COMPREHENSIVE MONTHLY REPORT

August 2013

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

September 27, 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

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EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *September 4, 2013* to conduct a monthly progress meeting for work performed in *August 2013*. The full time on-site PMOC representative attended various project meetings and site tours throughout this reporting period. Additional information for this report was obtained from MWAA during the *first* and *second* weeks of *September 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 FTA and PMOC met with MWAA on *September 4, 2013* to conduct a monthly progress review meeting and MWAA provided supplemental information the following week. The status of information is as of *August 31, 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. 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 September 17, 2013 between FTA, MWAA, WMATA and PMOC to review the past month's activities and Kawasaki's Project Review Meeting (PRM) #36 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 is expected to begin during the week of September 9, 2013.* The total measured average weight of the car is 82,729 pounds, which is near 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 the four pilot cars continues with delivery 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 *96%* complete. Significant accomplishments in *August* 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 system in all five N-Line test blocks. 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.

SILVER LINE CONSTRUCTION PROGRESS THROUGH *AUGUST* 2013			
ELEMENTS	**% COMPLETE**	**STATIONS/YARD**	**% COMPLETE**
O-3 (DCR) Trackway	100%	Tysons East	*94%*
Tysons East Guideway	100%	Tysons Central 123	*92%*
Tysons West Guideway	100%	Tysons Central 7	*92%*
O-9 (DIAAH) Trackway	100%	Tysons West	*92%*
Systems	*90%*	Wiehle Avenue	*97%*
Trackwork	*100%*	Systems Testing	*81%*

WEST FALLS CHURCH YARD PROGRESS THROUGH *AUGUST* 2013	
ELEMENTS	**% COMPLETE**
Overall	*75%*
Sitework	*99%*
Sound Cover Box	*73%*
S&I Building	*59%*
Trackwork	*99%*
Systems	*80%*
Testing	*8%*

- **The DTP Schedule Update** with a data date of *July* 25, *2013* showed the SSCD as *November 12,* 2013, which results in a *DTP* forecast RSD of *March 4, 2014*. (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 *July* 25, 2013 on *August 19*, 2013, stating that the schedule was once again "Not Accepted."

- **With regard to the West Falls Church Yard (WFCY)** completion date, DTP's schedule update of *July* 25, 2013 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*. This schedule was "not accepted" by MWAA.

- **Budget status as of *July 25, 2013* indicates** that *$2,485,725,577* 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 *$332,990,581* of the available contingency for the first ten contingency milestones has been drawn down to date with a balance of *$28,809,419* available through the tenth of twelve contingency phases. The current estimate of the contingency available at the end of construction is *$36.583 million.* In the PMOC's opinion, the contingency is adequate.

- **MWAA's** estimate of the **Earned Value** for the Project through July is *91.7%*.

- **Risk -** The FTA approved MWAA's RCMP Rev. 3 on April 13, 2012. On September 30, 2012, MWAA issued a revised list of Top Ten Risks. FTA's letter of November 29, 2012 approved the September 30 revised Top Ten Risks. These risks are now being reviewed on a quarterly basis. A revised list of Top Ten Risks dated December 2012 was submitted to the FTA via letter dated January 22, 2013. 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 resubmitted 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 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 *August is 840*, which is a decrease of *159* from the *July* actual of *999.*** *This* fluctuation is expected with the completion of civil construction and the ramping up of systems installation and testing.

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	*$36.58M*
Schedule	Revenue Service Date	December 1, 2014	*March 4,* 2014*

Total Project Percent Complete	Based on Expenditures	*78.6%*
	Based on Earned Value	*91.5%*

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 quality *has improved* and ECNs *continue to be* submitted and approved at a faster pace. The static retesting in the field has been completed. The regression testing related to the ECNs is yet to be fully quantified.	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. It is anticipated that WMATA will also accept the CAP with comments.*
Date of Next Quarterly Meeting:		September 11, 2013

* Based on DTP's schedule update of *July* 25, 2013 for SSCD of November *12*, 2013*. This is not likely the date that WMATA will select.*

3. PMOC's Assessment of Project Status

Through *July* 2013, MWAA has utilized *$332.99* million of contingency resulting in a remaining balance of *$28.81* 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 *July 2013*, of *$36.58* 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 *July* 25, 2013 reflected a *-64* calendar variance to the contract schedule indicating a SSCD of *November 12, 2013.* 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 12, 2013 SSCD is 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. That plan, *which MWAA has*

"Accepted as Noted", indicates a completion of the ECN review process on August 14, 2013. That process is currently running at least *three* weeks behind.

DTP has incorporated the West Falls Church Yard construction into the mitigation schedule with a target completion date of December 20, 2013. DTP's *July 25, 2013* schedule update 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 that, with the continued cooperation of WMATA and the coordination provided by MWAA, that the West Falls Church Yard work can be completed by December 31, 2013. 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 current information, RSD will be in mid-March 2014.*

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 *September 3, 2014, a seven-month delay. The Commissioning Facility is forecast to be completed on April 9, 2014, a four-month delay.*

During April 2013, *WMATA* staff raised concerns with the Alstom Automatic Train Control (ATC) testers working in the field 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 DTP's 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.

During *August 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. The first priority of the table top review was to determine a path forward for dealing with the unapproved software installed at K98, which was accomplished. Following a field audit, re-testing at K98 began on May 25, 2013. A planned July 27 weekend track outage and a permanent phases 6 and 9 circuits cutover was again canceled due to Alstom's inability to fully implement a software change to the CSEX4 circuit boards. That cutover *was completed during the weekend of September 7-8, 2013*. During the July 8 monthly meeting, MWAA reported that DTP delivered the necessary K98 ATC spare parts to support the future circuit cutovers. ATC testing for Impedance Bond Checkout Test (22.2), Vital Interlocking Operation Test (23.4) and Traffic Interlocking and Line Circuit Test (23.7)

previously completed on the N-Line with unapproved field test procedures have now been retested *in July*. Meetings *will* continue in *September and October* for re-reviewing existing and new engineering software changes with the goal to restoring confidence in the ATC Test Program and the determination of what re-testing will be required.

It is the PMOC's opinion that the Alstom QA/QC and document control/configuration issues may delay the SSCD by six to eight weeks *from the contractual SSCD of September 9, 2013.* 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. Alstom has improved the quality and quantity of its Engineering Change Notices (ECNs) for the table top review meetings, which has resulted in *114 of 126* (*through September 4)* known ECNs being approved. These ECN and ATC field test data reviews are *continuing* to restore a measure of confidence in the ATC Test Program.

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. 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 *July 25*, 2013. In this update, DTP reported a possible loss of *64* calendar days to the SSCD now forecasted by DTP to occur on November *12*, 2013. The WFCY schedule update 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 update with a data date of *July* 25, *2013* on *August 19, 2013* stating the schedule was again "Not Accepted." See Section 4.a for additional information.

- MWAA continues to monitor expenditures to date and to update the estimate at completion. In July 2012, MWAA allocated $71.8 million in finance cost savings to contingency budget. In October 2012, MWAA identified $19.0 million in forecast under-run commodity escalation that was transferred to the contingency budget. The removal of the $40.38 million in CNPAs from the federal portion of the Project improved the estimate of contingency remaining at the completion of construction. Through *July* 2013, MWAA has utilized *$332.99* million of contingency resulting in a remaining balance of *$28.81* 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 *July 2013*, contingency estimated to remain at project completion *is $36.58 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 *August 2013*, there has been a cumulative total of *13,584,125 hours* worked with eight lost time cases. This remains well below national average for heavy and civil engineering construction. (Most recent Department of Labor statistics are for 2011.)

  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.

  DTP submitted revisions to the System Safety/Security Management Plan (SSMP) and DTP Procedures PPQ 01.06.02, Development and Maintenance of the Safety/Security Certifiable Items List, and PPQ 01.06.03, Design Conformance Certification, which

MWAA accepted on December 6, 2010. The FTA and PMOC met with MWAA, WMATA, and DTP on April 29, 2011 and again on January 27, 2012 to discuss development and status of a revised SSMP to integrate WMATA and MWAA systems testing, interface management and pre-revenue operations. SSMP Revision 9 was completed in March 2012; 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 *August 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. The first priority of the table top reviews was to determine a path forward for dealing with the unapproved software

installed at K98 which was accomplished. Following a field audit, re-testing at K98 began on *May 25, 2013.* A planned July 27 weekend track outage and a permanent phases 6 and 9 circuits cutover was again canceled due to Alstom's inability to fully implement a software change to the CSEX4 circuit boards. That cutover *occurred on* September *7-8,* 2013. ATC testing previously completed on the N-Line with unapproved field test procedures have now been retested. Meetings continue for re-reviewing existing and new engineering software changes with the goal to restoring confidence in the ATC Test Program and the determination of what re-testing will be required. DTP transmitted a revised Corrective Action Plan (CAP) on July 22, *which MWAA "Accepted as Noted" via Letter No. 08893 dated August 22, 2013. WMATA anticipates that it will also accept the CAP with comments.*

It is the PMOC's opinion that the Alstom QA/QC and document control/configuration issues may delay the SSCD by six to eight weeks *from the contractual SSCD of September 9, 2013.* 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. Alstom has improved the quality and quantity of its ECNs for the table top review meetings which has resulted in *114 of 123* (through *September 4*) known ECNs being approved. These ECN and ATC field test data reviews are beginning to restore a measure of confidence in the ATC Test Program.

MWAA reported during the *September 4*, 2013 monthly update meeting that utility relocation is 100% complete, and DB construction is approximately *96%* complete.

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

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1)**
  Continued roof, wall and window installation in order to enclose the West Falls Church Yard (WFCY) Service and Inspection (S&I) Building; continued plumbing, electrical, fire sprinkler, HVAC ductwork, drywall installation and mechanical equipment installation in the S&I Shop; 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 in the new storage track area; continued new storage track finalization work; and continued pavement restoration on the through lanes along eastbound I-66 and along the DCR.

  Systems Work

  - **K&N Junction**
    Completed series 24.1 safe braking tests during non-revenue hours.

  - **Fisher Avenue K98 TCR**
    Alstom continued to monitor the CSEX4 board operations.

  - ***TPSS #1 (Plainfield St. – N91)***
    Performed series 26.3 snowmelter operation testing, performed series 24.4 ATC control line testing, and performed series 23.8 interlocking control panel testing.

- **Plainfield TCR and N91 Area of Control**
  Performed series 26.3 snowmelter operation testing and series 24.4 ATC control line testing.

- ***TBS #2 (Baldwin Drive – N92)***
  Performed series 26.3 snowmelter operation testing and series 24.4 ATC control line testing.

- **Baldwin TCR and N92 Area of Control**
  Performed series 26.3 snowmelter operation testing and series 24.4 ATC control line testing.

- ***TPSS #2 (Baldwin – N92)***
  Performed series 26.3 snowmelter operation testing and series 24.4 ATC control line testing.

- **Operations Area OP-4/5A (Tysons East Guideway and Tysons East Station)**
  In the station – Continued installing signage and map cases throughout the station; installing and testing communications systems; continued elevator and escalator testing and punch list work; and continued installation of station finish work.

  Systems Work

  - **TBS #3 (Tysons East – N01)**
    Performed series 24.4 ATC control line testing.

  - ***Tysons East TCR and N01 Areas of Control***
    Performed series 24.4 ATC control line testing.

  - ***TPSS #3 (Tysons East Station – N01)***
    Performed series 24.4 ATC control line testing.

- **Operations Area OP-5 (Tysons Central 123 Station)**
  Continued installing elevators and escalators controls; installing communications systems equipment, devices, raceways and wiring throughout the station and pavilion; installing station signage; installing mezzanine, intermediate and platform level ceiling panels; installing station mezzanine curtain wall and pavilion glass; and installing various station finish work.

  Systems Work

  - **TPSS #4 (Tysons 123 – N02)**
    Performed series 24.4 ATC control line testing.

- **Tysons 123 TCR and N02 Area of Control**
  Performed 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 civil punchlist work; conducting fire dry standpipe testing; and installing Fire Alarm and Public Address System cabling.

  - **West Cut and Cover and Ventilation Structure**
    Survey the invert slab elevation to verify further settlement has not occurred and continue service room punchlist work.

- **Operations Area OP-7 (Tysons Central 7 Station)**
  Continued installing pedestrian bridges' and pavilions' curtain wall framing and finishes, ceiling panels and glass; installing signage throughout the station; conducting elevator SCADA testing; installing various station finish work; and milling and paving on the eastbound and westbound Route 7 between Gosnell Road and Route 123.

  Systems Work

  - **TPSS #5 (Tysons Central 7 – N03)**
    Performed series 24.4 ATC control line testing.

  - **Tysons Central 7 TCR and N03 Area of Control**
    Performed 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; installing signage and map cases; continued installing escalator controls; installing granite stair tread finishes, handrails and handrail lighting; installing curtain wall framework and glass on the pavilion bridge; and continued various station finishes.

  Systems Work

  - ***TPSS #6 (Tysons West Station – N04)***
    Performed series 24.4 ATC control line testing.

  - ***Tysons West TCR and N04 Area of Control***
    Performed series 24.4 ATC control line testing.

- **OP-9 (DIAAH)**

  Systems Work

  - **TPSS #7 (Wolf Trap – N05)**
    Performed series 24.4 ATC control line testing.

  - ***Wolf Trap TCR and N05 Area of Control***
    Performed series 24.4 ATC control line testing.

  - ***TPSS #8 (Chatham's Ford – N93)***
    Performed series 24.4 ATC control line testing.

  - ***Chatham's Ford TCR and N93 Area of Control***
    Performed series 24.4 ATC control line testing.

  - ***TPSS #8 (Hunter Mill 0 N94)***
    Performed series 24.4 ATC control line testing.

  - **Hunter Mill TCR and N94 Area of Control**
    Performed series 24.4 ATC control line testing.

  - ***TPSS #10 (Sunset Hills – N95)***
    Performed series 24.2 wayside/car interface testing; series 24.3 pre and post shunt testing; and 24.4 ATC control line testing.

  - **Sunset Hills TCR and N95 Area of Control**
    Performed series 24.2 wayside/car interface testing; series 24.3 pre and post shunt testing; and 24.4 ATC control line testing.

  - ***TPSS #11 (Wiehle Avenue - N06)***
    Performed series 24.2 wayside/car interface testing; series 24.3 pre and post shunt testing; 24.4 ATC control line testing; and series 23.8 interlocking control panel retesting.

  - **Wiehle TCR/N06 Area of Control**
    Performed series 24.2 wayside/car interface testing; series 24.3 pre and post shunt testing; 24.4 ATC control line testing; and series 23.8 interlocking control panel retesting.

- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)**
  Continued installing and testing communications systems throughout the station and pedestrian bridges and pavilions; working elevator and escalator testing and punch list work; and continued various station finish work.

c. Real Estate

Real Estate Acquisition continued to keep ahead of construction requirements, often 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 *August* 2013.

PARCELS ACQUIRED[1]
(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	*1*	*1*	*55*	*53*	*(2)*
DIAAH	26	0	0	0	26	26	0
TOTAL	**105**	**0**	***1***	***1***	***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 2011* Property Acquisition Status Update. One additional acquisition, *#167,* was added in June 2013 *bringing the total to 105 which will be* completed in September 2013.

Condemnation Status

MWAA acquired thirty-nine parcel packages with the filing of thirty-three Certificates of Take. In *August* 2013, one case *was completed with the recordation of the Final Order* (Parcel 109, Plaza America). *One* case (Parcel 03, West Group Properties, LLC), for which the Final Order was entered in May 2013, was decided in favor of the Project but was appealed by the property owner. To continue this appeal, the owner *filed their brief supporting the appeal in late August 2013. The Commonwealth, on behalf of the Project, has until mid-September to file their response, and* the court will likely decide, *by the end of the year, whether* to hear the appeal. A refusal will let the verdict stand. If the court elects to hear the appeal, the decision *would probably not* be issued *until* July 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	Document Signed	Document Recorded
Fee/Easement Transfer	*27*	*27*	*27*	*27*	26	*23*	0	0
Easements on Public ROW	3	3	3	2	*2*	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 September 17, 2013 with FTA, MWAA, and WMATA to review the past month's activities and Kawasaki's Project Review Meeting (PRM) #36 information package. Project Review Meeting # 36 was held at the KMM facilities in Lincoln, NE on September 12, 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. *Track circuit testing of the test track with a rail car is expected to begin during the week of September 9, 2013.* The total measured average weight of the car is 82,729 pounds which is near 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 delivery 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 August 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	2/20/14
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	11/26/13
20	Completion of Prototype Car Review (Prior to Ship out from Japan)	5/14/13	10/4/13	*10/22/13*

Item #	Description	*December 2011* Approved Baseline MPS Dates	*February 2013 Approved MPS Dates*	Actual and Current Forecast Dates
21	Completion of Pilot Car FAI	10/21/13	10/3/13	11/27/13
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	Delivery of first 4 Pilot Cars to WMATA	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 is forecasting for September 3, 2014, a seven-month delay. The Commissioning Facility is forecast to be completed on April 9, 2014, a four-month 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.

WMATA developed an interim operating plan for dealing with the delay that called for using only six-car trains in lieu of a mix of six- and eight-car trains in the prior plan. This raised the concern of the FTA and PMOC. WMATA submitted this interim operating plan as part of the Rail Fleet Management Plan (RFMP) Rev. 4F dated April 18, 2012 to the FTA on May 4, 2012. FTA and WMATA met to address this issue and WMATA prepared revisions to their RFMP and submitted RFMP Rev 4G to the FTA on August 3, 2012. FTA conditionally approved RFMP Rev 4G on October 11, 2012 with the proviso

that that WMATA keep the FTA informed of the operating plan for the startup of the Dulles service.

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 *August*. All were related to Design-Build work. As of *August 31*, 2013, DTP had logged *13.584* million project man-hours, with *505* first aid cases and 8 lost time cases. There have been a total of *1,163* incident investigation reports, 95 utility hits, and 48 vehicular accidents. These statistics continue to remain below industry standards.

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 and Testing Conformance Checklist (STCC). 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 (STCC)	
6,172	*5,042*		*4,628*		*1,264*	
DTP Signed	*5,042*	*100%*	*3,165*	*68%*	*292*	*23%*
MWAA Accepted	4,999	99%	2,700	58%	*266*	*21%*
WMATA Audited	4,999	99%	1,920	41%	0	0%

1) Checklists are exclusive of WFCY (K99)
2) *Reflects DTP's Design, Construction, and Testing Verifications submittals through 8/29/2013.*
3) Reflects MWAA's acceptance through DCC #12 (7-30-13).
4) Reflects WMATA's audits through *DCC #12.*
5) Reflects MWAA's acceptance through *CCC #7 (8-23-13).*
6) Reflects WMATA audits through CCC #6.
7) Reflects MWAA's *pending acceptance of the re-submittal SITCC #1 (8-30-13).*

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 *August 20, 2013.* The next SCWG Meeting is scheduled for *September 17, 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 *August 2013,* MWAA and DTP performed no QA audit/surveillances.

MWAA QA Audit and Surveillance Schedule for *September -November 2013*

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Sur	Lead
TBD	S	Permanent Equipment Facilities	Y	MWAA
TBD	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. A productive planning meeting with all partners was held on November 20, 2012. Coordination of the night access and necessary escorts was discussed. UTRS, under the oversight of Russell Corrosion Consultants and CTI Special Inspection and MWAA/QA, began work on December 11, 2012. As of January 8, 2013, the contractor has completed the Vertical Test Facility (VTF) installation at both piers 3-IB and 5-IB. The test plan 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 prerequisite (track-to-earth) testing to the pier foundations stray current testing was finally completed on April 11, 2013 with the exception of some retesting completed on May 27, 2013. UTRS and RCC began the stray current coupon testing on April 22, 2013 with long-term data loggers and completed the data gathering on May 21, 2013. During testing there were unexpected changes observed in the pile-to-earth coupon flows. Discussions have *been ongoing* to determine if these observations are reflective of normal transit operations that have occurred for years (that will not impact the analysis) or if these changes are associated with new operating conditions. In order to accurately calculate past or normal conditions, there is a possibility that additional testing may be required (totally isolating the N-Line from the K-Line). UTRS forward the data for the rail-to-earth potential and the two worst case pile-to-coupon current flow data collected and organized onto 24 hour profiles for analysis by RCC. All efforts to determine the source(s) of the current flow abnormalities have proved unsuccessful. UTRS followed up with a "Preliminary Stray Current Testing Report" on July 10, 2013. On July 12, 2013, the PMOC and MWAA/QA discussed the pros and cons of proceeding with metal loss calculations utilizing the existing data. Following the discussion, MWAA wrote to RCC to pose several questions relative to the possibility of proceeding with the metal loss

calculation exercise if the intended purpose of the testing and calculations could still reasonably be satisfied. RCC responded on July 29, 2013 stating that the rough calculations indicate that the level of metal loss that has occurred to date is likely insignificant and that more than an additional 50 years would likely be required to reach the criteria of a maximum metal loss of 24%. However, RCC and UTRS recommend that an additional week of data collection be conducted in an effort to identify the abnormal operating conditions observed during the initial testing. MWAA, FTA and the PMOC discussed this recommendation following the August 8 monthly meeting and agreed that the recommended additional week of testing be conducted. MWAA *conducted* a planning meeting for this effort with all stakeholders for August 15, 2013. *During this meeting it was determined that an additional two days of testing versus a week should satisfy the need to better understand, determine and eliminate the causes of abnormal test results that were reported thus far. Subsequent to this meeting, it was determined that the temporary insulated joint configurations separating the WFCY and the K and N Line junctions are what are contributing to the abnormal test results and therefore it would be logical to wait until the September 7-8, 2013 ATC circuit cutover is completed and the permanent insulated joint configurations are restored which will isolate the K-Line from the N-Line and the K-Line from the WFCY. RCC confirmed this in an August 25, 2013 letter to MWAA. This testing which was planned for the week of September 16, 2013 has been delayed. It appears that September 25 – 27 may represent a better window of opportunity.*

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, *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 to FTA 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 27th. A discussion was held during the PMOC's September 6 monthly meeting. The PMOC provided review comments and a modified Top Ten Risk List that was reviewed by MWAA. MWAA provided a submittal dated October 3, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. The FTA approved the revised Top Ten Risks by letter dated November 29, 2012. It was agreed that the top ten risks would be reviewed and revised as needed on a quarterly basis. A revised list of Top Ten Risks dated December 2012 was submitted to the FTA via letter dated January 22, 2013. 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 *July* 25, 2013 reflects *a -64* calendar day variance *resulting in a* November *12, 2013* SSCD. MWAA completed its schedule review of the schedule update with a data date of *July* 25, *2013* on *August 19, 2013* and notified DTP that it was "Not Accepted." *MWAA Letter No. 08807 again* stated that "DTP's Schedule Narrative attributes the entire delay to the lack of reliable trains and the Washington Metropolitan Area Transit Authority's (WMATA) lack of resources to perform Advanced Energy Management System (AEMS) and Advanced Information Management System (AIMS) Supervisory Control and Data Acquisition (SCADA) testing." MWAA's letter also stated that "the Airports Authority disagrees with this position and is of the opinion that the delays are caused by, or are the responsibility of, DTP."

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. This results in a revised planned Revenue Service Date of January 4, 2014.

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 *July 25, 2013* reflected a *-14* calendar day variance yielding a forecasted completion date of *January 3, 2014.* This schedule was not accepted by MWAA.

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.

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 of September 9, 2013 will not be achieved due to the continued delay in the submission, approval and regression testing of engineering software changes for the ATC system. RSD is also dependent upon the completion of WMATA's schedule associated with the Rail Activation Plan (RAP).

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

- *ETS Remote Monitoring Configuration*
- *Approved ATC test procedures and issues with the software configuration. Completion of the O&M manuals and training.*
- *Impact of Kone's elevators and escalators slow progress in station and pavilions.*
- *DGS availability for increasing demand for concurrent walk-downs and inspections.*
- *DTP's submittal of Systems Performance Demonstration procedures.*

a. Critical Path Evaluation

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

In DTP's *July 2013* Schedule Update, the Critical Path No.1 has -*64* 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 and then system-wide, then to TPSS pull-away test for the Tysons East Station, and ends with the system performance demonstration and the final safety/security certification report and certification. MWAA does not accept this critical path and believes that more critical to the Project is the required re-testing due to the issues with Automatic Train Control.*

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 *12*, 2013 SSCD *may still be* 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 *three* weeks behind.

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	June 2013	July 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	06/28/13	*07/25/13*
Systems Testing Complete - Wiehle Ave Station	**08/13/12**	01/16/13	06/25/13	*07/25/13*
Systems Testing Complete - Central 7 Station	**01/23/13**	04/12/13	07/17/13	*08/13/13*
Systems Testing Complete - Tysons West Station	**02/21/13**	05/14/13	09/12/13	*09/18/13*
Systems Testing Complete - Tysons 123 Station	**12/20/12**	03/28/13	07/12/13	*08/26/13*
Substantial Completion Date (SSCD)	**07/31/13**	07/31/13	11/02/13	*11/12/13***
Completion – WFCY	**NA**	N/A *	01/02/14	*01/03/14*
Revenue *Service Date (RSD)* – Target	**11/27/13**	01/02/14	02/22/14**	*03/14/14***
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.

** Based on DTP's SSCD with which neither MWAA nor PMOC agree. RSD will ultimately be determined by MWAA and WMATA based on the Operational Readiness Testing schedule.

b. Important Activities – 90-Day Look Ahead

- K98 ATC circuits cutover.
- Obtain all Alstom ATO and level two Dynamic Testing Readiness Certifications.
- Complete level two ATC dynamic train testing.
- Complete ATC Test Program.
- Complete systems installation and testing.
- Complete SCADA Testing.
- Complete the stray current testing of existing piers 3-IB and 5-IB and issue final report.
- 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 *July 25, 2013* is shown below. Overall, approximately *79.1%* of the budget has been expended.

Project Cost Summary by SCC Code, *July* 2013

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET [1]	EXPENDED TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements	$ 621,265,115	$ 605,290,058	$ 614,540,910
20	Stations	$ 342,642,263	*$ 316,739,961*	$ 349,366,468
30	West Falls Church Yard	*$ 74,247,862*	*$ 35,049,065*	*$ 74,057,832*
40	Site Work & Utility Relocation	$ 240,522,580	*$ 216,930,424*	$ 261,989,061
50	Systems	$ 307,457,963	*$ 285,519,084*	$ 304,308,079
60	Right of Way Acquisition	$ 67,631,026	*$ 58,253,334*	$ 61,898,912
70	Vehicles	$ 195,352,701	*$ 76,031,450*	$ 194,648,939
80	Professional Service – FD	$ 739,966,107	*$ 770,684,081*	$ 806,893,021
90	Contingency Mgmt. Reserve [2]	*$ 115,201,445*	$ -	*$ 36,583,843*
100	Finance Charge [3]	$ 438,184,571	$ 121,228,121	$ 438,184,571
	Subtotal	**$ 3,142,471,635**	***$ 2,485,725,577***	**$ 3,142,471,635**

1. Current budget equals FFGA amount plus change orders CO#001-117, 119-134, 136-137, 139-*149* , *155* , Directive Letters 001-050, 052-058, *063-064* , 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 *24* Design-Build Change Orders totaling an estimated *$27.22* million and 3 Utility Relocation Change Orders totaling an estimated $5.93 million under evaluation. In addition, there remain *115* Design-Build Potential Change Orders and 5 Utility Relocation Subcontractor Changes under review.

b. Monthly Cost Report, *July 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	$ *1,699,447,854*	$ *81,594,795*	$ *1,781,042,650*	
Firm Fixed Price Insurance and Bonds		$ 65,109,408	$ *75,329,268*	$ *690,391*	$ 76,019,659	
	Firm Fixed Price Subtotal	$ 1,177,161,581	$ *1,774,777,122*	$ *82,285,186*	$ *1,857,062,308*	
Subcontract Allowance		$ 430,199,817	$ -	$ 4,029,653	$ 4,029,653	
	Design-Build Contract Prices	$ 1,607,361,398	$ *1,774,777,122*	$ *86,314,839*	$ *1,861,091,961*	
Indexed Commodity Escalation[5]		$ 77,469,926	$ -	$ *17,629,743*	$ *17,629,743*	
	Design-Build Contract Total	**$ 1,684,831,325**	***$ 1,774,777,122***	***$ 103,944,582***	**$ 1,878,721,704**	*94%*
Utility Relocation						
Utility Work		$ 84,312,807	$ 95,104,339	$ 6,929,716	$ 102,034,054	
Terf Tax		$ -	$ -	$ 0	$ 0	
Project Management and Final Design		$ 8,423,426	$ *25,588,536*	$ *152,680*	$ 25,741,216	
	Utility Relocation Total	**$ 92,736,233**	***$ 120,692,875***	***$ 7,082,396***	**$ 127,775,270**	94%
Right of Way						
	Right Of Way Total	**$ 42,443,132**	***$ 58,584,987***	***$ 3,938,925***	***$ 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	$ *11,510,872*	$ *18,539,906*	$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage		$ 23,225,717	$ *35,330,720*	$ *5,333,636*	$ *40,664,357*	
Project Management Support		$ 90,004,649	$ *131,271,531*	$ *24,329,042*	$ *155,600,572*	
	Airports Authority Services Total	**$ 142,109,519**	***$ 178,113,123***	***$ 48,202,584***	***$ 226,315,707***	*79%*
Contingency[5]						
	Contingency Total	**$ 297,762,579**	**$ -**	***$ 36,583,843***	***$ 36,583,843***	
Finance Costs[6]						
	Finance Costs Total	**$ 509,984,571**	**$ 121,228,121**	**$ 316,956,450**	**$ 438,184,571**	
Total Federal (FFGA Scope)		**$ 3,142,471,635**	***$ 2,485,725,577***	***$ 656,746,057***	**$ 3,142,471,635**	*89%*

1 Reflects Paid costs through *July 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 CNPA adjustments making a contribution to Federal contingency and drawdown from Non Federal contingency

c. Project Funding Sources: *July 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	*$ 71,824,668*	*79%*	*$ 18,905,837*
FFGA Balance	Planned		$ 198,155,131	*$ -*	*0%*	*$ 198,155,131*
Subtotal - New Starts		**33.29%**	**$ 900,000,000**	***$ 682,939,032***	***75.88%***	***$ 217,060,968***
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	*$ 1,151,086,545*	*100%*	*$ 867,377*
Subtotal - Local Funds		**63.94%**	**$ 1,728,653,922**	***$ 1,727,786,545***	***99.95%***	***$ 867,377***
Total Project Budget		**100%**	**$ 2,703,653,922**	***$ 2,485,725,577***	***91.94%***	***$ 217,928,345***
Interrelated Highway Activities			$ 201,408,229	*$ 154,364,622*	*76.64%*	*$ 47,043,607*
DTR Revenues/Commonwealth Funds[3]			**$ 201,408,229**	***$ 154,364,622***	***76.64%***	***$ 47,043,607***
		TOTAL[7]	**$ 2,905,062,151**	***$ 2,640,090,199***	***90.88%***	***$ 264,971,952***

1Reflects costs through *July 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.

7 Excludes Financing Costs.

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 *July* 25, 2013, MWAA reports that it has utilized *$332,990,581* of the $361,800,000 available contingency for the first ten contingency milestones leaving a balance of *$28,809,419*. 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 *July 25, 2013*, the project has an estimated balance at project completion of *$36,583,843*. 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 (24) and Utility Relocation (3) Change Orders under evaluation, and a large number of Potential Change Orders *(115)* and Utility Relocation Subcontractor Changes (5) still under review.

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 is $9.3 million and $7.3 million, respectively.

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 *July 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, *July* 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 *new RC-7000* 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 (spare parts) for WMATA acceptance.*	Unchanged	Unchanged	Unchanged	Unchanged
80.C 20	WMATA deliverables scope of work – including technical support may exceed the schedule *and therefore the budget.*	Unchanged	Unchanged	Unchanged	Unchanged
30.C 39	Construction issues (WFC Yard delayed construction which affects opening of the system).*West Falls Church Yard Construction issues delaying construction completion.*	Decreased	Decreased	Unchanged	Unchanged
50.S.2	*WMATA required points of testing for acceptance.* *(Supervisory Control and Data Acquisition (SCADA) Testing Required Points)*	Decreased	Decreased	Unchanged	Unchanged
20.C.40	Delay in Station Finishes (Platform Granite Edge, Platform & Mezzanine Paving Tile, Ceilings and Ceiling Lighting)	Unchanged	Unchanged	Unchanged	Unchanged
50.S.34	*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.)*	Unchanged	Unchanged	Unchanged	Unchanged
70.S.1	*Insufficient number of Rail Cars for Safe Braking Dynamic Testing*	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	*Construction not in accordance with permitted design documents.*	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.	*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 4th Quarter 2012. MWAA also submitted Letter No. 08631 dated July 11, 2013 CNPAs for the 1st Quarter of 2013 for FTA review and approval.	Y	Y	*Y*		*C*

KEY ITEM

Subtask 2A CLIN 0002A – PMP Review
Subtask 2B CLIN 0002 – On-Site Monitoring

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

LEGEND

PRIORITY (PR)
1- Most Critical
2- Critical
3- Least Critical

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

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

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
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: *September 27, 2013 (*reporting current through *August 2013* - Financials through *July 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.

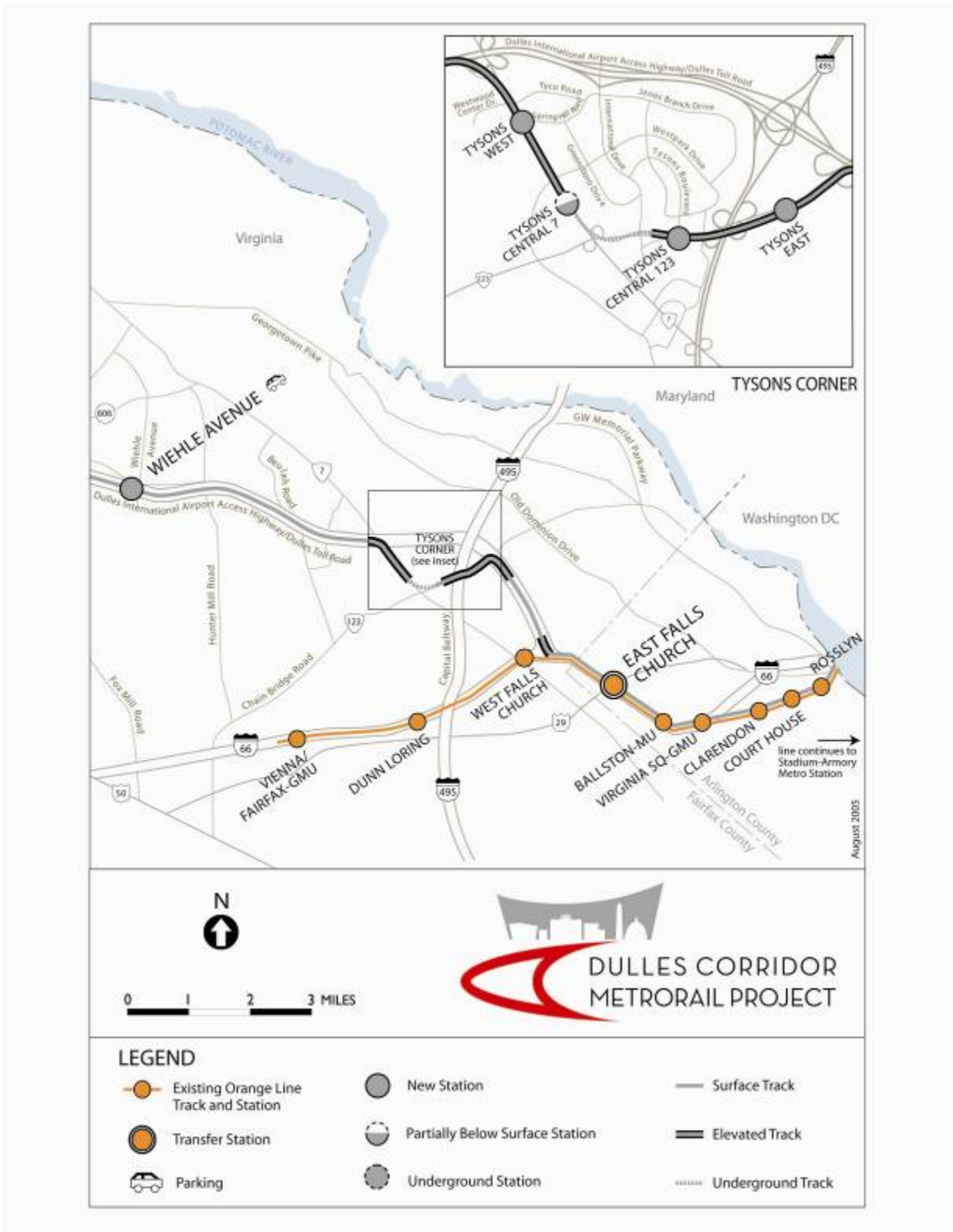
Schedule

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
03/14/14	Revenue Service Date (RSD*)* based on DTP's Update of *July* 25, 2013 for SSCD.		
96.0%	Percent Complete Construction *as of August 31, 2013.*		
78.0%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
91.7%	MWAA's Estimate of Project Earned Value through *July 2013*		

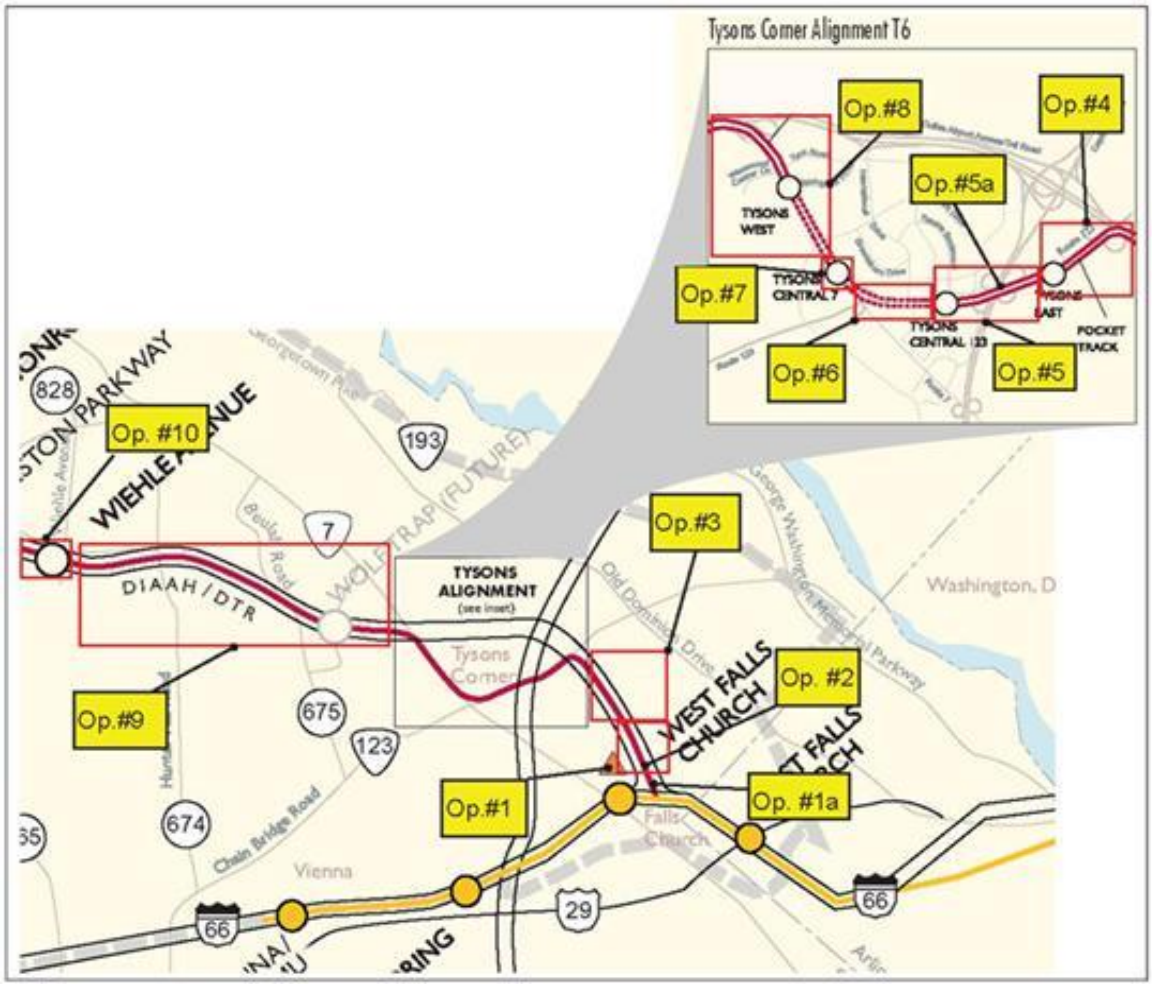
Cost

$1.490 billion	Total Project Cost ($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
$2.485 billion	Expenditures through *July 2013* from total project budget of $3.142B
79.1%	Percent complete based on federal expenditures.
$36.58 million	Total project contingency remaining (allocated and unallocated) through *July 2013*.

Project Map


TYSONS CORNER
TYSONS WEST
TYSONS CENTRAL 7
TYSONS CENTRAL 123
TYSONS EAST
Virginia
Maryland
Washington DC
POTOMAC RIVER
WIEHLE AVENUE
TYSONS CORNER (see inset)
EAST FALLS CHURCH
WEST FALLS CHURCH
DUNN LORING
VIENNA/ FAIRFAX-GMU
BALLSTON-MU
VIRGINIA SQ-GMU
CLARENDON
COURT HOUSE
ROSSLYN
line continues to Stadium-Armory Metro Station
Arlington County
Fairfax County
August 2013
N
0 1 2 3 MILES
DULLES CORRIDOR METRORAIL PROJECT
LEGEND
Existing Orange Line Track and Station
Transfer Station
Parking
New Station
Partially Below Surface Station
Underground Station
Surface Track
Elevated Track
Underground Track

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 (3rd 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 *13.584 million* project man-hours, which is below the national average.
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	

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

APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW

[redacted]

[redacted]