

COMPREHENSIVE MONTHLY REPORT

September 2013

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

November 4, 2013

PMOC Contract Number: DTFT60-09-D-00016

Task Order Number: 002, **Project Number:** DC-27-5142, **Work Order No.** 04

OPs Referenced: 01, 25

Hill International, Inc.

One Penn Square West

30 South 15th Street

Philadelphia, PA 19102

PMOC Lead: [REDACTED]

Length of Time PMOC Assigned to Project: 12.5 years

Length of Time PMOC Lead Assigned to Project: 5.5 years

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
1. PROJECT DESCRIPTION	1
2. PROJECT STATUS SUMMARY.....	1
3. PMOC’S ASSESSMENT OF PROJECT STATUS.....	4
MAIN REPORT	6
1. GRANTEE’S CAPABILITIES AND APPROACH	6
a. <i>Technical Capacity and Capability</i>	6
b. <i>Project Controls</i>	7
c. <i>Compliance</i>	8
2. PROJECT SCOPE	8
a. <i>Design Status</i>	8
b. <i>Bidding and Construction Status</i>	8
c. <i>Real Estate</i>	13
d. <i>Utility Coordination</i>	14
e. <i>Vehicle Procurement</i>	14
f. <i>Safety and Quality Status</i>	17
3. PROJECT MANAGEMENT PLAN AND SUB-PLANS	20
4. PROJECT SCHEDULE.....	22
a. <i>Critical Path Evaluation</i>	23
b. <i>Important Activities – 90-Day Look Ahead</i>	24
5. PROJECT COST	25
a. <i>Explanation of Variances</i>	25
b. <i>Monthly Cost Report, July 2013 Federal Only</i>	27
c. <i>Project Funding Sources: July 2013</i>	28
6. PROJECT RISKS	29
7. ACTION ITEMS	32
APPENDICES.....	33
APPENDIX A – <i>LIST OF ACRONYMS</i>	34
APPENDIX B – <i>PROJECT OVERVIEW AND MAP</i>	37
APPENDIX C – <i>SAFETY AND SECURITY CHECKLIST</i>	41
APPENDIX D – <i>PMOC TEAM PERFORMING THIS REVIEW</i>	45

EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *October 10, 2013* to conduct a monthly progress meeting for work performed in *September 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 *second* and *third* weeks of *October 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) 2013, Congress has appropriated \$701,844,869 in Section 5309 New Starts funds for the Project with the addition of the FY13 New Starts Appropriation of \$90,730,505. The FTA has awarded \$611,114,364 in Section 5309 New Starts and \$75,000,000 in STP funds to date for the Project.

2. Project Status Summary

The PMOC met with MWAA on *October 10, 2013* to conduct a monthly progress review meeting and MWAA provided supplemental information the following week. The status of information is as of *September 30, 2013*, unless otherwise noted.

- **Real estate acquisition** kept ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels. Of the 105 parcel packages required, 103 have been acquired. *The remaining two parcels are expected to be acquired in October 2013.* MWAA expects to complete the transfer of property to WMATA between SSCD and RSD.
- **Rail Car Procurement** – *The PMOC participated in a teleconference held on October 22, 2013 with FTA, MWAA, and WMATA to review the past month's activities and Kawasaki's Project Review Meeting (PRM) #37 information package.* Design Qualification Testing (DQT) continues for components and subsystems, and car level DQTs continue at the Kawasaki Heavy Industries (KHI) facility in Japan on the full prototype car. The production of trucks at Kawasaki Rail Car, Inc. (KRC) in Yonkers, NY has begun and a First Article Inspection (FAI) was held on June 26, 2013. The Test Track at KMM in Lincoln, NE was

completed on July 12, 2013. *Track circuit testing of the test track with a rail car began during the week of September 9, 2013.* The total measured average weight of the car is now 83,327 pounds, which is *nearly 600 pounds over the previously reported measured average weight of 82,729 pounds.* The requirement is *an average weight of 82,500 pounds.* WMATA reported that they have four full-time inspectors at KMM. They also have two inspectors at KHI. The current forecast completion date for the conditional acceptance of the 64th railcar remains as March 25, 2015, a nearly three-month improvement over the June 12, 2015 contractual completion date. This anticipated schedule improvement is based on Kawasaki continuing to manufacture the pilot cars at risk and seeking to ramp up to a sixteen railcar per month production rate more quickly than originally anticipated. KMM production of the four pilot cars continues with *shipment to WMATA expected on December 20, 2013, as opposed to the contractual date of February 20, 2014.* The delivery of the first four production cars remains forecast to be April 20, 2014, and the conditional acceptance of the first four production cars is still forecast to be August 14, 2014. The four prototype rail cars were completed at KHI *in Japan on May 17, 2013.*

- **Design progress** – MWAA reported that, as of the end of February 2013, all required permit applications have been submitted and approved.
- **Construction progress** is broken into two components: utility relocation (UR), which is 100% complete, and design-build (DB) construction, which is approximately 98% complete. Significant accomplishments in *September* included continued fit and finish work at stations, pedestrian bridges and pavilions; elevators and escalators installation and testing; continued installation and testing of Communications Systems; static and dynamic train testing of the Automatic Train Control (ATC) system in all five N-Line test blocks. *Initial joint walkdown inspections of all five stations have been completed and punch list correction work and verification inspections continue.* The Project also continues to make good progress on the West Falls Church Yard upgrades to include construction of the track Sound Cover Box (SCB), Service and Inspection (S&I) Shop and storage tracks *and Automatic Train Control System.*

SILVER LINE CONSTRUCTION PROGRESS THROUGH SEPTEMBER 2013			
ELEMENTS	% COMPLETE	STATIONS	% COMPLETE
O-3 (DCR) Trackway	100%	Tysons East	97%
Tysons East Guideway	100%	Tysons Central 123	94%
Tysons West Guideway	100%	Tysons Central 7	95%
O-9 (DIAAH) Trackway	100%	Tysons West	95%
Systems	93%	Wiehle Avenue	98%
Trackwork	100%	Systems Testing	89%

WEST FALLS CHURCH YARD PROGRESS THROUGH SEPTEMBER 2013	
ELEMENTS	% COMPLETE
Overall	78%
Sitework	99%
Sound Cover Box	85%
S&I Building	80%
Trackwork	99%
Systems	90%
Testing	15%

- **The DTP Schedule Update** with a data date of *August 25, 2013* showed the SSCD as *November 19, 2013*. Based on that SSCD, the forecast RSD would be *March 17, 2014*. The RSD will ultimately be determined by MWAA and WMATA. (MWAA has ceased noting a DTP projected RSD in its Monthly Report and correctly states that the RSD is not applicable to DTP after SSCD). MWAA completed its review of the Schedule Update with a data date of *August 25, 2013* on *September 20, 2013*, stating that the schedule was once again “Not Accepted.” *MWAA did not accept DTP’s Critical Path No.1. MWAA believes the completion of the ETS Remote Monitoring reconfiguration and final SCADA testing of the TPSSs is more critical.*
- **With regard to the West Falls Church Yard (WFCY) completion date**, DTP’s schedule update of *August 25, 2013* reflected *again* -14 calendar day variance to the targeted completion date of *December 20, 2013*, resulting in a forecast completion date of *January 3, 2014*. This schedule was “not accepted” by MWAA. *DTP’s schedule update continues to attribute late completion due to the impact of requested weather days not having been approved. MWAA is concerned that the delays to the delivery of interior acoustical panels which must be installed before the noise study of the SCB can be completed is the true critical path.*
- **Budget status as of August 25, 2013 indicates** that \$2,501,770,567 or 89%, of the \$3,142,471,635 budget total has been expended. In March 2013, MWAA moved the \$40.38 million value of CNPA expenditures to the available contingency. MWAA now reports \$332,902,557 of the available contingency for the first ten contingency milestones has been drawn down to date with a balance of \$28,897,443 available through the tenth of twelve contingency phases. The current estimate of the contingency available at the end of construction is \$36.671 million. In the PMOC’s opinion, the contingency is adequate.
- **MWAA’s estimate of the Earned Value** for the Project through *August* is *91.7%*.
- **Risk** - The FTA approved MWAA’s RCMP Rev. 3 on April 13, 2012. MWAA revised the proposed top ten risks and resubmitted them on March 20, 2013 along with a revised risk register. On May 1, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 to FTA for approval. PMOC provided comments to MWAA on April 29, 2013. MWAA has incorporated the comments in their listing of the Top Ten Risks in their monthly reports to FTA.

- The Full Time Equivalents (FTE) estimated total for *September* is 753, which is an increase of 37 from the *August* actual of 716. This fluctuation is expected with the completion of civil construction and the ramping up of systems installation and testing and commissioning.

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	\$36.67M
Schedule	Revenue Service Date	December 1, 2014	March 17, 2014*
Total Project Percent Complete		Based on Expenditures	89%
		Based on Earned Value	91.7%
Major Issue	Status	Comments/Action/Planned Action	
Alstom Configuration Control – ATC field concerns arose with regard to testers working with unapproved test procedures.	ECN submittal <i>quality has improved but new unanticipated</i> ECNs continue to be submitted <i>requiring additional review and approval efforts.</i> The static retesting in the field has been completed. The regression testing related to the ECNs <i>has been partially quantified and is underway.</i>	Alstom developed a revised Corrective Action Plan (CAP) that DTP submitted to MWAA on July 22, 2013. MWAA “Accepted as Noted” the CAP via Letter No.08893 dated August 22, 2013. <i>Alstom issued an Automatic Train Operation (ATO) Test Safety Certificate on October 7, 2013 and WMATA and MWAA authorized the commencement of Level F ATC testing which commenced on October 10, 2013.</i>	
Date of Next Quarterly Meeting:		<i>December 12, 2013</i>	

* This date represents a projected RSD based on DTP’s projected SSCD. However, *the RSD will be determined MWAA and WMATA based on the Operational Readiness Testing Schedule since WMATA maintains a measure of flexibility with its pre-revenue operations activities.*

3. PMOC’s Assessment of Project Status

Through *August 2013*, MWAA has utilized \$332.90 million of contingency resulting in a remaining balance of \$28.89 million through contingency Phase 10. The budgeted contingency for Phases 11 and 12 is \$26.76 million of which \$18.99 million is obligated, leaving a balance of \$7.77 million for use in Phases 11 and 12. This results in a grand total balance, as of the end of *August 2013*, of \$36.67 million in contingency estimated to remain at project completion. In the opinion of the PMOC, the Project has adequate contingency.

The Project continues working according to the “Mitigation Schedule” authorized by MWAA’s November 1, 2011 Directive Letter. The DTP mitigation schedule with a data date of *August 25, 2013* reflected a -71 calendar variance to the contract schedule indicating a SSCD of *November 19, 2013*. *MWAA and DTP are not in agreement on the critical path and Alstom continues its struggle to regain its ATC test program schedule. Therefore, it remains the PMOC’s opinion that the November 19, 2013 projected SSCD is optimistic.*

Notwithstanding the schedule disagreements, DTP/Alstom, with the continued cooperation of MWAA and WMATA, continue to progress the ECN review, installation and testing process despite the continued development of new and unanticipated ECNs. It is not yet known exactly how this will impact the Systems Performance Demonstration (SPD) which leads directly to SSCD. However, the overall ATC Test Program progress has led to an Alstom issued Automatic Train Operation (ATO) Test Safety Certificate on October 7, 2013. WMATA and MWAA in turn authorized the commencement of Level F ATC testing which commenced on October 10, 2013. Although optimistic, this latest development suggests that the SPD, SSCD and ORD could still be achieved in late November 2013.

DTP has incorporated the West Falls Church Yard construction into the mitigation schedule with a target completion date of December 20, 2013. DTP’s *August 25, 2013* schedule update *again* reflected a -14 calendar day variance to the targeted completion date of December 20, 2013, resulting in a forecast completion date of January 3, 2014. It is the PMOC’s opinion, with the continued cooperation of WMATA and the coordination provided by MWAA, that the West Falls Church Yard work can be completed *in January 2014*. It remains the PMOC’s opinion that the Project will be in revenue service within the FFGA specified date of December 1, 2014. Based on *DTP’s forecast of SSCD, the RSD could be as late as late-March 2014. However, WMATA maintains a measure of flexibility with its pre-revenue operations activities and durations that could improve this projection.*

Kawasaki’s Mitigation Schedule based on the impacts of the March 2011 tsunami/earthquake forecasted a conditional acceptance date of the 64th DCMP rail cars on June 12, 2015. Since their Progress Review Meeting (PRM) No. 33 (June 13, 2013) report, Kawasaki updated their forecast for the conditional acceptance of the 64th railcar to March 25, 2015. Kawasaki continues with the production of the four pilot cars at KMM. Although Kawasaki has not gone into the full production mode, it is the PMOC’s opinion that Kawasaki can achieve their updated forecast for the conditional acceptance of the 64th railcar at the end of March 2015. What may constrain the conditional acceptance *process* is the delay to the completion of WMATA’s test track at Greenbelt which is now forecasted for *October 28, 2014*, a nearly nine-month delay. The Commissioning Facility is forecast to be completed on *May 1, 2014*, a *five-month* delay. *However, WMATA has found logic flaws in the contractor’s schedule with a data date of August 25, 2013 (GR19), which was not approved.*

During *September 2013*, Alstom, DTP, WMATA and MWAA continued to conduct weekly Table Top review meetings and various other specially scheduled meetings to re-review test procedures, test data and software changes. *Following numerous ATC software troubleshooting issues and cancelations of phases 6 through 9 circuits cutover, the cutover was finally completed*

during the weekend of September 7-8, 2013. Meetings will continue in *October and November* for reviewing new engineering software changes and ATC test data.

It is the PMOC's opinion that the Alstom QA/QC and document control/configuration issues *has delayed* the contractual September 9, 2013 SSCD by *eleven or more weeks*. The full impact on the schedule cannot yet be determined until all ECNs have been submitted and approved and the amount of ECN-related regression testing is quantified. As noted above, despite continued ECN submissions, the ATC Test Program is progressing and confidence in the Program is improving.

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 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 on May 21, 2012, replacing Jon Christensen, who retired. The 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 staffed a Quality Assurance and Inspection Staff to keep pace with Project progress as it enters the Testing and Start-up Phase. In addition, both MWAA and WMATA have hired Start-up Managers who are coordinating their efforts.

b. Project Controls

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

- The Project Schedule was updated by DTP through *August 25, 2013*. In this update, DTP reported a possible loss of *71* calendar days to the SSCD now forecasted by DTP to occur on *November 19, 2013*. The WFCY schedule update *again* reflected a *-14* calendar day variance to the target date of *December 20, 2013*, which yields a forecast WFCY completion date of *January 3, 2014*. MWAA completed its schedule review of the schedule updates with a data date of *August 25, 2013* on *September 20, 2013* stating the schedules *were* again "Not Accepted." See Section 4.a for additional information.
- MWAA continues to monitor expenditures to date and to update the estimate at completion. Through *August 2013*, MWAA has utilized *\$332.90* million of contingency resulting in a remaining balance of *\$28.90* million through contingency Phase 10. The budgeted contingency for Phases 11 and 12 is *\$26.76* million of which *\$18.99* million is obligated, leaving a balance of *\$7.77* million for use in Phases 11 and 12. As of the end of *August 2013*, contingency estimated to remain at project completion is *\$36.67 million*. In the opinion of the PMOC, the Project has adequate contingency.
- MWAA submitted the latest revision of the RCMP (Revision 3) to the FTA on March 28, 2012 and FTA letter of April 13, 2012 found it acceptable. For details, see section 3 "Project Management Plan and Sub-plans" below.
- The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data.

Through *September 2013*, there has been a cumulative total of *13,796,892* hours worked with eight lost time cases. This remains well below national average for heavy and civil engineering construction. (Most recent Department of Labor (*DOL*) statistics are for 2011. *Those statistics indicate 5.85 injuries 100 full time employees. The DTC rate translates to 0.580 injuries per 100 full time employees.*)

DTP submitted the Safety and Security Certifiable Items List (SCIL) Revision 6 to include the WFCY on August 6, 2012. After MWAA review and comment, DTP subsequently resubmitted the SCIL Revision 6, which was approved "as noted" on February 5, 2013.

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; 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 2nd quarter of 2013 on July 31, 2013.

2. Project Scope

a. Design Status

The design is 100% complete.

b. Bidding and Construction Status

DTP has awarded all of the thirty-seven Allowance subcontract packages worth \$571,173,458. The Budget for the Allowance Items was \$426,145,893, resulting in an overrun of \$145,027,565, which was covered by contingency.

During April 2013, WMATA staff raised questions about Automatic Train Control (ATC) field testers working with unapproved marked up test procedures. This apparent lack of configuration control on Alstom's part caused Project partners to lose confidence in the Alstom ATC test program. DTP subsequently reported having spent several days in late April at Alstom's Rochester, NY facility conducting a workshop. DTP reported that they discovered Alstom had installed 14 vital software changes on the N-Line (not yet operational) that Alstom had not submitted for review or approval. On May 7, 2013, Alstom and DTP senior management made a presentation to MWAA and WMATA Executive Staff. DTP and Alstom were emphatic that they were going to turn the troubled test program around and outlined their plans to do so. They also emphasized they would fully cooperate with MWAA and WMATA to regain their confidence.

Throughout *September 2013*, Alstom, DTP, WMATA and MWAA continued to conduct weekly Table Top Review Meetings and various other specially scheduled meetings to re-review test procedures and software changes. The Project completed the re-review of field test procedures in July and completed the associated field static retesting. *DTP/Alstom, with the continued cooperation of MWAA and WMATA, continue to progress the ECN review, installation and testing process despite the continued development of new and unanticipated ECNs. It is not yet known exactly how this will affect the Systems Performance*

Demonstration (SPD), which leads directly to SSCD. However, the overall ATC Test Program progress has led to an Alstom issued Automatic Train Operation (ATO) Test Safety Certificate on October 7, 2013. WMATA and MWAA, in turn, authorized the commencement of Level F ATC testing which commenced on October 10, 2013. Although optimistic, this latest development suggests that the SPD, SSCD, and ORD could still be achieved in late November 2013.

It is the PMOC's opinion that the Alstom QA/QC and document control/configuration issues has delayed the contractual September 9, 2013 SSCD by eleven or more weeks. The full impact on the schedule cannot yet be determined until all ECNs have been submitted and approved and the amount of ECN-related regression testing is quantified. As noted above, despite continued ECN submissions, the ATC Test Program is progressing and confidence in the Program is improving.

MWAA reported during the April 9, 2013 monthly update meeting that utility relocation is 100% complete. During the October 10, 2013 monthly update meeting, MWAA reported that DB construction is approximately 98% complete.

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

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

Continued dry wall installation, car lift and car hoist equipment installation, ductwork and fire sprinkler installation and completed window frame installation in the West Falls Church Yard (WFCY) Service and Inspection (S&I) Building; continued the erecting and detailing of structural steel, metal framing, roof decking and insulation for closing in the Sound Cover Box (SCB); continued installation of cabling for the yard lead track and the new storage tracks; continued pavement restoration on the through lanes along eastbound I-66 and along the Dulles Connector Road (DCR).

Systems Work

- **K&N Junction**

Completed series 24.1 safe braking tests during non-revenue hours.

- **Fisher Avenue K98 TCR**

Completed the Phase 9 ATC circuit cutover during the weekend outage on September 7, 2013.

- **TPSS #1 (Plainfield St. – N91)**

Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; series 24.4 control lines testing at WFCY lead tracks; and TPSS to OCC AIMS testing.

- **Plainfield TCR and N91 Area of Control**

Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.

- **TBS #2 (Baldwin Drive – N92)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **Baldwin TCR and N92 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **TPSS #2 (Baldwin – N92)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; series 24.4 ATC control line testing; and performed TPSS to OCC AIMS testing.
- **Operations Area OP-4/5A (Tysons East Guideway and Tysons East Station)**
In the station – Continued installing and testing communications systems; continued elevator and escalator punch list work; conducting mechanical, electrical plumbing punch list work; installing Kiss & Ride Bus Shelters; and continued installation of station finish work.

Systems Work

- **TBS #3 (Tysons East – N01)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **Tysons East TCR and N01 Areas of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **TPSS #3 (Tysons East Station – N01)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing; and performed TPSS to OCC AIMS testing.
- **Operations Area OP-5 (Tysons Central 123 Station)**
Continued installing and testing communications systems; continue conducting SCADA testing; continued elevator and escalator punch list work; conducting mechanical, electrical plumbing punch list work; and continued installation of station finish work.

Systems Work

- **TPSS #4 (Tysons 123 – N02)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing; and performed TPSS to OCC AIMS testing.
- **Tysons 123 TCR and N02 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **Operations Area OP-6 (East and West Cut and Cover Tunnel)**
 - **East Cut and Cover and Ventilation Structure**
Continue punch list work.
 - **West Cut and Cover and Ventilation Structure**
Continue punch list work.
- **Operations Area OP-7 (Tysons Central 7 Station)**
Continued installing station and pedestrian bridges' and pavilions' finish installations and punch list work; continue communications systems installation and testing; and installing various station finish work.

Systems Work

- **TPSS #5 (Tysons Central 7 – N03)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing; and performed TPSS to OCC AIMS testing.
- **Tysons Central 7 TCR and N03 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.

Operations Area OP-8 (Tysons West Station/Guideway)

In the station and pavilion – continued systems installation and testing; continue various punch list work; and continued installing various station finishes.

Systems Work

- **TPSS #6 (Tysons West Station – N04)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing; and performed TPSS to OCC AIMS testing.

- **Tysons West TCR and N04 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.

- **OP-9 (DIAAH)**

- **Systems Work**

- **TPSS #7 (Wolf Trap – N05)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing; and performed TPSS to OCC AIMS testing.
- **Wolf Trap TCR and N05 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **TPSS #8 (Chatham’s Ford – N93)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing; and performed TPSS to OCC AIMS testing.
- **Chatham’s Ford TCR and N93 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **TPSS #9 (Hunter Mill - N94)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **Hunter Mill TCR and N94 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **TPSS #10 (Sunset Hills – N95)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **Sunset Hills TCR and N95 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.

- **TPSS #11 (Wiehle Avenue - N06)**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **Wiehle TCR/N06 Area of Control**
Performed series 26.1 central to wayside integration testing; series 41.1 console/station/interlocking testing; and series 24.4 ATC control line testing.
- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)**
Continued testing communications systems throughout the station and pedestrian bridges and pavilions; continue various punch list work.

c. Real Estate

Real Estate Acquisition continued to keep ahead of construction requirements, resorting to Right of Entry (ROE) to gain access to required parcels. Through *August 2013*, MWAA has acquired 103 of the 105 parcels required for the Project. The table below summarizes acquisition activities for the Project through *September 2013*.

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	23	0
Route 7	55	0	0	0	55	53	(2)
DIAAH	26	0	0	0	26	26	0
TOTAL	105	0	0	0	105	103	(2)

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 quantities are based on the March 31, 2011 Property Acquisition Status Update. One additional acquisition, #167, was added in June 2013 bringing the total to 105, which will be completed in *November 2013*.

Condemnation Status

MWAA acquired thirty-nine parcel packages with the filing of thirty-three Certificates of Take. *There is only one case yet to be finally resolved (Parcel 03, West Group Properties, LLC) The Final Order was entered in May 2013 but was appealed by the property owner with the filing of their brief supporting the appeal in late August 2013. The Commonwealth, on behalf of the Project, filed their response in mid-September and the court is expected to decide whether to hear the appeal by the end of 2013. A refusal will let the verdict stand. If the court elects to hear the appeal, the decision will likely be issued by mid to late 2014.*

Property Turnover to WMATA

MWAA, VDOT, Fairfax County, and WMATA have been meeting to address the required transfer of property to WMATA that is expected to take place between Substantial Completion and Revenue Service.

The following table summarizes the status of the conveyance of property interests and maintenance agreements.

Conveyance Documents	Total Required	General Format Accepted	Draft of Document Prepared	Plat/ Exhibit Complete	Submitted for Stakeholder Review	Document Accepted	Documents Signed	Document Recorded
Fee/Easement Transfer	27	27	27	27	26	23	8	0
Easements on Public ROW	3	3	3	3	3	0	0	0
Maintenance Documents	4	4	2	2	2	0	0	0

d. Utility Coordination

MWAA reported during the April 9, 2013 monthly update meeting that Utility Relocation (UR) was 100% complete.

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 *equally* the development costs associated with the railcar procurement.

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

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 *conditional acceptance* date for the 64th railcar, which is more than six months beyond the FFGA completion date for the DCMP.

The Conceptual Design Review phase for the 7000 (7K) Series railcars was completed on January 31, 2011 and the Preliminary Design Review (PDR) phase *was* completed on March 16, 2012, more than eleven months past the original baseline schedule date of March 30, 2011.

The PMOC participated in a teleconference held on October 22, 2013 with FTA, MWAA, and WMATA to review the past month's activities and Kawasaki's Project Review Meeting (PRM) #37 information package. Project Review Meeting # 37 was held at the KMM facilities in Lincoln, NE on October 17, 2013. Design Qualification Testing (DQT) continues for components and subsystems, and car level DQTs continue at the Kawasaki Heavy Industries (KHI) facility in Japan on the full prototype car. Validation of subsystems continues in Japan. The production of trucks at Kawasaki Rail Car, Inc. (KRC) in Yonkers, NY has begun and a First Article Inspection (FAI) was held on June 26, 2013. The completion of the Test Track at KMM in Lincoln, NE was achieved on July 12, 2013. Pilot cars are undergoing testing at KMM. ATC design qualification testing is being performed at KMM now that the test track has fully functional ATC. The total measured average weight of the car is now 83,327 pounds which is an increase over the measured average weight of 82,729 pounds reported in the previous PRM #36 package versus the requirement of 82,500 pounds. WMATA reported that they have four full-time inspectors at KMM. They also have two inspectors at KHI. The current forecast completion date for the conditional acceptance of the 64th railcar remains as March 25, 2015, a nearly three-month improvement over the June 12, 2015 contractual completion date. This anticipated schedule improvement is based on Kawasaki continuing to manufacture the pilot cars at risk and seeking to ramp up to a sixteen railcar per month production rate more quickly than originally anticipated. KMM production of pilot cars continues with shipment to WMATA anticipated to be December 20, 2013, as opposed to the contractual date of February 20, 2014. The delivery of the first four production cars remains forecast to be April 20, 2014, and the conditional acceptance of the first four production cars is still forecast to be August 14, 2014. The four prototype rail cars were completed at KHI in Japan on May 17, 2013. Below is a table showing the key milestones for this railcar procurement (as of September 30, 2013).

Item #	Description	December 2011 Approved Baseline MPS Dates	February 2013 Approved MPS Dates	Actual and Current Forecast Dates
1	Soft Mock up	12/17/10	-	4/28/11A
2	CDR Completion	12/14/10	-	6/30/11A
3	PDR Completion	3/30/11	-	3/16/12A
4	Hard Mock up	10/4/11	-	4/24/12A
5	Completion of HVAC Unit DVR	NA	NA	8/10/12A
6	Completion of Propulsion DVR	NA	NA	9/21/12A
7	Completion of ATC DVR	NA	NA	10/10/12A
8	Completion of Communications DVR	NA	NA	10/19/12A
9	Completion of Network DVR	NA	NA	10/19/12A
10	Begin Production of Pilot Cars #1, 2, 3 and 4 at KMM	9/10/13	-	12/17/12A
11	FDR Completion	10/24/11	-	2/28/13A
12	Begin Car Level Qualification Testing in Japan	10/30/12	-	3/15/13A
13	Completion of Prototype Cars #1, 2, 3, and 4 at KHI	10/29/12	-	5/17/13A
14	Completion of KMM Test Track	NA	NA	7/12-/13A
15	Approval Climate Room Testing	2/15/13	7/30/13	10/17/13
16	Completion and Approval of Pilot Car Production Activities	2/20/14	2/20/14	2/10/14
17	Begin Pilot Car Testing at KMM	10/1/13	7/8/13	8/5/13A
18	First Manual submission (DRAFT)	8/30/13	3/13/14	2/10/14
19	Completion of Pilot Car Testing at KMM	10/17/13	10/2/13	12/11/13
20	Completion of Prototype Car Review (Prior to Ship out from Japan)	5/14/13	10/4/13	10/22/13
21	Completion of Pilot Car FAI	10/21/13	10/3/13	2/10/14
22	Ship out of Prototype cars from Japan to USA	6/15/13	11/7/13	11/2013
23	Completion and Approval of FAI Activities	12/11/13	12/12/13	3/21/14
24	Shipment of first 4 Pilot Cars to WMATA from KMM	2/20/14	2/20/14	12/20/13
25	Delivery of first 4 production Cars to WMATA	2/11/14	2/20/14	4/20/14
26	Final Manual submission (DRAFT)	5/12/14	11/25/14	11/25/14
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	2/19/15
30	Conditional Acceptance of 64th Production Car	6/12/15	6/12/15	3/25/15

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

What may constrain the conditional acceptance process is the delay to the completion of WMATA's test track at Greenbelt, which WMATA's contractor is forecasting for October 28, 2014, nearly a nine-month delay. The Commissioning Facility is forecast to be completed on May 1, 2014, a five-month delay. However, WMATA found logic flaws in the schedule development and expects that the next schedule update will show less delay.

- **Effect on Operations**

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.

MWAA formally informed the FTA Regional Administrator of the railcar delivery delay in a letter dated January 31, 2012. In this letter, MWAA also 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 determine if the existing fleet can support the start of revenue service.

FTA requested the details of a new Operating Plan for the Silver Line service, which incorporates changing the eastern terminus to Largo Station instead of Stadium-Armory Station. After a month’s delay, the revised Plan was presented to the WMATA Customer Service and Operations Committee on April 11, 2013, and approved by the full Board on April 25. The material presented to the WMATA Board of Directors was general in nature.

At the May 22, 2013 QPRM, FTA requested that MWAA obtain an updated letter from WMATA with regard to their ability to supply sufficient vehicles from their existing fleet for the commencement of Silver Line service due to the additional rail cars required to operate service to Largo Town Center Station. MWAA sent a letter requesting WMATA’s reconfirmation of the availability of railcars to WMATA’s Deputy General Manager on June 21, 2013.

To address the new operating plan, WMATA submitted RFMP Revision 4H to the FTA on June 7, 2013 for review and FTA provided comments on June 10, 2013. WMATA submitted RFMP Revision 4I to the FTA on July 5, 2013, which FTA reviewed and provided comments. Subsequently, WMATA issued RFMP Revision 4J dated August 2013, which FTA accepted on August 8, 2013.

f. Safety and Quality Status

MWAA participated in *four* safety walk downs with DTP during the month of *September*. All were related to Design-Build work. As of *September 30, 2013*, DTP had logged *13.796* million project man-hours, with 505 first aid cases and 8 lost time cases. There have been a total of *1,166* incident investigation reports, 95 utility hits, and *50* vehicular accidents. These statistics continue to remain below industry standards. *The United States injury rate for 2011 was 5.85 injuries per million hours worked. The 8 lost time cases recorded by DTP is a rate of 0.58 per million hours worked.*

DTP submitted Safety and Security Certifiable Items List (SCIL) Revision 6 to include the WFCY on August 6, 2012. WMATA submitted comments 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 30, and MWAA and DTP met on December 18 to discuss the issues further. DTP subsequently resubmitted the SCIL Revision 6, which was approved “as noted” on February 5, 2013.

DTP and MWAA now meet every week 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), the Construction/Procurement/Installation Conformance Checklist (CCC) items related to all issued for construction designs and the Startup *Integration* Testing Conformance Checklist (*SITCC*). The status of the conformance checklists is reflected in the status table below. The progress on the completion of the checklists continues to lag although the DCC is nearing completion.

Safety and Security Conformance Checklists (excluding n/a)

Total # of Items	Verified in Design (DCC)		Verified in Construction (CCC)		Verified in Startup and Testing (SITCC)	
6,172	5,042		4,582		1,028	
DTP Signed	5,042	100%	3,386	74%	316	31%
MWAA Accepted	5,042	100%	2,635	58%	256	25%
WMATA Audited	5,042	100%	2,635	58%	0	0%

- 1) Checklists are exclusive of WFCY (K99)
- 2) Reflects DTP’s Design, Construction, and Testing Verifications submittals through 9/26/2013.
- 3) Reflects MWAA’s acceptance through DCC #13 (9-19-13).
- 4) Reflects WMATA’s audits through DCC #13.
- 5) Reflects MWAA’s acceptance through CCC #7 (8-23-13).
- 6) Reflects WMATA audits through CCC #7.
- 7) MWAA comments on CCC #8 sent to DTP (9-27-2013)
- 8) Reflects MWAA’s acceptance of SITCC #1 (9-13-13).

Regular weekly visits to work sites continue by safety representatives from DTP, MWAA, and WMATA. 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 is now attending the Monthly Project Update Meetings and Quarterly Progress Review Meetings. The SCWG held its regular monthly meeting on *September 17, 2013*. The next SCWG Meeting is scheduled for *October 15, 2013*.

MWAA submitted its Safety and Security Management Plan, Revision 8, to the FTA on February 17, 2011. MWAA and WMATA agreed to develop jointly 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 September and October 2013, MWAA and DTP have been conducting an ongoing Surveillance of the station fire-stop installations.

MWAA QA Audit and Surveillance Schedule for September -November 2013

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv.	Lead
TBD	S	Permanent Equipment Facilities	Y	MWAA
11/12/13	A	WMATA's Procurement (Federal Requirements) MWAA Letter No. 08779	N	MWAA

Use of Existing Foundations

As a result of the USDOT Office of Inspector General's audit report of the Dulles Project dated July 26, 2012, testing of the foundations installed in the 1970's by VDOT for the future extension of the Silver Line, MWAA will conduct tests to determine the effects, if any, of stray current on the service life of the steel piles that made up those foundations. To assure that the existing steel piles to be re-used for the Dulles Extension provide a minimum of a fifty year service life, MWAA is undertaking stray current tests to calculate the piles' corrosion rate and estimate their remaining service life. The following table contains a summary of the actions to be taken to estimate the remaining service life of the re-used steel piles. Russell Corrosion Consultants, Inc. was employed by MWAA to develop a Corrosion Test Plan and to oversee implementation of that plan. Russell developed a Draft Corrosion Testing Plan, and numerous comment resolution meetings were conducted during August 2012 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. The FTA reviewed the plan and provided an acceptance letter dated November 1, 2012. A Site Specific Work Plan submitted to WMATA on October 10, 2012 was approved on November 9, 2012. UTRS, under the oversight of Russell Corrosion Consultants and CTI Special Inspection and MWAA/QA, began work on December 11, 2012. The contractor has completed the Vertical Test Facility (VTF) installation at both piers 3-IB and 5-IB on January 8, 2013. The test plan called for the VTFs to be left to settle for 30 days, after which the specified testing would commence. On March 25, 2013, MWAA submitted Revision No. 1 of the Stray Current and Corrosion Rate Test Plan to the FTA, which was reviewed by the FTA consultant. WMATA provided Letter No. 239 dated May 6, 2013 providing its concurrence with the revised plan.

UTRS experienced numerous delays caused by weather and track access issues. However, the stray current testing was finally completed on April 11, 2013 with the exception of some retesting completed on May 27, 2013. During testing there were unexpected changes observed in the pile-to-earth coupon flows. *Following protracted*

discussions and investigation it was determined that these anomalies were associated with the temporary track bonding conditions associated with the N-Line testing and new WFCY tie in. In order to fully demonstrate the source of the abnormalities and then to accurately calculate past or normal conditions with full confidence, it was determined that several days of supplemental testing with the K-Line totally isolating the N-Line would be needed. It was determined that the supplemental data collection needs could be satisfied with a 48 hour period of testing. MWAA conducted a planning meeting for this effort with all stakeholders for August 15, 2013. After this meeting it was decided that it would be logical to wait until the ATC circuit cutover was completed and the permanent insulated joint configurations could be restored without impacting the N-Line test schedule. RCC issued letters to MWAA dated August 16 and August 30, 2013 describing testing prerequisites. This supplemental testing was successfully completed on September 27, 2013. It is anticipated that RCC will submit its draft final report to MWAA on November 15, 2013 for review and comment and that a meeting to discuss the report and comments will be conducted during the week of December 2, 2013.

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	Test Plan Rev.1 submitted to FTA on March 25, 2013, approved by FTA on May 28, 2013, and forwarded to OIG.
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	WMATA RFMP, Revision 4J, submitted on August 5, accepted by FTA on August 8, and forwarded to OIG.

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, 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. MWAA has made no further QPP procedure updates.

- MWAA's **Real Estate Acquisition Management Plan (RAMP)**, Revision 2, dated September 15, 2009, has been reviewed by the PMOC with a recommendation that the FTA concur, with comments, with the revised RAMP. On January 21, 2010, the FTA provided comments to MWAA, and MWAA staff has revised Procedure PM-3.01 (Monitoring the Design-Build Contractor Property Acquisition Services). DTP revised their Procedure PIQ-5.1 (Property Acquisition Coordination) on November 1, 2010.
- The FTA requested MWAA to update its **Risk and Contingency Management Plan (RCMP)**, formerly called a Risk Management Plan (RMP), along with their Project Management Procedures to address Directive Letters and Contingency Drawdown Procedures. MWAA submitted the revised RCMP Rev. 3 on March 28, 2012, and the PMOC recommended FTA acceptance. The FTA accepted RCMP Rev. 3 as well as revised Project Management Procedure PM 5.07, Rev. 4, on April 13, 2012. MWAA updated the Risk Register Assessment on June 30, 2012 and submitted it to the FTA and PMOC on August 27. 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. The PMOC submitted its comments on the proposed revised risks to MWAA on February 22, 2013 and the comments were discussed at the March 7, 2013 update meeting. MWAA revised the proposed top ten risks and resubmit them on March 20, 2013 as their re-titled "Proposed Top Tier" list containing nine items along with a revised risk register. The PMOC provided comments on April 3, 2013 and during the April 9, 2013 monthly meeting the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list. The PMOC commented on April 29, 2013 relative to the resubmission dated April 17, 2013, agreeing to the risks but raising some questions relative to numbering. On May 1, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 to FTA for approval. The PMOC provided comments to MWAA on April 29, 2013.

Since WMATA, rather than MWAA, will be the operator of the completed project, the WMATA **Rail Fleet Management Plan (RFMP)** is the applicable document. See discussion under Section 2b of this report.

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

4. Project Schedule

Mainline - The project “Mitigation Schedule” update with a data date of *August 25, 2013* reflects a -71 calendar day variance *resulting in a November 19, 2013* SSCD. MWAA completed its schedule review of the schedule update with a data date of *August 25, 2013* on *September 20, 2013* and notified DTP that it was “Not Accepted.” *MWAA Letter No. 08939* again stated that “*DTP’s Schedule Narrative attributes the entire delay of 71 days to the Scheduled Substantial Completion Date of September 9, 2013 to additional traction power testing that has been identified by the Washington Metropolitan Area Transit Authority as required prior to Operational Readiness Testing, and an “expanded” scope for the Systems Performance Demonstration deemed necessary prior to Substantial Completion. The Airports Authority does not agree with DTP’s assessment of the delay, its stated causes, and its actions to reclassify the contractual work required activities, occurring after September 9, 2013, as extended scope or changes.*” *The PMOC concurs in MWAA’s analysis.*

While 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 the SSCD *will not be achieved until late November 2013, at the earliest, due to the continued delay in the submission, approval and regression testing of engineering software changes for the ATC system. Also impacting the SSCD are the evolving train start testing plans for the Traction Power Substations and the Systems Performance Demonstration that are not yet fully agreed upon by MWAA, DTP and WMATA.* RSD is also dependent upon the completion of WMATA’s schedule associated with the Rail Activation Plan (RAP).

MWAA Granted excusable weather delay days as reflected in the table below have resulted in a revised contractual SSCD of September 9, 2013 as of April 26, 2013.

MWAA’s Report of Excusable Work Days of Delay through August 25, 2013

ACTION	WORK DAYS
Total Excusable Days of Delay on Project Critical Path requested by DTP	27
Under evaluation by MWAA	0
Granted by MWAA	27

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

- **West Falls Church Yard** - MWAA and DTP agreed to a target completion date of December 20, 2013. DTP’s schedule update of *August 25, 2013* again reflected a -14 calendar day variance yielding a forecasted completion date of January 3, 2014. This schedule was not accepted by MWAA. *DTP’s schedule update continues to attribute late completion due to the impact of requested weather days not having been approved. MWAA is*

concerned that the delays to the delivery of interior acoustical panels which must be installed before the noise study of the SCB can be completed is the true critical path.

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 and the sound cover box are most critical to WMATA's needs to support start-up and operation.

a. Critical Path Evaluation

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

In DTP's August 2013 Schedule Update, the Critical Path No.1 has negative 71 calendar days of float and starts with the "Series 24" dynamic testing from Segment N91 (Plainfield Street) to Segment N02 (Tysons Central 123), moves to the Level F testing for Segment N01, then to TPSS pull-away test for the Tysons East Station, and ends with the System Performance Demonstration (SPD) and the final safety/security certification report and certificate. MWAA states in the Monthly Meeting handout that it did not accept this critical path because more critical to the Project is the completion of the ETS remote monitoring configuration and the final SCADA testing of the TPSSs before the "Series 41" testing can be completed. The PMOC notes that in addition to these items, the adverse ripple effect caused by the struggles with the ATC test program still impacts the critical path.

Since DTP continues to fail to acknowledge the impact of Alstom's use of unapproved ECNs and procedures on the schedule, it is the PMOC's opinion that the November 19, 2013 SSCD is still overly optimistic. Although Alstom, with the continued cooperation of MWAA and WMATA, has moved ahead with getting the unapproved documents approved through Table Top Reviews, the fact is that they have not been meeting the schedule shown in their Corrective Action Plan dated July 19, 2013 and submitted by DTP on July 22, 2013 which indicates a completion of the ECN review process on August 14, 2013. That process is currently running at least *eight* weeks behind with additional ECNs still being submitted and reviewed. *However, it should be noted that Level F ATC dynamic train testing commenced on October 10, 2013 which suggests that a late November 2013 SSCD may still be achievable.*

MWAA continues to carefully analyze the schedule and continues to hold DTP accountable for changes made to the agreed upon schedule.

The following table compares the milestone dates relative to the approved baseline schedule.

MILESTONE	June 2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	July 2013	August 2013
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	02/03/13 ^A	02/03/13 ^A
Systems Testing Complete - Tysons East Station	07/24/12	02/21/13	07/25/13	08/26/13
Systems Testing Complete - Wiehle Ave Station	08/13/12	01/16/13	07/25/13	08/26/13
Systems Testing Complete - Central 7 Station	01/23/13	04/12/13	08/13/13	09/06/13
Systems Testing Complete - Tysons West Station	02/21/13	05/14/13	09/18/13	09/16/13
Systems Testing Complete - Tysons 123 Station	12/20/12	03/28/13	08/26/13	09/10/13
Substantial Completion Date (SSCD)	07/31/13	07/31/13	11/12/13**	11/19/13**
Completion – WFCY	NA	N/A *	01/03/14	01/03/14
Revenue Service Date (RSD) – Target	11/27/13	01/02/14	03/14/14**	03/17/14**
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

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

** This date represents a projected RSD based on DTP's projected SSCD. However, the RSD will be determined MWAA and WMATA based on the Operational Readiness Testing Schedule since WMATA maintains a measure of flexibility with its pre-revenue operations activities.

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

- Approved ATC test procedures and issues with the software configuration.
- *Remote Terminal Unit (RTU) trouble shooting issues.*
- *Availability of outages for K-Line systems testing.*
- *Availability of operational testing vehicles in concert to DTP's ability to perform testing.*
- *Completion of the O&M manuals and training.*
- *DGS availability concurrent walk-downs and inspections.*
- *DTP's submittal of Systems Performance Demonstration procedures.*

b. Important Activities – 90-Day Look Ahead

- K98 ATC Phase 12 circuits cutover.
- Complete level two ATC dynamic train testing.
- Complete ATC Test Program.
- Complete systems installation and testing.
- Complete SCADA Testing.
- *Complete the Train Start Tests and Systems Performance Demonstration.*
- Complete the stray current *final test report* for the existing piers 3-IB and 5-IB.
- Complete the two remaining property acquisitions along Route 7 and Route 123.

5. Project Cost

The SCC Budget and Expenditures summary for the period ending *August 25, 2013* is shown below. Overall, approximately 79.6% of the budget has been expended.

Project Cost Summary by SCC Code, August 2013

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements	\$ 621,265,115	\$ 606,033,540	\$ 614,540,910
20	Stations	\$ 342,642,263	\$ 323,454,063	\$ 349,366,468
30	West Falls Church Yard	\$ 74,328,862	\$ 34,080,330	\$ 74,138,832
40	Site Work & Utility Relocation	\$ 240,522,580	\$ 213,288,116	\$ 261,989,061
50	Systems	\$ 307,288,939	\$ 287,701,331	\$ 304,139,055
60	Right of Way Acquisition	\$ 67,631,026	\$ 58,310,954	\$ 61,898,912
70	Vehicles	\$ 195,352,701	\$ 76,031,450	\$ 194,648,939
80	Professional Service – FD	\$ 739,966,107	\$ 781,642,661	\$ 806,893,021
90	Contingency Mgmt. Reserve ²	\$ 115,289,469	\$ -	\$ 36,671,867
100	Finance Charge ³	\$ 438,184,571	\$ 121,228,121	\$ 438,184,571
Subtotal		\$ 3,142,471,635	\$ 2,501,770,567	\$ 3,142,471,635

1. Current budget equals FFGA amount plus change orders CO#001-117, 119-137, 139-149, 151-152, 156-158, 163, Directive Letters 001-050, 052-066, UR-CO-001-039. CO#118 is for betterment.
2. Estimate at Completion for Contingency reflects the remaining amount.
3. The transfer of Finance Costs under-run of \$71.8 million to the contingency was approved in December 2012.
General Comments:
* During March 2013, \$40.3M was transferred from Fed to Non-Fed as a result CNPA adjustments making a contribution to Federal contingency.

a. Explanation of Variances

During March 2013, \$40.3 million was transferred from Federal to Non-Federal as a result of CNPA adjustments making a contribution to Federal contingency. The major variances *from* the FFGA project budget are associated in seven categories as noted below:

1. SCC10 – Guideway and Track Elements has been reduced approximately \$52.00 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 and the addition of sales tax to permanent materials.
2. SCC20 – Stations has been increased by approximately \$32.34 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 allowance item for stations finishes and MEP increased over budget.

3. SCC30 – WFC Yard has increased by approximately \$19.22 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 \$27.15 million as a result of a combination of change events (change orders, directive letters and scope transfers) and cost overruns.
5. SCC50 -- Systems has increased by \$25.56 million due to additional WMATA requirements for 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 \$98.88 million. The change events are numerous with the most significant being the transfer from the tunnel subcontract and the addition of design for and WFCY. The forecast adjustment is predominantly attributed to higher project management costs for MWAA, PMSS, WMATA and VDOT.
9. SCC90 – Contingency Management Reserve estimate at completion of \$51.27 million is the result of the transfer of the Finance Costs under-run of \$71.8 million, which was authorized by the MWAA Board in December 2012, and the \$19 million under-run in commodity escalation. The PMOC is of the opinion that the remaining \$51.27 million contingency reserve that includes the \$40.3 million in CNPAs is adequate.

MWAA indicates that there are *18* Design-Build Change Orders totaling an estimated \$26.50 million and 3 Utility Relocation Change Orders totaling an estimated \$4.55 million under evaluation. In addition, there remain *125* Design-Build Potential Change Orders.

b. Monthly Cost Report, August 2013 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	\$ 1,711,901,181	\$ 69,254,801	\$ 1,781,155,982	
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 75,701,848	\$ 317,811	\$ 76,019,659	
Firm Fixed Price Subtotal	\$ 1,177,161,581	\$ 1,787,603,028	\$ 69,572,612	\$ 1,857,175,640	
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 4,029,653	\$ 4,029,653	
Design-Build Contract Prices	\$ 1,607,361,398	\$ 1,787,603,028	\$ 73,602,264	\$ 1,861,205,293	
Indexed Commodity Escalation ⁵	\$ 77,469,926	\$ -	\$ 17,428,387	\$ 17,428,387	
Design-Build Contract Total	\$ 1,684,831,325	\$ 1,787,603,028	\$ 91,030,652	\$ 1,878,633,680	95%
Utility Relocation					
Utility Work	\$ 84,312,807	\$ 95,204,632	\$ 6,829,423	\$ 102,034,054	
Terf Tax	\$ -	\$ -	\$ 0	\$ 0	
Project Management and Final Design	\$ 8,423,426	\$ 25,589,312	\$ 151,904	\$ 25,741,216	
Utility Relocation Total	\$ 92,736,233	\$ 120,793,944	\$ 6,981,327	\$ 127,775,270	95%
Right of Way					
Right Of Way Total	\$ 42,443,132	\$ 58,645,156	\$ 3,878,755	\$ 62,523,912	94%
WMATA Agreement					
Vehicles	\$ 195,138,329	\$ 76,031,450	\$ 118,617,489	\$ 194,648,939	
Construction and Procurement	\$ 31,484,799	\$ 14,467,475	\$ 13,630,642	\$ 28,098,117	
WMATA Force Account Startup	\$ 13,777,100	\$ 10,682,751	\$ 2,722,270	\$ 13,405,021	
Project Management and Final Design	\$ 31,235,400	\$ 30,416,675	\$ 5,066,877	\$ 35,483,552	
WMATA Agreement Total	\$ 271,635,628	\$ 131,598,350	\$ 140,037,278	\$ 271,635,628	48%
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	\$ 11,619,687	\$ 18,431,091	\$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 35,793,737	\$ 4,870,620	\$ 40,664,357	
Project Management Support	\$ 90,004,649	\$ 133,757,544	\$ 21,843,028	\$ 155,600,572	
Airports Authority Services Total	\$ 142,109,519	\$ 181,170,967	\$ 45,144,740	\$ 226,315,707	80%
Contingency⁵					
Contingency Total	\$ 297,762,579	\$ -	\$ 36,671,867	\$ 36,671,867	
Finance Costs⁶					
Finance Costs Total	\$ 509,984,571	\$ 121,228,121	\$ 316,956,450	\$ 438,184,571	
Total Federal (FFGA Scope)	\$ 3,142,471,635	\$ 2,501,770,567	\$ 640,701,068	\$ 3,142,471,635	89%

1 Reflects Paid costs through August 31, 2013

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 and Indexed Commodity Escalation represent the remaining amounts

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

General Comments:

* During March 2013, \$40.3M was transferred from Fed to Non-Fed as a result of CNPA adjustments making a contribution to Federal contingency and drawdown from Non Federal contingency

c. Sources of Capital Funding, August 2013

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	VA-03-0113-05		\$ 90,832,000	\$ 90,832,000	100%	\$ -
FFGA Construction Grant ^{5,6}	VA-03-0113-06		\$ 90,730,505	\$ 76,308,575	84%	\$ 14,421,930
FFGA Balance	Planned		\$ 198,155,131	\$ -	0%	\$ 198,155,131
Subtotal - New Starts		33.29%	\$ 900,000,000	\$ 687,422,939	76.38%	\$ 212,577,061
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		2.77%	\$ 75,000,000	\$ 75,000,000	100%	\$ -
Local Funds						
VTA 2000			\$ 51,700,000	\$ 51,700,000	100%	\$ -
Commonwealth Transportation Bonds ²			\$ 125,000,000	\$ 125,000,000	100%	\$ -
Fairfax County Funds ³			\$ 400,000,000	\$ 400,000,000	100%	\$ -
Dulles Toll Road Revenues ^{2,4,5}			\$ 1,151,953,922	\$ 1,041,419,507	90%	\$ 110,534,415
Subtotal - Local Funds		63.94%	\$ 1,728,653,922	\$ 1,618,119,507	93.61%	\$ 110,534,415
Total Project Budget		100%	\$ 2,703,653,922	\$ 2,380,542,446	88.05%	\$ 323,111,476
Interrelated Highway Activities						
			\$ 201,408,229	\$ 155,296,591	77.11%	\$ 46,111,638
DTR Revenues/Commonwealth Funds³			\$ 201,408,229	\$ 155,296,591	77.11%	\$ 46,111,638
		Total	\$ 2,905,062,151	\$ 2,535,839,037	87.29%	\$ 369,223,114

¹ Reflects costs through August 31, 2013.

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

³ Includes Tax District Revenues (\$400 million)

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

⁵ Expenditures include accruals.

⁶ Pending Amendment and Budget in TEAM

6. Project Risks

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. The PMOC submitted its comments on the proposed revised risks to MWAA on February 22, 2013 and the comments were discussed at the March 7, 2013 update meeting. MWAA revised the proposed top ten risks and resubmit them on March 20, 2013 as their re-titled "Proposed Top Tier" list containing nine items along with a revised risk register. The PMOC provided comments on April 3, 2013 and during the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list. The PMOC commented on April 29, 2013 relative to the resubmission dated April 17, 2013, agreeing to the risks but raising some questions relative to numbering. On May 1, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 to FTA for approval. PMOC provided comments on the revised Top Ten Risks on April 29, 2013. In a letter dated June 27, 2013, the FTA and PMOC concurred with the proposed March 29, 2013, Top Ten Risks List as submitted by the Airports Authority on April 30, 2013. In response to FTA's request, the Airports Authority is evaluating the Risk Register and Top Ten Risks List continually and updating them on a quarterly basis. The table below lists the Top Ten Risks updated as of the end of Q1 2013. The Project team updated the Risk Register and the Top Ten Risks List at the end of Q2 2013 and submitted the documents for FTA/PMOC's review in July 2013.

- a. **Budget Risks:** MWAA has allocated \$71.8 million in finance cost savings and \$19 million of Commodity Escalation under-run to Contingency. This brings the total Contingency to \$388,562,579. Through *August 25, 2013*, MWAA reports that it has utilized \$332,902,557 of the \$361,800,000 available contingency for the first ten contingency milestones leaving a balance of \$28,897,443. For phases 11 through 12 MWAA reports obligating \$18,988,157 of the available \$26,762,579 leaving an available balance of \$7,774,424. Therefore, as of *August 25, 2013*, the project has an estimated balance at project completion of \$36,671,867. MWAA's transfer of \$90.80 million to contingency and the removal of CNPA expenditures have improved the Project Contingency situation. However, the project must continue to be diligent in its efforts to identify additional contingency monies and to control the project costs. As noted elsewhere in this report, there is a significant number of Design-Build (18) and Utility Relocation (3) Change Orders under evaluation, and a large number of Potential Change Orders (125).

MWAA submitted a tabulation of possible Concurrent Non-Project Activities (CNPAs) on July 6, 2012 that had 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 costs 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 \$40.38 million. MWAA submitted an e-mail to the PMOC on April 24, 2013 outlining its CNPA expenditure accounting as well as MWAA's procedure for FTA grant drawdowns demonstrating how MWAA makes adjustments to previously drawn down grant funds when necessary. Adjustments were made to the contingency fund in March 2013 that effectively raised the remaining Phase 10 contingency by removing the identified CNPA expenditures. FTA requested additional documentation to identify the CNPA charges by SCC code. MWAA submitted Letter No. 08421 dated May 30, 2013 entitled "Reversal Methodology for CNPA" for FTA review and approval. MWAA submitted Letter No. 07998 dated February 26, 2013 and Letter No. 08631 dated July 11, 2013 with changes requiring funding from contingency for the 4th Quarter of 2012 and 1st Quarter of 2013 for FTA review and approval. The total for these changes associated with the re-introduction of Traction Power Substations #7 and #9 is \$9.3 million and \$7.3 million, respectively. PMOC recommended that FTA concur in these CNPAs on August 5, 2013. Subsequently, MWAA submitted their CNPA list for the 2nd Quarter of 2013 on September 26, 2013. On October 7, 2013, PMOC requested additional information relative to three items on the proposed listing.

- b. 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 available 510 calendar days. MWAA and DTP are now working off a new Mitigation Schedule with a data date of October 25, 2011 that was accepted "as noted" on November 23, 2011. Through August 2013, MWAA has granted DTP time extensions of 40 calendar days reducing the available contingency from 510 to 470 calendar days. The currently approved contractual SSCD is September 9, 2013.
- c. 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. Below are the MWAA proposed Top Ten Risks dated March 29, 2013 and submitted on April 30, 2013, and approved by FTA on June 27, 2013.

Summary Status of the Top Ten Project Risks, August 2013

RISK NUMBER	RISK DESCRIPTION	RISK STATUS			
		SINCE INCLUSION ON TOP TEN LIST		Since April	2013 Update
		COST	SCHEDULE	COST	SCHEDULE
70.R.27	Delay in <i>new RC-7000</i> vehicle (railcar) delivery.	Unchanged	Unchanged	Unchanged	Unchanged
10.C.21	Availability of track access for DTP to complete the K-Line connection work. This has transitioned into the delivery of all prerequisites (<i>spare parts</i>) for WMATA acceptance.	Unchanged	Unchanged	Unchanged	Decreased
80.C.20	WMATA deliverables scope of work – including technical support may exceed the schedule <i>and therefore the budget</i> .	Unchanged	Unchanged	Unchanged	Unchanged
30.C.39	Construction issues (WFC Yard delayed construction which affects opening of the system). <i>West Falls Church Yard Construction issues delaying construction completion.</i>	Decreased	Decreased	Unchanged	Unchanged
50.S.2	<i>WMATA required points of testing for acceptance. (Supervisory Control and Data Acquisition (SCADA) Testing Required Points)</i>	Decreased	Decreased	Unchanged	Unchanged
20.C.40	Delay in Station Finishes (Platform Granite Edge, Platform & Mezzanine Paving Tile, Ceilings and Ceiling Lighting)	Unchanged	Unchanged	Decreased	Decreased
50.S.34	<i>Design changes by DTP during construction: 1. This is causing a massive backlog of design Review by DTP Engineering". In some instances DTP is proceeding with construction of changes to the Authority Having Jurisdiction (AHJ) approved design documents without the necessary approvals. 2. This is also causing a backlog of design reviews which are required by WMATA. (Reviewing/approving DTP Construction/Test documents.)</i>	Unchanged	Unchanged	Unchanged	Unchanged
70.S.1	<i>Insufficient number of Rail Cars for Safe Braking Dynamic Testing</i>	Unchanged	Unchanged	Unchanged	Unchanged
50.C.41	Completion of the installation of the upgrade for the new (Proposed) communication center at WMATA's Carmen Turner Building.	Unchanged	Unchanged	Decrease	Decrease
20.C.45	<i>Construction not in accordance with permitted design documents.</i>	Unchanged	Unchanged	Unchanged	Unchanged

7. Action Items

MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
3	2A.05	Submit Updated Risk Register	FTA and PMOC need to review the updated document.	Y	Y	Y	MWAA revised the proposed top ten risks and resubmit them on March 20, 2013 containing nine items along with a revised risk register. The PMOC provided comments on April 3, 2013 and MWAA resubmitted it on April 17, 2013. The PMOC provided comments on April 29, 2013 agreeing to the risks. On April 30, 2013, MWAA submitted their proposed Top Ten Risks dated March 29, 2013 which were approved by the FTA on June 27, 2013.	C
2	2B.01	Submit dates and responsible individuals for the Readiness for Revenue Operations Roadmap provided on February 12, 2013.	FTA and PMOC need to schedule necessary readiness reviews.	N	N	N	Information for roadmap was requested by February 28, 2013. A partially completed roadmap was submitted to the FTA/PMOC at the June 6, 2013 monthly update meeting. This roadmap does not include the start and completion dates for which WMATA is responsible. WMATA indicated that the dates for these activities will be available by the end of June. However, this date has not been met. WMATA submitted Rail Activation Plan, Revision 3.0 dated July 31, 2013 on August 9, 2013 which is under review. MWAA submitted an updated roadmap at the October 10 th Update Meeting. Some WMATA dates are still lacking.	R
2	2B.03	Transfer the value of CNPAs out of the federal portion and add to contingency as they arise	MWAA submitted Letter No.07998 dated February 26, 2013 with CNPA items for FTA review and approval for the 4 th Quarter 2012. MWAA also submitted Letter No. 08631 dated July 11, 2013 CNPAs for the 1 st Quarter of 2013 for FTA review and approval.	Y	Y	Y	FTA approved the proposed CNPAs on September 25, 2013.	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

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

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

APPENDICES

APPENDIX A – LIST OF ACRONYMS

AAC	Agreement After Certificate
AEMS	Automated Energy Management System
AIMS	Advanced Information Management System
AMEP	Architectural/Mechanical/Electrical/Plumbing
ARRA	American Reinvestment and Recovery Act
ASSHTO	American Association of State Highway and Transportation Officials
ATC	Automatic Train Control
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
DQT	Design Qualification Testing
DR	Deficiency Report
DTP	Dulles Transit Partners, LLC
DTR	Dulles Toll Road
DVP	Dominion Virginia Power
ETS	Emergency Trip Station
FAI	First Article Inspection
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
KHI	Kawasaki Heavy Industries, Ltd. (Plant in Japan)
KMM	Kawasaki Motor Manufacturing, Corp. (Plant in Lincoln, NE)

KRC	Kawasaki Rail Car, Inc. (Yonkers, NY)
KSA	KSA, INC – Producer of Concrete Crossties
MH	Manhole
MCI	A communication company now owned by Verizon
MEP	Mechanical, Electrical and Plumbing
MPS	Master Program Schedule (7K Railcars)
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
ORD	Operational Readiness Date
PAC	Point Assignment Charts
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
RAP	Rail Activation Plan
RCMP	Risk and Contingency Management Plan
RFC	Request for Change
RFMP	Rail Fleet Management Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROE	Right-of-Entry
ROW	Right-of-Way
RSD	Revenue Service Date (synonymous with Revenue Operations Date)
SCADA	Supervisory Control and Data Acquisition
SCB	Sound Cover Box
SCC	Standard Cost Category
SCIL	Safety and Security Certifiable Items List
S&I	Service and Inspection
<i>SITCC</i>	<i>Startup Integration Testing Conformance Checklist</i>
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: *November 4, 2013* (reporting current through *September 2013* - Financials through *August 2013*)

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.

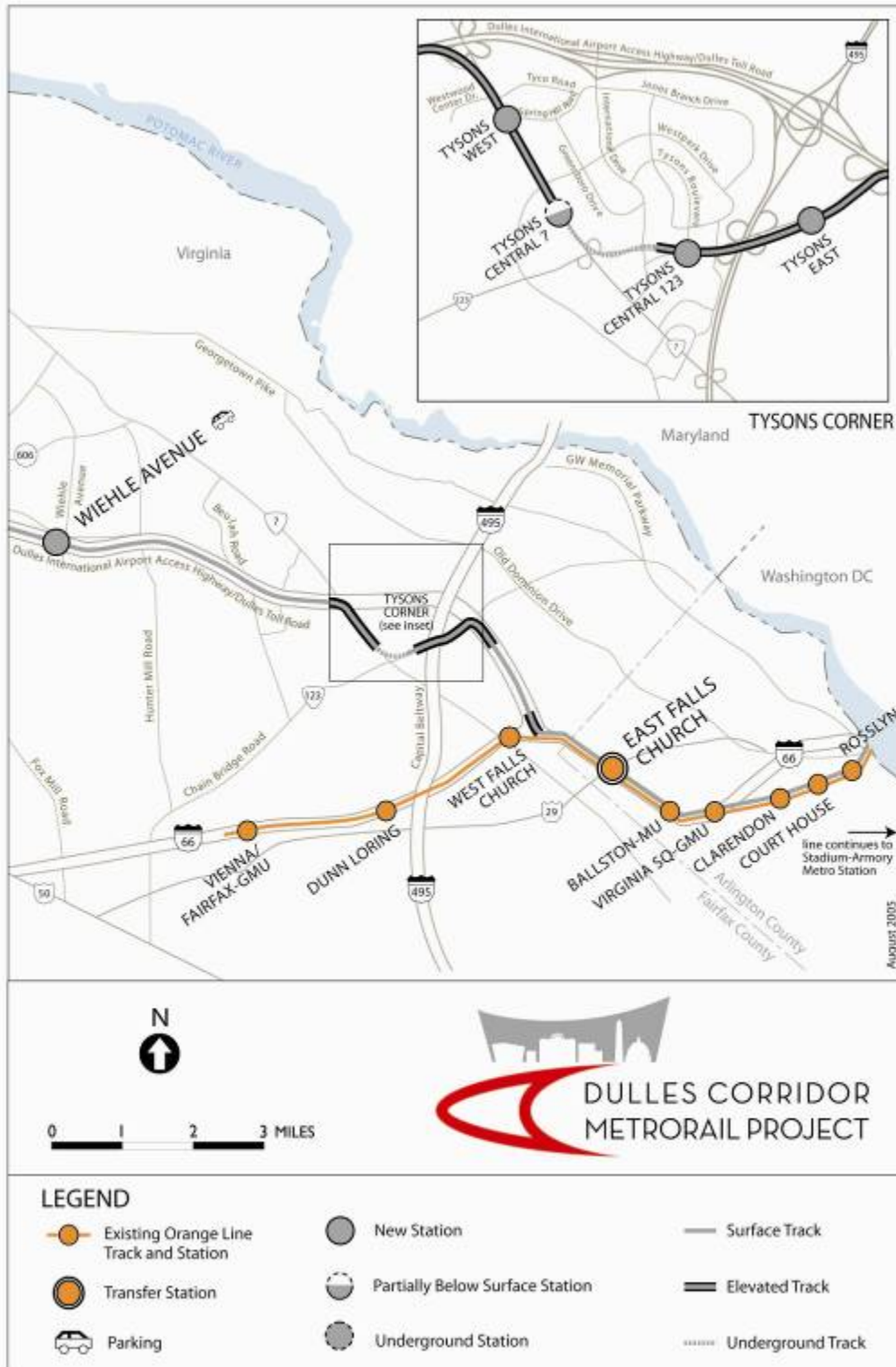
Schedule

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
03/17/14	Revenue Service Date (RSD) based on DTP's Update of <i>August 25, 2013</i> for SSCD.		
98.0%	Percent Complete Construction <i>as of September 30, 2013</i> .		
79.4%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
91.7%	MWAA's Estimate of Project Earned Value through <i>August 2013</i>		

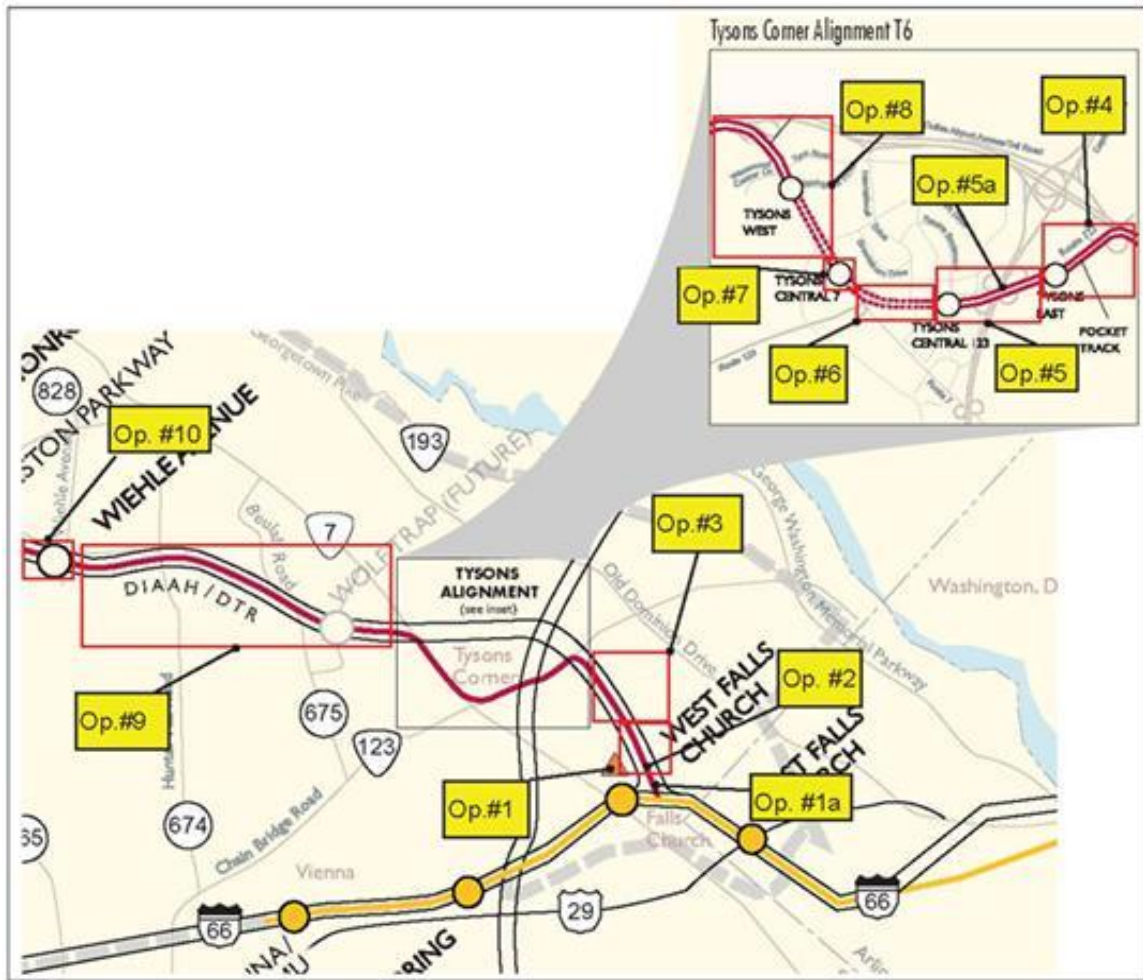
Cost

\$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
\$2.501 billion	Expenditures through <i>August 2013</i> from total project budget of \$3.142B
89%	Percent complete based on federal expenditures.
\$36.67 million	Total project contingency remaining (allocated and unallocated) through <i>August 2013</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	Version	Review By FTA	Status
Safety and Security Management Plan	3/20/12	4/20/12	Accepted. MWAA's SSMP Rev.9 dated March 2012 was submitted for review in March 2012 and accepted by the FTA on April 13, 2012.
Safety and Security Certification Plan			WMATA's SSCPP March 2012 Revision is included as Appendix E to MWAA's SSMP Revision 9, which was accepted by the FTA on April 13, 2012.
System Safety Program Plan	1/20/2011		WMATA's SSPP is effective January 2013
System Security Plan or Security and Emergency Preparedness Plan (SEPP)			WMATA's SEPP is effective March 2012
Construction Safety and Security Plan			Addressed in PMP
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 2013 was approved by TOC	
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 and/or its contractor (TRA) routinely attend the quarterly meetings, including the most recent on May 22, 2013.
Has the grantee submitted its safety certification plan to the oversight agency?	N	SSCPP has been developed and distributed to stakeholders
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	Silver line currently has several active committees, including the weekly start-up committee (Tuesdays), monthly safety and security working group (3 rd Thursday), and biweekly rail activation committee (Friday)

Does the grantee ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	N	Gannett Fleming has conducted a PHA dated 5/10/2013 for the project. The TVA, being conduct by Volpe, is scheduled for completion on September 30, 2013.
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	The integrated test plan has been developed and approved by WMATA on 3/15/2013.
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 505 first aid cases and eight lost time cases in <i>13.796 million</i> 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]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]

[Redacted text block]