plan</i>
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)
SCB	Sound Cover Box
SCC	Standard Cost Category
SCIL	Safety and Security Certifiable Items List
S&I	Service and Inspection
SOE	Support of Excavation
SSCD	Scheduled Substantial Completion Date
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan
STP	Surface Transportation Program
SWGR	Switch Gear
TBD	To Be Determined
TBS	Tie Breaker Station
TOC	Tri-state Oversight Committee
TPSS	Traction Power Substation
UR	Utility Relocation
VDOT	Virginia Department of Transportation
VTF	Vertical Test Facility (Corrosion Testing)
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: *March 1, 2013* (reporting current through *January 2013*- Financials through *December 2012*)

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

Grantee: Metropolitan Washington Airports Authority (MWAA)

FTA Regional Contact: Brian Glenn, P.E.

FTA Headquarters Contact: Dale Wegner, P.E.

Scope

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

Ridership

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

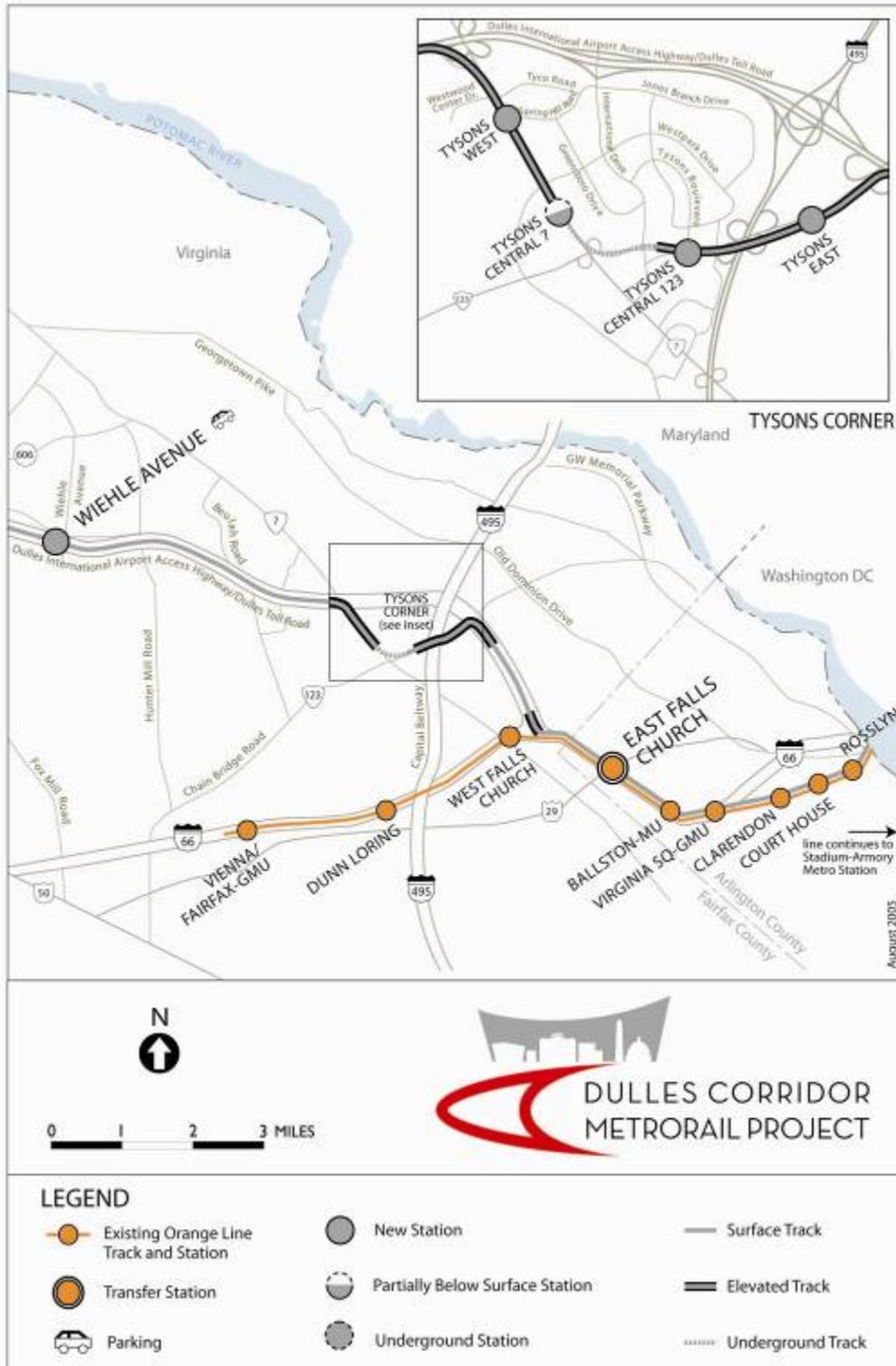
Schedule

06/10/04	Approval to Enter PE	2011	Estimated Rev Ops at Entry to PE
05/12/08	Approval to Enter FD	12/04/13	Estimated Rev Ops at Entry to FD
03/10/09	FFGA signed	12/01/14	Estimated Rev Ops at FFGA
01/10/14	Revenue Service Date (RSD) <i>as of December 25, 2012</i>		
88.0%	Percent Complete Construction <i>as of January 31, 2012.</i>		
68.0%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
87.1%	MWAA's Estimate of Project Earned Value through <i>December 2012</i>		

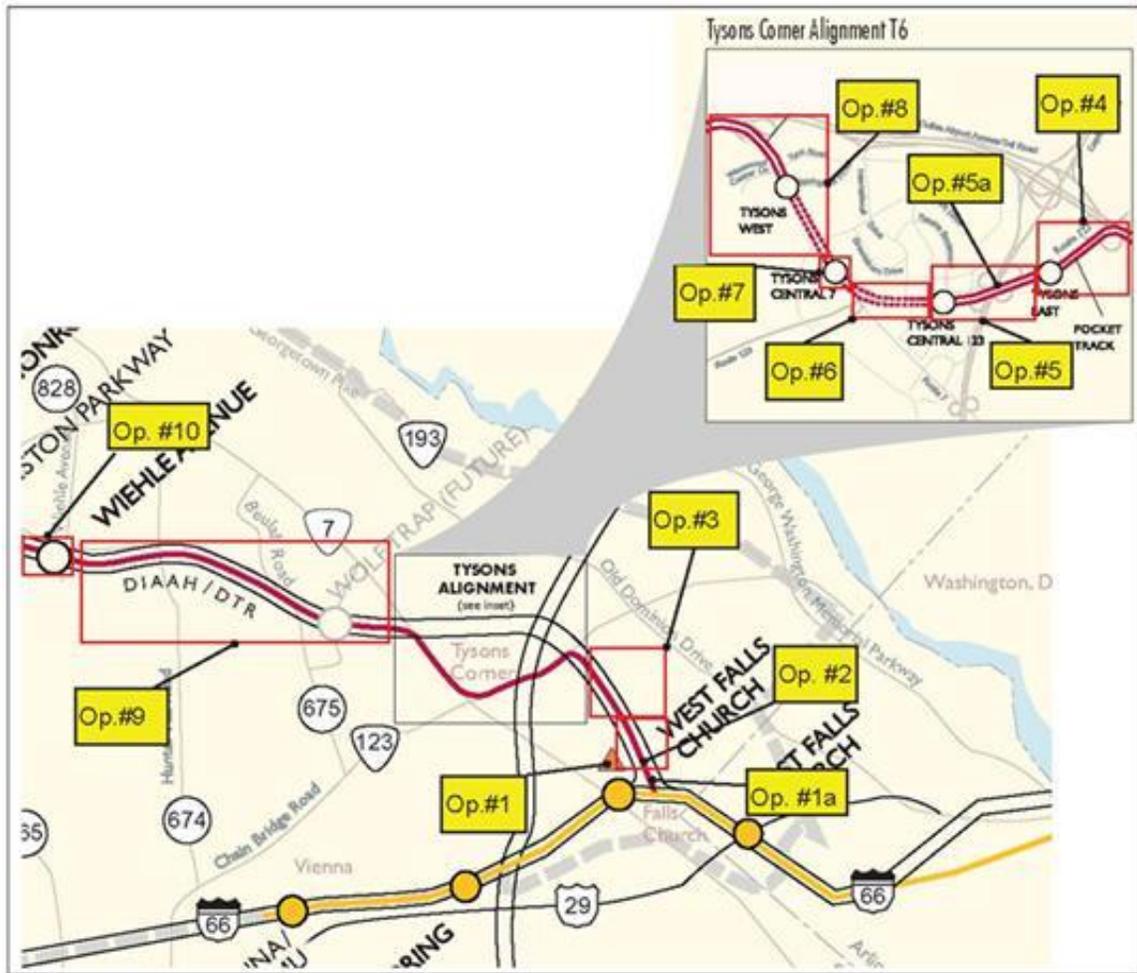
Cost

\$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
\$2.296 billion	Expenditures through <i>December 2012</i> from total project budget of \$3.142B
82%	Percent complete based on federal expenditures excluding contingency and finance charges through <i>December 2012</i> .
\$17.83 million	Total project contingency remaining (allocated and unallocated) through <i>November 2012</i> .

Project Map



Construction Operational Areas



APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST

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

Safety and Security Authority	Y/N	Notes/Status
Is the grantee subject to 49 CFR Part 659 State Safety Oversight requirements?	Y	Tri-State Oversight Committee (TOC)
Has the State designated an oversight agency as per Part 659.9?	Y	Tri-State Oversight Committee (TOC)
Has the oversight agency reviewed and approved the grantee's SSPP as per 659.17?	N	An updated WMATA SSPP dated January 20, 2011 was approved by TOC on February 22, 2011.
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	Y	Approved on August 2, 2010
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	TOC 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.

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

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

Construction Safety	Y/N	Notes/Status
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	DTP's Construction Safety, Health and Security Plan accepted on January 6, 2009.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	
Provide the grantee's OSHA statistics compared to the national average for the same type of work. If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	Y	DTP has recorded 465 first aid cases and six lost time cases in 12.163 million project man-hours, which is below the national average.
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	

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

APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW

[REDACTED]

[Redacted]