

COMPREHENSIVE MONTHLY REPORT

March 2013

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

April 25, 2013

PMOC Contract Number: DTFT60-09-D-00016

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

OPs Referenced: 01, 25

Hill International, Inc.

One Penn Square West

30 South 15th Street

Philadelphia, PA 19102

PMOC Lead: [REDACTED]

Length of Time PMOC Assigned to Project: 12.0 years

Length of Time PMOC Lead Assigned to Project: 5.0 years

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EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *April 9, 2013* to conduct a monthly progress meeting for work performed in *March 2013*. The full time on-site PMOC representative attended various project meetings and site tours throughout this reporting period. Additional information for this report was obtained from MWAA during the second week of *April 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 *April 9, 2013* to conduct a monthly progress review meeting and supplemental information was obtained from MWAA during the following week. The status of information is as of *March 31, 2013*, unless otherwise noted.

- **Real estate acquisition** continues to keep ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels. Of the 104 parcel packages required, *101* have been acquired. *MWAA expects to complete the transfer of property to WMATA between SSCD and RSD.*
- **Rail car Procurement** - Monthly Progress Review Meeting No. *31* between WMATA and Kawasaki on the 7000 Series railcars was held on *April 11, 2013 at the Kawasaki Motor Manufacturing (KMM) facility in Lincoln, NE* and the WMATA/PMOC 7K Rail Car Update Meeting was held on *April 16, 2013 at WMATA's Jackson Graham Building*. Design Qualification Testing (DQT) continues for components and subsystems, and *car level DQTs*

have begun at the Kawasaki Heavy Industries (KHI) facility in Japan on the full prototype car. KMM production of pilot cars continues.

The delivery of the first four production cars is now forecast to be December 13, 2013, and the conditional acceptance of the first four production cars is forecast to be August 14, 2014. The four prototype rail cars were completed at KHI on April 8, 2013. Conditional acceptance for the 64th railcar is forecast for June 12, 2015.

- **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 now considered to be 100% complete, and design-build (DB) construction, which is approximately 90% complete. Significant accomplishments in March included continued installation of pedestrian bridges and pavilions, elevators and escalators, finalizing of ballasted and direct fixation trackwork, continued progress with the testing of Traction Power Substations and track energizations, installation of Communications Systems, static testing of the Automatic Train Control system and train safe braking tests within N-Line test block No. 1. The Project also continued to make progress on the K-Line tie-in ATC testing.

SILVER LINE CONSTRUCTION PROGRESS THROUGH MARCH 2013			
ELEMENTS	% COMPLETE	STATIONS/YARD	% COMPLETE
O-3 (DCR) Trackway	100%	Tysons East	75%
Tysons East Guideway	100%	Tysons Central 123	67%
Tysons West Guideway	100%	Tysons Central 7	56%
O-9 (DIAAH) Trackway	100%	Tysons West	55%
Systems	51%	Wiehle Avenue	84%
Trackwork	99%		

WEST FALLS CHURCH YARD PROGRESS THROUGH MARCH 2013	
ELEMENTS	% COMPLETE
<i>Overall</i>	40%
<i>Sitework</i>	95%
<i>Sound Cover Box</i>	30%
<i>S&I Building</i>	28%
<i>Trackwork</i>	63%
<i>Systems</i>	30%
<i>Testing</i>	5%

- **The DTP Schedule Update** with a data date of February 25, 2013 “Mitigation Schedule” showed a -12 calendar day variance with a September 11, 2013 SSCD a forecast RSD of January 15, 2014. MWAA completed its review of the Schedule Update with a data date of February 25, 2013 on March 15, 2013, stating that the schedule was “not accepted.” See Section 4 for additional information.

- **With regard to the West Falls Church Yard (WFCY) completion date**, DTP's schedule update of *February 25, 2013* again reflected a -28 calendar day variance to the targeted completion date of December 20, 2013, resulting in a forecast completion date of January 17, 2014. *However, DTP's March 25, 2013 Schedule Update shows improvement with a forecasted completion date of December 30, 2013. This update has not yet been analyzed.*
- **Budget** status as of *February 25, 2013* indicates that \$2,375,711,894 has been expended of the \$3,142,471,635 budget total. MWAA reports \$358,616,087 of the available contingency for the first ten contingency milestones have been drawn down to date with a balance of \$3,183,913 available through the tenth contingency phase. The current estimate of the contingency available at the end of construction is \$10.96 million. Upon MWAA's transfer of the \$40.38 million value of CNPAs, the contingency available at the completion of construction to \$51.36 million. In the PMOC's opinion, the contingency is adequate. As of *February 25, 2013*, the federal portion of the Allowance Items recommended for award and yet to be transferred to the Firm Fixed Price is estimated to be \$11.51 million over budget. With the completion of the award of all contracts for Allowance Items, \$39.93 million of the original FFGA amount of \$77.47 million budgeted for Indexed Commodity Escalation was transferred to the Firm Fixed Price. During October 2012, the project re-assessed the commodity escalation estimate at completion (EAC) and transferred \$19.0 million to contingency.
- MWAA's estimate of the **Earned Value** for the Project through *February* is 88.8%.
- **Risk** - The FTA approved MWAA's RCMP Rev. 3 on April 13, 2012. In June 2012, MWAA updated the Risk Register. This document and a recommendation to update the Top Ten Risks were forwarded to the FTA and the PMOC for review on August 2012. FTA, the PMOC and MWAA discussed this issue during the PMOC's September monthly site visit. The PMOC provided review comments and a modified Top Ten List that was reviewed by MWAA. On September 30, 2012, MWAA issued a revised list of Top Ten Risks. FTA's letter of November 29, 2012 approved the September 30 revised Top Ten Risks. These risks 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. During the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list.
- **The Full Time Equivalent (FTE) estimated total for March is 1,129 which is a decrease of 43 from the February actual of 1,172.** A fluctuation is to be expected with the winding down of design and civil construction, the ramping up of systems installation and testing and winter weather.

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	\$10.96M
Schedule	Revenue Service Date	December 1, 2014	January 15, 2014**
Total Project Percent Complete		Based on Expenditures	75.6%
		Based on Earned Value	88.80%
Major Issue	Status	Comments/Action/Planned Action	
Concurrent Non-Project Activities (CNPA) -- Project Partners have added activities to the Project that may not be part of the FFGA-funded scope of work.	The FTA identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA's letter of November 28, 2012 corrected the total to \$40.38M.	MWAA will provide FTA details of how they will address budget and drawdown adjustments for the identified CNPAs.	
Date of Next Quarterly Meeting:		May 22, 2013	

Note:

* Through February 2013

** Contingent upon WFCY not needing to be complete

3. PMOC's Assessment of Project Status

In its monthly report for June 2011, the PMOC concluded that MWAA needed to replenish the Project contingency, and to actively pursue items that may be additional scope (non-FFGA) and billed to the responsible parties in order to address potential budget overruns caused in part by scope of work issues. The FTA/PMOC and MWAA met on September 6, 2012 to discuss MWAA's August 10, 2012 re-tabulation of the list of potential Concurrent Non-Project Activities (CNPAs). The *cost of* items that are not part of the FFGA Project scope could provide a source of funds to replenish the Project Contingency. The FTA identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA provided a response on November 28, 2012 acknowledging the FTA letter and identifying an additional \$3.7 million to increase the value of the CNPAs to \$40.38 million. MWAA is preparing the documentation to demonstrate the refund of any previous drawdowns of federal funds to pay for these expenses.

Through February 2013, MWAA has utilized \$358,616,087 resulting in a remaining balance of \$3.18 million through contingency Phase 10. With \$18,988,157 in obligated contingency, this leaves a balance of \$7.77 million for Phases 11 through 12 and a grand total balance, as of the end of February 2013, of \$10.96 million in contingency estimated to remain at project

completion. The removal of the \$40.38 million in CNPAs from the federal portion of the Project will improve the estimate of contingency remaining at the completion of construction to \$51.36 million. 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 mitigation schedule with a data date of *February 25, 2013* reflected a -12 calendar variance to the contract schedule reflecting an SSCD of September 11, 2013.

DTP has incorporated the West Falls Church Yard construction into the mitigation schedule with a target completion date of December 20, 2013. DTP’s *February 25, 2013* schedule update *again* reflected a -28 calendar day variance to the targeted completion date of December 20, 2013, resulting in a forecast completion date of January 17, 2014. It remains the PMOC’s opinion that the Project will be in revenue service within the FFGA specified date of December 1, 2014.

Kawasaki’s Mitigation Schedule based on the impacts of the March 2011 tsunami/earthquake forecasts a conditional acceptance date of the 64th DCMP rail cars on June 12, 2015. The Final Design Review (FDR) was closed February 28, 2013, a slippage of 343 calendar days. The completion of the Design Validation Review (DVR) also occurred on that date. *Completion of Prototype rail cars #1, #2, #3 and #4 was achieved at KHI on April 8, 2013.*

MAIN REPORT

1. Grantee's Capabilities and Approach

a. Technical Capacity and Capability

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

In September 2009, MWAA reorganized by implementing an integrated project management organization consisting of MWAA and PMSS staff. However, the personnel involved remained the same as was evaluated in the January 2008 Technical Capacity and Capability Report with a few replacements and additions. It remains the PMOC's opinion that the staffing levels and technical capabilities are still adequate. MWAA hired Mr. William Kerrigan as Manager of Project QA/QC and Safety, replacing Jon Christensen, who retired. PMSS also hired Mr. Leo Himmel to serve as the Project's Team Systems Testing Coordinator. In addition, MWAA has been reorganizing staff members into a new Testing and Start-up Group. MWAA has submitted a draft PMP, Version 8.0 to include the Testing and Commissioning stages of the project. The FTA transmitted comments to MWAA on July 11, 2012 requesting the final PMP by November 1, 2012. PMP Version 8.0 was transmitted to the FTA on November 8, 2012. The PMOC reviewed this submission and found it acceptable with the exception of the inclusion of draft organization charts, Figures 2-4 and 2-5. FTA's email of January 4, 2013 requested the updated organization charts, which MWAA submitted on January 23, 2013. The FTA's letter of January 25, 2013 approved PMP Version 8.0 Final.

Upon completion of the project, WMATA will become the operator of this extension to their system. WMATA personnel have been active participants in the project. The addition of WMATA personnel, particularly the Director of the Dulles Corridor Metrorail Project, has significantly improved the coordination between DTP, MWAA and WMATA with regard to scheduling outages and work. Over the past year, WMATA's Dulles Project Director has *staffed* a Quality Assurance and Inspection Staff to keep pace with Project progress as it enters the Testing and Start-up Phase. In anticipation of the testing and commissioning of the Project, *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 *February* 2013. In this update, DTP reported a possible loss of *twelve* calendar days to the SSCD forecasted by DTP to occur on September 11, 2013. The WFCY schedule update *again* reflected a -28 calendar day variance to the target date of December 20, 2013. However, the WFCY activities and completion dates are only overlaid on the master mainline schedule but not connected to the mainline critical path or SSCD. MWAA completed its schedule review of the schedule update with a data date of *February 25, 2013* on *March 15, 2013* stating the schedule was “not accepted.” See Section 4.a for additional information.
- MWAA continues to monitor expenditures to date and to update the estimate at completion. In July 2012, MWAA allocated \$71.8 million in finance cost savings to contingency budget. In October 2012, MWAA identified \$19.0 million in forecast under-run commodity escalation that *was* transferred to the contingency budget. Through *February* 2013, MWAA has utilized \$358.62 million, of contingency, resulting in a remaining balance of \$3.18 million through contingency Phase 10. With \$18.99 million in obligated contingency, this leaves a balance of \$7.77 million for *use in* Phases 11 and 12, *resulting in* a grand total balance, as of the end of *February* 2013, of \$10.96 million in contingency estimated to remain at project completion. The removal of the \$40.38 million in CNPAs from the federal portion of the Project will improve the estimate of contingency remaining at the completion of construction to \$51.36 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 *March* 2013, there has been a cumulative total of 12,520,267 hours worked with six lost time cases.

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 fourth quarter of 2012 on January 30, 2013.

2. Project Scope

a. Design Status

MWAA reported *at the March 7, 2013 update meeting* that all required permit applications have been submitted and approved *as of the end of February 2013*.

Regarding Automatic Train Control, MWAA issued a NTP on January 24, 2011 to an independent third-party consultant, Battelle, to review Alstom's safety analysis of their Generation 4 track circuit modules proposed for use on the Dulles Extension. MWAA received the Final Battelle Report on November 16, 2012. WMATA provided a letter dated November 19, 2012 stating, "the Alstom Generation 4 track circuit is accepted for service provided the system fulfills the requirements of Project specifications section 16919 – ATC System Reliability, Availability, Maintainability and Safety Program". MWAA wrote Letter No. 07687 dated November 30, 2012 to DTP stating, "As a condition of acceptance, WMATA has requested copies of the documents reviewed by Battelle. The list of documents is attached. DTP is requested to provide copies of these documents, in electronic format, to the Airports Authority." Battelle and DTP gathered and submitted the requested documents to MWAA and WMATA on January 14, 2013. MWAA wrote Letter No. 07877 dated January 23, 2013 to WMATA stating, "with the provision of the aforementioned documents to WMATA, the Airports Authority considers all of the tasks related to the Independent Review and Assessment of Alstom's Generation 4 Safety Analysis by Battelle to be complete."

b. Bidding and Construction Status

DTP has awarded all of the thirty-seven Allowance subcontract packages. Through *February 2013*, MWAA has transferred \$558,905,404 worth of the \$424,147,505 federally funded Allowance Items Budget with an overrun of \$134,757,900 to the firm fixed price contract. In

addition, MWAA has Allowance Items recommended for Award, but not yet transferred to the firm fixed price contract, worth \$11.51 million, which is an additional \$9.51 million over budget. The \$9.51 million does not include Installation of Public Art (C7) and *the remainder of Spare Parts (C11)*.

MWAA reported during the *April 9, 2013 monthly update* meeting that utility relocation is now considered 100% complete, and DB construction is approximately 90% complete.

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

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

Completed rebar and concrete construction of the West Falls Church Yard (WFCY) Service and Inspection (S&I) Building foundation basement walls, pile caps and the shop level east end floor slab; continued rebar and concrete construction for the Sound Cover Box (SCB) foundation and walls along the outer loop track; Powell continued equipment testing inside the TPSS facility at the WFCY; Delta continued building ladder tracks and the initial portions of the storage tracks.

Systems Work

- **K-Line Track Outage**

Performed safe braking tests and static control line tests on the IB and OB No. 15 track switches during weekend track outages.

- **TPSS #1 (Plainfield St. – N91)**

Continued pulling track N3 traction power cables and racking in the manholes; began splicing N3 positive traction power cables in manholes; terminating track N3 traction power cables at contact rail; installing heater control cabinet and ETS panels.

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

Commenced dynamic train safe braking tests; and pulling and terminating ATC cables for signal and pushbutton stations.

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

Under DTP Startup control: Commenced dynamic train safe braking tests.

- **Operations Area OP-4/5A (Tysons East Guideway and Tysons East Station)**

In the station - installing control cables and equipment for station and pavilion elevators; installing cable, wire and light fixtures throughout the station, platform edges, pedestrian bridges and pavilions; installing the HVAC unit in the mezzanine break room; installing mezzanine level curtain wall glass; installing fireproofing caulk in the TCR; installing brass angles at the mezzanine expansion joints; preparing to install the mezzanine topping slab; installing the pedestrian bridge suspended ceiling supports; and installing platform paver tile.

Systems Work

- **TBS #3 (Tysons East – N01)**
Under DTP Startup control; Commenced dynamic train safe braking tests.
- **Operations Area OP-5 (Tysons Central 123 Station)**
Continued installing elevators and escalators; installing communications systems equipment, devices, raceways and wiring throughout the station and pavilion; erecting pavilion canopy; installing mezzanine level suspended ceiling; installing ductwork and vents in the platform elevator machine room; installing ground level waterlines; installing mezzanine canopy roof and skylights; installing frames, doors and hardware; installing suspended ceiling at the platform and ceiling hangers for the pedestrian bridge; and installing the fire suppression piping.
- **Operations Area OP-6 (Laydown Area #6/NATM) Tunnel/East Cut & Cover and Ventilation Structure)**
Completed the ventilation equipment installation and ventilation system performance testing.
- **Operations Area OP-6 (West Cut and Cover Tunnel)**
Conducting static ATC equipment testing; backfilling along the vent structure south traffic barrier walls; installing cable tray and conduits in the plenum; and installing radio cable and equipment.
- **Operations Area OP-7 (Tysons Central 7 Station)**
Installing raceways, cable, fixtures and devices for electrical and communications systems in the AC switchgear room, service rooms, under platform, in the TPSS #5 elevators, pedestrian bridges and in the pavilions; installing metal roofing at the platform level and the south pavilion; installing ceiling panels at the platform and mezzanine; installing escalators and elevators in the pavilions; installing electrical raceways and cables for the pavilions; and installing fireproof sealant in various openings around conduit and in CMU wall gaps.

Systems Work

- **TPSS #5 (Tysons Central 7 Station-N03)**
Labeling Supervisory Control and Data Acquisition (SCADA) cables in the AC switchgear room; pulling heater control cables; and completed SCADA testing.
- **Operations Area OP-8 (Tysons West Station/Guideway)**
Grading and retention pond work within the median of Route 7 between the DTR and Gosnell Road; grading and demolition for the right lane of the eastbound travelway of Route 7 between Gosnell Road and Route 123; in the station – installing conduits for emergency egress stair system; installing interior finish doors, frames and hardware; installing metal roof for the platform level canopy; installing glass curtain wall glazing; installing fire suppression system conduits in the ground floor AC switchgear room,

water service room, mezzanine level service rooms and stair cases; painting fire suppression system pipes throughout the station; pulling and terminating wires for communications systems; installing emergency lighting conduits under escalators; installing conduits for elevator power machine room in the north pavilion; north pavilion canopy welding work; and installing precast curbs for precast wall panels at the south pavilion.

Systems Work

- **TPSS #6 (Tysons West Station –N04)**
Pulling ETS cable from the trackside to the AC switchgear room; installing jumper cables at the double crossover rail joints; and installing heat tape fuse box disconnects and terminating cables.
- **Tysons West TCR and N04 Area of Control**
Continued core drilling and saw cutting cable trough covers for ETS and HC conduit penetrations; and continue grounding ETS and HC frames and panels.
- **OP-9 (DIAAH)**
Continued track punch list work between Hunter Mill Road and Difficult Run; and the pouring of the barrier wall at the ramp for the Wiehle Avenue off ramp from the eastbound completed DTR.

Systems Work

- **TPSS #7 (Wolf Trap –N05)**
Pulling negative drainage pump cable from the trackside to the electrical manhole.
- **Wolf Trap TCR and N05 Area of Control**
Energized this section of contact rail.
- **Chatham’s Ford TCR and N93 Area of Control**
Energized this section of contact rail.
- **Hunter Mill TCR and N94 Area of Control**
Energized this section of contact rail.
- **TPSS #10 (Sunset Hills – N95)**
Continued terminating cables between heater control cabinets and heat tape fuse box disconnects.
- **Sunset Hills TCR and N95 Area of Control**
Energized this section on contact rail.

- **Wiehle TCR/N06 Area of Control**
Energized this section of contact rail.

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

Installing conduit for communications switch boxes and TEL-LAN and emergency circuits in the plenum, west service rooms, the Kiosk and pedestrian bridges; installing multi-conductor cable and wiring in the AC Switchgear Room, panels, transformers and equipment cabinets in AC room and throughout the station; flood testing the platform; installing platform ceiling lights; installing fire suppression lines in the south pavilion service rooms; installing wiring and equipment for the south pavilion elevators and escalators; installing Fire and Intrusion Alarm (FIA) devices in service rooms; installing ceiling support system and grid on the mezzanine level and for the south pavilion; installing electrical conduit and wiring in the south pavilion elevator machine room; and installing sump pumps and piping in the south pavilion elevator pits.

c. Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *March 2013*, 101 of the 104 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *March 2013*. *The three remaining parcels have been delayed due to protracted negotiations with the owners and Fairfax County regarding deed language and other modifications needed to finalize the deeds and agreements.*

PARCELS ACQUIRED¹
(Number of parcel packages)

LOCATION	TOTAL	Period			To Date		
		Planned ²	Actual	Var	Planned ²	Actual	Var
I-66 / DCR	1	0	0	0	1	1	0
Route 123	23	0	1	1	23	22	(1)
Route 7	54	0	1	1	54	52	(2)
DIAAH	26	0	0	0	26	26	0
TOTAL	104	0	2	2	104	101	(3)

Notes: 1. Parcels acquired through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 39 parcels for which Certificates of Take have been filed.
2. Planned values are based on the March 31, 2011 Property Acquisition Status Update. One additional acquisition was added in June 2012 was to be completed in September 2012 and another was added in October 2012 to be completed in February 2013. However, the processing of documents has been delayed and is not expected to be completed until April 2013.

Condemnation Status

Thirty-nine parcel packages have been obtained with the filing of thirty-three Certificates of Take. In *March 2013*, the trial for the Parcel 03 (West Group Properties, LLC) was

concluded with a judgment significantly less than the Certificate amount. An appeal is anticipated, but has not yet been filed. One case (Parcel 81, CESC Commerce Executive Park, LLC) had the Final Order entered and one case is in finalization (Parcel 125, JBG 1831 Wiehle Avenue, LLC).

Property Turnover to WMATA

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

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

<i>Documents</i>	<i>Total Required</i>	<i>General Format Accepted</i>	<i>Draft of Document Prepared</i>	<i>Plat/ Exhibit Complete</i>	<i>Submitted for Stakeholder Review</i>	<i>Document Accepted</i>	<i>Document Signed</i>	<i>Document Recorded</i>
<i>Conveyance Documents:</i>								
<i>Fee/Easement Transfer</i>	26	26	26	25	21	0	0	0
<i>Easements on Public ROW</i>	3	3	3	0	2	0	0	0
<i>Maintenance Documents</i>	4	4	2	1	1	0	0	0

d. Utility Coordination

MWAA reported during the April 9, 2013 monthly update meeting that Utility Relocation (UR) is 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 the development costs associated with the railcar procurement equally.

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

On December 3, 2010, WMATA confirmed in a letter to MWAA that “sufficient resources including railcars will be available to support dynamic testing and initial revenue service in accordance with the Project’s current schedule.” WMATA confirmed that cars from the

existing fleet would be made available for dynamic testing on the Dulles Extension. Since there would be a gap in the delivery of the 7000 Series rail car delivery and the revenue service date, WMATA outlined its strategies for being able to support initial revenue service using the existing WMATA fleet.

On March 16, 2011, Kawasaki formally notified WMATA of potential delays that they believe would be considered excusable under the terms of the contract due to the earthquake/tsunami in Japan on March 11, 2011. On December 21, 2011, WMATA approved Kawasaki's Mitigation Schedule with a June 12, 2015 delivery date for the 64th railcar, which is more than six months beyond the FFGA completion date for the DCMR. MWAA formally informed the FTA Regional Administrator in a letter dated January 31, 2012. In this letter, MWAA writes, "WMATA has stated that they would be able to provide sufficient rail cars from their existing fleet to begin service on the extension until the new Kawasaki rail cars are available. Therefore, we expect no impact to the FFGA, other than the late delivery of the rail cars." The PMOC continues to monitor WMATA's daily railcar availability statistics to *determine if the existing fleet can support the start of revenue service*. WMATA developed an interim operating plan for dealing with the delay. *WMATA proposed an operating plan that called for using only six-car trains in lieu of a mix of six- and eight-car trains in the prior plan*. This issue remains a concern of the FTA and PMOC. WMATA submitted this interim operating plan as part of the Rail Fleet Management Plan (RFMP). WMATA submitted RFMP Rev. 4F dated April 18, 2012 to the FTA on May 4, 2012. FTA and WMATA met to address this issue and WMATA prepared revisions to their RFMP and submitted RFMP Rev-4G to the FTA on August 3, 2012. FTA *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. *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, has not yet been submitted to the FTA. The operating plan was originally scheduled for presentation to the WMATA Board of Directors on March 14, 2013 but has been delayed. The Plan was presented to the WMATA Customer Service and Operations Committee on April 11, 2013 with a recommendation for Board approval. The material presented to the WMATA Board of Directors was general in nature and FTA awaits the specifics of the operating plan, as well as a corresponding update to the RFMP.*

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

Monthly Progress Review Meeting No. 31 between WMATA and Kawasaki on the 7000 Series railcars was held on *April 11, 2013 at the Kawasaki facility in Lincoln, NE (KMM)*, and the WMATA/PMOC 7K Rail Car Update Meeting was held *on April 16, 2013 at WMATA's headquarters*. *Design qualification testing (DQT) continues for components and subsystems, and car level DQTs have begun at Kawasaki facility in Japan (KHI) on the full prototype car. KHI production of the first four prototype cars was completed on April 8, 2013. KMM production of four pilot cars continues. WMATA has begun First Article*

Inspections (FAIs) on components and these will continue throughout the balance of 2013 and 2014.

As noted in the schedule table below, the actual completion date of the A-Car mock-up was April 24, 2012, forty-six calendar days beyond the mitigation schedule completion date. Master Test Plan, Revision B was submitted for review on May 29, 2012 and the Test Master Plan was approved on July 19, 2012. As noted above, the completion of Final Design Reviews is now anticipated to be on February 28, 2013 which is 343 calendar days beyond the mitigation schedule. The Carbody/Truck First Article Inspection Approval was completed on December 25, 2012, which was 117 calendar days behind schedule. The final assembly of the prototype cars was completed on April 8, 2013, which was 161 calendar days behind the mitigation schedule.

The key milestones for this railcar procurement are:

Item #	Description	December 2011 Approved Baseline MPS Dates	October 2012 Approved MPS Dates	Actual and Current Forecast Dates
1	<i>Soft Mock up</i>	12/17/10	-	4/28/11A
2	<i>CDR Completion</i>	12/14/10	-	6/30/11A
3	<i>PDR Completion</i>	3/30/11	-	3/16/12A
4	<i>Hard Mock up</i>	10/4/11	-	4/24/12A
5	<i>Completion of HVAC Unit DVR</i>	NA	NA	8/10/12A
6	<i>Completion of Propulsion DVR</i>	NA	NA	9/21/12A
7	<i>Completion of ATC DVR</i>	NA	NA	10/10/12A
8	<i>Completion of Communications DVR</i>	NA	NA	10/19/12A
9	<i>Completion of Network DVR</i>	NA	NA	10/19/12A
10	<i>Begin Production of Pilot Cars #1, 2, 3 and 4 at KMM</i>	9/10/13	-	12/17/12A
11	<i>FDR Completion</i>	10/24/11	11/8/12	2/28/13A
12	<i>Begin Car Level Qualification Testing in Japan</i>	10/30/12	2/13/13	3/10/13A
13	<i>Completion of Prototype Cars #1, 2, 3, and 4 at KHI</i>	10/29/12	2/12/13	4/8/13A
14	<i>Completion of KMM Test Track</i>	NA	NA	5/21/13
15	<i>Approval Climate Room Testing</i>	2/15/13	5/31/13	5/9/13
16	<i>Completion and Approval of Pilot Car Production Activities</i>	9/30/13	5/31/13	5/9/13
17	<i>Begin Pilot Car Testing at KMM</i>	10/1/13	7/8/13	6/28/13
18	<i>First Manual submission (DRAFT)</i>	8/30/13	7/26/13	6/29/13
19	<i>Completion of Pilot Car Testing at KMM</i>	10/17/13	10/2/13	8/12/13
20	<i>Completion of Prototype Car Review (Prior to Ship out from Japan)</i>	5/14/13	7/31/13	9/30/13
21	<i>Completion of Pilot Car FAI</i>	10/21/13	10/3/13	10/4/13
22	<i>Ship out of Prototype cars from Japan to USA</i>	6/15/13	8/31/13	10/2013
23	<i>Completion and Approval of FAI Activities</i>	12/11/13	12/12/13	11/30/13

Item #	Description	<i>December 2011 Approved Baseline MPS Dates</i>	<i>October 2012 Approved MPS Dates</i>	Actual and Current Forecast Dates
24	Delivery of first 4 Pilot Cars to WMATA	2/20/14	2/20/14	12/16/13
25	Delivery of first 4 production Cars to WMATA	2/11/14	2/20/14	2/20/14
26	Final Manual submission (DRAFT)	5/12/14	4/4/14	4/17/14
27	Conditional Acceptance of first 4 pilot Cars	8/14/14	8/14/14	8/14/14
28	Conditional Acceptance of first 4 Production Cars	8/14/14	8/14/14	8/14/14
29	Completion of On-site Test (After Burn-In)	2/19/15	2/19/15	2/14/15
30	Conditional Acceptance of 64th Production Car	6/12/15	6/12/15	6/12/15

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

f. Safety and Quality Status

MWAA participated in *two* safety walkdowns with DTP during the month of *March*. All were related to Design-Build work. As of *March 31, 2013*, DTP had logged *12.520* million project man-hours with *484* first aid cases and six lost time cases. There have been a total of *1,043* incident investigation reports, *91* utility hits and *44* vehicular accidents.

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) and Construction/Procurement/Installation Conformance Checklist (CCC) items related to all issued for construction designs.

DCC Submittal No. 10, was submitted on January 7, 2013 and MWAA’s review has brought the accepted sign-offs to 92% as of March 15, 2013. *DTP submitted DCC No. 11 on April 8, which brings its proposed sign-off items to 99%, and is currently under review.* The 100% DCC completion, with the exclusion of the WFCY, is *now* anticipated by *June 30, 2013*.

CCC Submittal No. 5, which brings the sign-offs to 31%, was submitted on February 19, 2013. *MWAA accepted 18% of the sign-offs and provided 26 comments back to DTP to address on April 12, 2013. DTP expects to submit CCC No. 6 on April 19, 2013.*

MWAA, WMATA and DTP came to an agreement on how to implement DTP’s proposed CCC documentation support procedure changes utilizing the Visual Measurement and Test (VMT) methodology for the sign-off back-up data on March 15, 2013. A revised procedure

incorporating the agreement including a visual sign-off certification form will be submitted on April 19, 2013.

Regular weekly visits to work sites by safety representatives from DTP, MWAA and WMATA continue. The Tri-State Oversight (TOC) and the FTA’s on-site PMOC representative continue to meet monthly with the Safety/Security Certification Working Group (SCWG) and continue ongoing involvement in the certification process. In addition, the TOC has begun attending the Monthly and Quarterly DCMP progress update meetings. The SCWG held its regular monthly meeting on *March 19, 2013*. The next SCWG Meeting is scheduled for *April 16, 2013*.

MWAA submitted its Safety and Security Management Plan, Revision 8, to the FTA on February 17, 2011. MWAA and WMATA agreed to jointly develop a revised SSMP that would cover the roles and responsibilities of both MWAA and WMATA. MWAA submitted Draft SSMP Rev. 9 to the FTA, PMOC, WMATA, and TOC on September 30, 2011. WMATA completed its revision of its SSCPP in March 2012. The SSCPP was subsequently incorporated as Appendix E into SSMP Revision 9 and MWAA and WMATA approved the revised SSMP on March 20 and 22, 2012 respectively. The PMOC reviewed the completed revision and provided comments to the FTA on April 5, 2012. The FTA accepted the SSMP on April 13, 2012.

During *March 2013*, MWAA and DTP performed the following QA audit/surveillances:

- *Whiting-Turner (West Falls Church Yard): DTP/MWAA conducted this audit on March 12, 2013. Two observations and one recommendation. A report is being prepared.*

MWAA QA Audit and Surveillance Schedule for April through May 2013

Tentative Date	Audit (A) Surv. (S)	Organization/Activity	Joint Audit/Surv.	Lead
TBD	S	Permanent Equipment Facilities	Y	MWAA
4/10-11/13	A	Facchina Construction Co. (Pedestrian Bridges/Pavilions)	Y	MWAA
4/17-18/13	A	DTP System Safety/Security Program	N	MWAA
4/24-25/13	A	Facchina Construction Co. (Late C6)	Y	MWAA
5/01-02/13	A	DTP Startup and Testing	N	MWAA

Use of Existing Foundations

As a result of the USDOT Office of Inspector General’s audit report of the Dulles Project dated July 26, 2012, testing of the foundations installed in the 1970’s by VDOT for the future extension of the Silver Line, MWAA will conduct tests to determine the effects, if any, of stray current on the service life of the steel piles that made up those foundations. To assure that the existing steel piles to be re-used for the Dulles Extension provide a minimum of a fifty year service life, MWAA is undertaking stray current tests to calculate the piles’ corrosion rate and estimate their remaining service life. The following table contains a summary of the actions to be taken to estimate the remaining service life of the re-used steel piles. Russell Corrosion Consultants, Inc. was employed by MWAA to develop a Corrosion

Test Plan and to oversee implementation of that plan. Russell developed a Draft Corrosion Testing Plan, and numerous comment resolution meetings were conducted during August with all partners. A Final Plan was submitted to MWAA on September 14, 2012 for review and acceptance. MWAA accepted the plan and submitted it to the FTA for review and approval via MWAA Letter No. 07403 dated September 24, 2012. WMATA reviewed and accepted the plan on October 5, 2012 via an email. The FTA reviewed the plan and provided an acceptance letter dated November 1, 2012. *Subsequently, on March 25, 2013, MWAA submitted Revision No. 1 of the Stray Current and Corrosion Rate Test Plan to the FTA which is under review by the FTA consultant.* 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 calls for the VTFs to be left to settle for 30 days, after which the specified testing will commence. UTRS has been conducting track-to-earth resistance testing. *UTRS experienced numerous delays caused by weather and track access issues. However, this prerequisite (track-to-earth) testing to the pier foundations stray current testing was finally completed on April 11, 2013. On April 17, 2013, UTRS notified MWAA about an inconsistency in the track to earth resistance in Sections 2 and 3 and recommended that the tests be repeated in those two sections. The VTF stray current testing can now commence, likely during the week of April 22, 2013.*

OIG Report Follow-up Action Items

	Action Item	Due Date	Comments
1	Provide a copy to the OIG of the final stray current test plan MWAA will implement, including a plan for accounting for untested locations and for collecting baseline track-to-earth resistance measurements	As soon as the plan become available	<i>Test Plan Rev.1 submitted to FTA on March 25, and is under review by FTA consultant.</i>
2	Provide documentation to OIG on actions taken on the stray current testing	10 days after action is completed	
3	Provide documentation to OIG on actions taken on corrosion protection measures installation plan	10 days after action is completed	
4	Provide documentation to OIG on actions taken pertaining to the rail car delivery schedule	10 days after action is completed	

3. Project Management Plan and Sub-plans

The FTA accepted MWAA's **Project Management Plan (PMP)** Version 7.0 Final on February 14, 2011. FTA requested MWAA update its PMP to include the start-up and testing phase. MWAA submitted its Version 8.0 Draft to the FTA on May 1, 2012. The PMOC provided its draft review and comments to the FTA on June 11, 2012. On July 9, 2012 the FTA sent comments to MWAA and requested a PMP Version 8.0 Final or a PMP Version 9.0 be submitted by November 1, 2012. *PMP* Version 8 Final was submitted to the FTA on November 8, 2012. The PMOC reviewed this submission and found it acceptable with the exception of the inclusion of draft organization charts, Figures 2-4 and 2-5. FTA's email of January 4, 2013 requested the updated organization charts, which MWAA submitted on January 23, 2013. The FTA approved PMP Version 8.0 Final on January 25, 2013.

- MWAA submitted a revised **Quality Program Plan (QPP)**, Revision 7 to FTA on January 7, 2010. MWAA reported that three Project Management Procedures were updated in the period from April through June 2011. No new QPP procedure updates were made during the period from July through January 2012.
- MWAA's **Real Estate Acquisition Management Plan (RAMP)**, Revision 2, dated September 15, 2009, has been reviewed by the PMOC with a recommendation that the FTA concur, with comments, with the revised RAMP. On January 21, 2010, the FTA provided comments to MWAA, and MWAA staff has revised Procedure PM-3.01 (Monitoring the Design-Build Contractor Property Acquisition Services). DTP revised their Procedure PIQ-5.1 (Property Acquisition Coordination) on November 1, 2010.
- The FTA requested MWAA to update its **Risk and Contingency Management Plan (RCMP)**, formerly called a Risk Management Plan (RMP), along with their Project Management Procedures to address Directive Letters and Contingency Drawdown Procedures. MWAA submitted the revised RCMP Rev. 3 on March 28, 2012, and the PMOC recommended FTA acceptance. The FTA accepted RCMP Rev. 3 as well as revised Project Management Procedure PM 5.07, Rev. 4, on April 13, 2012. MWAA updated the Risk Register Assessment on June 30, 2012 and submitted it to the FTA and PMOC on August 27th. A discussion was held during the PMOC's September 6 monthly meeting. The PMOC provided review comments and a modified Top Ten Risk List that was reviewed by MWAA. MWAA provided a submittal dated October 3, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. The FTA approved the revised Top Ten Risks by letter dated November 29, 2012. It was agreed that the top ten risks would be reviewed and revised as needed on a quarterly basis. A revised list of Top Ten Risks dated December 2012 was submitted to the FTA via letter dated January 22, 2013. 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. During the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list.*

- Since WMATA, rather than MWAA, will be the operator of the completed project, the WMATA **Rail Fleet Management Plan** (RFMP) is the applicable document. The FTA accepted a WMATA RFMP on September 25, 2007. However, WMATA updated the RFMP to reflect the 7000 Series Rail Car procurement and submitted a draft copy dated February 26, 2010 to the FTA for review and comment. The PMOC issued its Spot Report on its review of the draft RFMP on March 11, 2010, finding the plan to be deficient in many areas. The FTA, PMOC and WMATA continued the review and comment reconciliation process of various draft revisions. FTA and the PMOC provided some additional comments and WMATA's RFMP Rev. 4E dated March 14, 2012 was submitted to the FTA on April 10, 2012. FTA's comments on that revision were submitted to WMATA on April 12 with the request that the comments are incorporated and the final document then be formally submitted to the FTA Regional Administrator. WMATA submitted RFMP Rev. 4F dated April 18, 2012 to the FTA on May 4, 2012. FTA and WMATA met on July 3, 2012 to address the issue of the Dulles Interim Operations Plan. WMATA has revised their RFMP and RFMP Rev 4_G was submitted to the FTA on August 3, 2012. FTA letter dated October 11, 2012 conditionally approved the RFMP with the proviso that WMATA keep the FTA informed of the operating plan for the startup of the Dulles service. With the proposed change in the eastern turnaround moving from Stadium-Armory Station to Largo Town Center Station, FTA requested an updated RFMP once the WMATA Board formally adopts this operating change, which is expected in *April 2013*. FTA awaits WMATA's submission of the *detailed* updated operating plan.
- **Safety and Security Management Plan** (SSMP) see Section 2f.

4. Project Schedule

Mainline - The project "Mitigation Schedule" update with a data date of *February 25, 2013* reflected a -12 calendar day variance with a September 11, 2013 SSCD. DTP's schedule shows the Revenue Service Date to be January 15, 2014. MWAA completed its schedule review of the schedule update with a data date of *February 25, 2013* on *March 15, 2013* and *again* determined it to be "not accepted." MWAA Letter No. 08044 *once again* stated that this was "largely due to the incorporation of the unapproved Commissioning and Integration Testing Schedule which represents a significant portion of the remaining activities" despite MWAA's rejection of that testing schedule. MWAA also stated, "DTP also continues to ignore specifications by adding activities, deleting activities, changing relationships, using constraints, and changing durations contrary to...contract requirements." *Subsequent to this letter, DTP submitted its revised "Commissioning and Integration Testing Schedule" via Letter No. 0440 dated March 22, 2013, which was reviewed and "accepted as noted" via Letter No. 08113 dated April 8, 2013.*

The mitigation schedule supersedes the previously approved recovery schedule with a data date of December 25, 2010 that was finally settled in mid-September 2011 but does not relieve DTP from their obligations to the earlier recovery schedule.

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

September 6, 2013 as of February 25, 2013. This results in an expected Revenue Service Date of January 10, 2014.

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

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

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

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

MWAA and DTP agreed to a target completion date of December 20, 2013. DTP’s schedule update of *February 25, 2013* again reflects a -28 calendar day variance yielding a forecasted completion date of January 17, 2014. However, DTP’s *March 25, 2013* schedule update shows improvement with a forecasted completion date of December 30, 2012. This update has not yet been analyzed.

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. The PMOC remains confident that the project can be completed before the FFGA RSD of December 1, 2014. It is the PMOC’s opinion that SSCD can be achieved by September 30, 2013. RSD is dependent upon the completion of WMATA’s schedule associated with the Rail Activation Plan (RAP).

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

- Kone’s work related to elevators and escalators in stations and pavilions falling behind schedule. *Action Taken:* In response, Kone has added crews and MWAA continues to carefully scrutinize Kone’s progress.

- ETS software and field wiring issues. *Action Taken: The field wiring has been accepted, as is, and MWAA has requested that WMATA make its own preferential software changes following SSCD.*
- WMATA required points of testing for acceptance are now up to 700 points per location, necessitating an increased number of resources in order to avoid any adverse impact if something in the field is not wired correctly or if there is an abnormality in the software program. *Action Taken: DTP is attempting to accelerate the submission of the remaining Point Assignment Charts (PAC) and DTP and WMATA are now conducting SCADA testing in multiple locations in order to meet the schedule requirements.*
- DGS availability for walk-downs and inspections. *Action Taken: DGS and MWAA continue to discuss permit closures and to define the path forward for DGS final acceptance.*
- Obtaining required weekend outages from WMATA for K-Line systems testing. *Action Taken: DTP, MWAA and WMATA meet on a weekly basis to refine and adjust outages to meet DTP's level of readiness and WMATA's changing operational needs and requirements.*
- WMATA systems upgrade programs could have other technical scope changes impacting Automatic Train Control, and Communications systems. *Action Taken: MWAA has requested that any other preferential scope changes be implemented by WMATA following SSCD. DTP's late submission of PAC sheets required for ARINC OCC software. . Action Taken: DTP is accelerating its efforts to complete the remaining PAC sheets, and WMATA and ARINC are accommodating the incremental submissions.*
- Availability of spare parts for the K & N cutover. *Action Taken: DTP is endeavoring to obtain two each of the necessary ATC spares to support the Memorial Day Weekend cutover. WMATA will allow the cutover to proceed with two of each spare, if DTP can guarantee that the remaining K-Line spares are delivered by June 19, 2013.*
- Availability of operational test-ready vehicles for testing. *Action Taken: The issue of the use of the 1000 series trains which are subject to frequent breakdowns is being considered by WMATA executive management.*

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 *February 2013 Schedule Update*, the Critical Path No.1 *reflects a -12 calendar days of float and starts with procurement of the spare parts by DTP, continues with the dynamic testing of the K98 (K&N) cutover, Level F testing for the entire Project, and ends with the system performance demonstration. MWAA does not accept this path as the longest path for the Project because the spare parts delivery activity is referring to the entire list of spare parts not required until SSCD; not the small portion of ATC spare parts required from Alstom before the K&N cutover can occur. MWAA also does not agree with the way the remaining tasks are being sequenced and represented, and therefore, does not accept this path nor the Project schedule update of February 2013. DTP has been asked to resubmit the*

commissioning and integrated testing schedule, which is the key component of the remaining tasks.

DTP has subsequently submitted its revised commissioning and integrated testing schedule that was accepted by MWAA and has been incorporated in DTP's March 25, 2013 schedule update that has not yet been analyzed by MWAA.

The PMOC is in agreement with MWAA's assessment regarding the critical path. MWAA continues to carefully analyze the schedule and continues to hold DTP accountable for changes made to the agreed schedule, which appears to be yielding the desired results.

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

MILESTONE	June 2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	January 2013	February 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	02/05/13	02/03/13 ^A
Systems Testing Complete - Tysons East Station	07/24/12	02/21/13	05/20/13	05/08/13
Systems Testing Complete - Wiehle Ave Station	08/13/12	01/16/13	06/21/13	06/13/13
Systems Testing Complete - Central 7 Station	01/23/13	04/12/13	06/13/13	07/02/13
Systems Testing Complete - Tysons West Station	02/21/13	05/14/13	07/11/13	07/08/13
Systems Testing Complete - Tysons 123 Station	12/20/12	03/28/13	07/02/13	06/14/13
Substantial Completion Date (SSCD)	07/31/13	07/31/13	09/06/13	09/11/13
Completion - WFCY	NA	N/A *	01/17/14	01/17/14
Revenue Service Date (RSD) – Target	11/27/13	01/02/14	01/10/14	01/15/14
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

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

b. Important Activities – 90-Day Look Ahead

The important milestones scheduled for the next 90 days include:

- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- Complete the three remaining property acquisitions along Route 7 and Route 123. K98 ATC circuits cutover.
- Obtain all level one Dynamic Testing Readiness Certifications.
- Obtain all Alstom ATO and level two Dynamic Testing Readiness Certifications.
- Complete train safe braking tests and progress level two ATC dynamic train testing.
- Complete SCADA Testing.
- Complete the stray current testing of existing piers 3-IB and 5-IB.

5. Project Cost

The SCC Budget and Expenditures summary for the period ending *February 25, 2013* is shown below. Overall, approximately 75.6% of the budget has been expended.

Project Cost Summary by SCC Code, February 2013

FTA SCC CODE	DESCRIPTION	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION	CONTINGENCY TO DATE
10	Guideway and Track Elements	\$ 639,071,584	\$ 621,080,319	\$ 632,347,379	\$ 41,681,049
20	Stations	\$ 344,818,384	\$ 275,910,102	\$ 351,542,589	\$ 26,706,007
30	West Falls Church Yard	\$ 71,202,263	\$ 25,551,195	\$ 71,012,232	\$ 7,803,084
40	Site Work & Utility Relocation	\$ 239,561,397	\$ 210,305,293	\$ 261,027,878	\$ 7,944,677
50	Systems	\$ 322,685,914	\$ 283,452,421	\$ 319,536,030	\$ 23,949,088
60	Right of Way Acquisition	\$ 67,631,026	\$ 56,755,047	\$ 62,310,611	\$ 809,164
70	Vehicles	\$ 195,352,701	\$ 57,343,261	\$ 194,648,939	\$ 16,491,446
80	Professional Service – FD	\$ 733,976,155	\$ 742,182,820	\$ 800,903,069	\$ 69,865,001
90	Contingency Mgmt. Reserve ²	\$ 89,987,639	\$ -	\$ 10,958,337	\$ 167,690,747
100	Finance Charge ³	\$ 438,184,571	\$ 103,131,435	\$ 438,184,571	\$ -
Subtotal		\$ 3,142,471,635	\$ 2,375,711,894	\$ 3,142,471,635	\$ 362,940,262

¹ Current budget equals FFGA amount plus change orders CO#001-117, 119-133, 136, Directive Letters 001-050, 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

a. Explanation of Variances

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

1. SCC10 – Guideway and Track Elements has been reduced approximately \$36.33 million due to the decision by the DB contractor to self-perform the NATM tunnel work. In so doing, \$29.2 million was transferred out of the direct account to other accounts including predominantly SCC80 for the professional services portion of the subcontract budget. This was offset by scope additions and other budget transfers, the most notable being the adjustment for the revised federal/non-federal split, the addition of the directive letter for crossing the Beltway during construction of the HOT Lanes Project by VDOT and the addition of sales tax to permanent materials.
2. SCC20 – Stations has been increased by approximately \$33.87 million. The decision by the Airports Authority to remove the Wiehle Avenue Parking Garage – Allowance Item C-2, due to the Fairfax County Joint Development project, allowed the transfer of \$29.1 million out of the direct account into the unallocated contingency account. This was offset by a combination of add and subtract change orders, the most notable addition being the transfer from the tunnel subcontract. In addition, the allowance item for stations finishes and MEP increased over budget.
3. SCC30 – WFC Yard has increased by approximately \$19.17 million due to delay in progressing the design and additional requirements requested by WMATA.
4. SCC40 – Site work and Utility Relocation has been increased by approximately \$28.06 million as a result of a combination of change events (change orders, directive letters and scope transfers) and cost overruns. The forecast adjustments are predominantly due to cost overruns in utility relocations.

5. SCC50 -- Systems has increased by \$41.19 million due to additional WMATA requirements for Traction Power Remote Monitoring, Emergency Trip Station/Amber Light Warning System and requirements for Communications.
6. SCC60 – Right of Way Acquisition experienced nearly \$16.36 million increases primarily due to adjustment of project cost for the revised federal/non-federal split along Route 7.
7. SCC70 – Vehicles has been reduced by \$16.98 million due to actual bid prices.
8. SCC80 – Professional Services increased approximately \$102.43 million. The change events are numerous with the most significant being the transfer from the tunnel subcontract and the addition of design for the HOT Lanes and WFCY. The forecast adjustment is predominantly attributed to higher project management costs for MWAA, PMSS and VDOT. In addition, WMATA budget transfers are treated as forecast adjustments.
9. SCC90 – Contingency Management Reserve estimate at completion of \$10.96 million is available for future use with the transfer of the Finance Costs under run of \$71.8M which was authorized by the MWAA Board in December 2012 and the \$19M under-run in commodity escalation. The PMOC is of the opinion that the remaining \$10.96M contingency reserve with the \$40.4 million in CNPAs added to the remaining contingency is adequate. MWAA indicates that there are *nineteen Design-Build Change Orders* totaling \$2.622M (*federal portion*) under evaluation and three Utility Relocation Change Orders totaling \$5.93M under evaluation. In addition, there remain *one hundred and four Design-Build Potential Change Orders* and five Utility Relocation Subcontractor Changes under review.

b. Monthly Cost Report, February 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	\$ 1,651,354,641	\$ 147,672,491	\$ 1,799,027,132	
Firm Fixed Price Insurance and	\$ 65,109,408	\$ 73,762,220	\$ 1,533,595	\$ 75,295,815	
Firm Fixed Price Subtotal	\$ 1,177,161,581	\$ 1,725,116,861	\$ 149,206,086	\$ 1,874,322,947	
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 16,978,537	\$ 16,978,537	
Design-Build Contract Prices	\$ 1,607,361,398	\$ 1,725,116,861	\$ 166,184,623	\$ 1,891,301,484	
Indexed Commodity	\$ 77,469,926	\$ -	\$ 18,545,207	\$ 18,545,207	
Design-Build Contract Total	\$ 1,684,831,325	\$ 1,725,116,861	\$ 184,729,830	\$ 1,909,846,691	90%
Utility Relocation					
Utility Work	\$ 84,312,807	\$ 95,719,862	\$ 6,754,615	\$ 102,474,477	
Terf Tax	\$ -	\$ -	\$ 0	\$ 0	
Project Management and Final	\$ 8,423,426	\$ 25,436,805	\$ 304,411	\$ 25,741,216	
Utility Relocation Total	\$ 92,736,233	\$ 121,156,667	\$ 7,059,026	\$ 128,215,693	94%
Right of Way					
Right Of Way Total	\$ 42,443,132	\$ 57,083,880	\$ 5,851,731	\$ 62,935,611	91%
WMATA Agreement					
Vehicles	\$ 195,138,329	\$ 57,343,261	\$ 137,305,677	\$ 194,648,939	
Construction and Procurement	\$ 31,484,799	\$ 9,777,481	\$ 18,320,636	\$ 28,098,117	
WMATA Force Account Startup	\$ 13,777,100	\$ 6,643,797	\$ 6,761,224	\$ 13,405,021	
Project Management and Final Design 2	\$ 31,235,400	\$ 25,292,374	\$ 10,191,178	\$ 35,483,552	
WMATA Agreement Total	\$ 271,635,628	\$ 99,056,913	\$ 172,578,715	\$ 271,635,628	36%
Preliminary Engineering^{2,3}					
Preliminary Engineering Total	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999	100%
Airports Authority Services					
General Conditions ⁴	\$ 28,879,153	\$ 10,925,429	\$ 19,125,349	\$ 30,050,778	
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 33,800,151	\$ 10,829,618	\$ 44,629,770	
Project Management Support	\$ 90,004,649	\$ 124,709,557	\$ 20,573,999	\$ 145,283,556	
Airports Authority Services Total	\$ 142,109,519	\$ 169,435,138	\$ 50,528,965	\$ 219,964,103	77%
Contingency⁵					
Contingency Total	\$ 297,762,579	\$ -	\$ 10,958,337	\$ 10,958,337	
Finance Costs⁶					
Finance Costs Total	\$ 509,984,571	\$ 103,131,435	\$ 335,053,136	\$ 438,184,571	
Total Federal (FFGA Scope)	\$ 3,142,471,635	\$ 2,375,711,894	\$ 766,759,741	\$ 3,142,471,635	84%

1 Reflects Paid costs through February 28, 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

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

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.

c. Project Funding Sources: February 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 ⁵	VA-03-0113-05		\$ 90,832,000	\$ 90,832,000	100%	\$ -
FFGA Balance	Planned		\$ 288,885,636	\$ -	0%	\$ 288,885,636
Subtotal - New Starts		28.64%	\$ 900,000,000	\$ 611,114,364	67.90%	\$ 288,885,636
Other Federal Funds						
Sec 5307 Surface Transportation Program						
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 47,218,109	100%	\$ -
Construction Grant	VA-95-X056-02		\$ 21,281,890	\$ 21,281,890	100%	\$ -
Construction Grant	VA-95-X056-03		\$ 6,500,001	\$ 6,500,001	100%	\$ -
STP/Sec. 5307		2.39%	\$ 75,000,000	\$ 75,000,000	100%	\$ -
Local Funds						
VTA 2000						
Commonwealth Transportation Bonds ^{2,5}			\$ 125,000,000	\$ 125,000,000	100%	\$ -
Fairfax County Funds ³			\$ 523,750,000	\$ 369,089,733	70%	\$ 154,660,267
Dulles Toll Road Revenues ^{2,4,5}			\$ 1,467,021,634	\$ 1,143,807,796	78%	\$ 323,213,838
Subtotal - Local Funds		68.97%	\$ 2,167,471,634	\$ 1,689,597,529	77.95%	\$ 477,874,105
Total Project Budget		100%	\$ 3,142,471,634	\$ 2,375,711,893	75.60%	\$ 766,759,741
Interrelated Highway Activities						
DTR Revenues/Commonwealth Funds ³			\$ 201,408,229	\$ 100,684,778	49.99%	\$ 100,723,451
			\$ 201,408,229	\$ 100,684,778	49.99%	\$ 100,723,451
Total			\$ 3,343,879,863	\$ 2,476,396,671	74.06%	\$ 867,483,192

¹ Reflects costs through February 28, 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) plus debt service costs allocated to Project Budget

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

⁵ Expenditures include accruals

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. During the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list.*

Budget Risks: MWAA has allocated \$71.8 million in finance cost savings and \$19 million of Commodity Escalation under run monies to Contingency. This brings the total Contingency to \$388,562,579. Through *February 25, 2013*, MWAA reports that it has utilized \$358,616,087 of the \$361,800,000 available contingency for the first ten contingency milestones leaving a balance of \$3,183,913. 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 *February 25, 2012*, the project has an estimated balance at project completion of \$10,958,337. MWAA's transfer of \$90,800,000 to contingency has improved the Project Contingency situation. However, the project must be diligent in its efforts to identify additional contingency monies and to control the project overrun costs. As noted elsewhere in this report, there are significant Design-Build (19) and Utility Relocation (3) Change Orders under evaluation and a large number of Potential Change Orders (104) and Utility Relocation Subcontractor Changes (5) still under review.

MWAA submitted a tabulation of possible Concurrent Non-Project Activities (CNPAs) that could further improve the Contingency on July 6, 2012 with a total value of approximately \$63.9 million. This tabulation was reviewed by the FTA and PMOC and additional information was requested from MWAA on July 30, 2012. The revised tabulation of CNPAs was submitted on August 10, 2012. MWAA and the FTA/PMOC discussed this tabulation following the September 7 monthly meeting. The FTA/PMOC indicated that there was a potential \$23,861,089 that could be considered CNPAs. FTA indicated that \$19,511,703 in additional cost would be taken up with the FTA Administrator for possible inclusion in the CNPAs. The FTA subsequently identified \$36.7 million of CNPAs in its November 6, 2012 letter to MWAA. MWAA's letter of November 28, 2012 corrected the total for CNPAs to \$40.38 million. MWAA is currently developing the documentation to confirm the refund of any federal funds previously drawn down to pay for these ineligible costs. *MWAA expects to provide its budget reconciliation of the CNPA items in its March 2013 Monthly report, which will be available in early May.*

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 *February 2013*, MWAA has granted DTP time extensions of 30 calendar days reducing the available contingency from 510 to 480 calendar days. *MWAA reported in the April 9, 2013 monthly update meeting that an additional seven calendar days of time extension has been granted which would reduce the available contingency from 510 to 473. However, DTP's assessment through March 2013 shows an additional 3 calendar days of weather delay that if approved would move the SSCD to September 9, 2013. In the PMOC's opinion, the current risk of a DTP constructive acceleration and associated claimed costs due to additional disputed excusable weather delay days is minimal. There are additional weather delay days currently in contention for the WFCY, however they are not likely to trigger a DTP self-imposed constructive acceleration since the S&I Shop is not needed to support ORD and RSD.*

- Top Ten Risks:** MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the Top Ten Risks for review and approval. FTA approved the revised Top Ten Risks by letter dated November 29, 2012. MWAA submitted a list of revised Top Ten Risks dated December 2012 on January 22, 2013. The PMOC submitted its comments on the revised top ten risks to MWAA on February 22, 2013 and discussed the comments with MWAA on March 7, 2013. *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. During the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list.*

Summary Status of the Proposed Top Ten Project Risks, February 2013

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

7. Action Items

MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
3	2A.05	Submit Updated Risk Register developed in June 2012	FTA and PMOC need to review the updated document.	Y	Y	Y	MWAA provided a submittal dated September 30, 2012 of its review and proposed changes to the FTA/PMOC for review and approval. FTA issued an approval letter on November 29, 2012. MWAA submitted a list of revised Top Ten Risks dated December 2012 on January 22, 2013. <i>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. During the April 9, 2013 monthly meeting, the PMOC requested that MWAA resubmit a proposed top ten risks versus a top tier list.</i>	R
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. MWAA is still working on populating the roadmap <i>and anticipates submission in mid-May 2013.</i>	R
2	2B.02	Transfer the value of CNPAs out of the federal portion and add to contingency.	FTA agreed to the CNPAs on November 6, 2012 and MWAA corrected the value of the CNPAs on November 28, 2012.	Y	N	N	The details of the accounting of the CNPAs were requested in FTA's November 6 th letter and have yet to be submitted. <i>Budget reconciliation due in submission of March 2013 Budget due in early May 2013.</i>	R

KEY ITEM

Subtask 2A
Subtask 2B

CLIN 0002A – PMP Review
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
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
<i>DQT</i>	<i>Design Qualification Testing</i>
DR	Deficiency Report
DTP	Dulles Transit Partners, LLC
DTR	Dulles Toll Road
DVP	Dominion Virginia Power
ETS	Emergency Trip Station
FFGA	Full Funding Grant Agreement
FIA	Fire and Intrusion Alarm
FTA	Federal Transit Administration
FTE	Full Time Equivalent
FY	Fiscal Year
HC	Heater Cable
HOT	High Occupancy Toll
IDW	Intrusion Detection Warning System
IFC	Issued For Construction
IFP	Issued for Proposal
IRR	Issue Requiring Resolution
<i>KHI</i>	<i>Kawasaki Heavy Industries, Ltd. (Plant in Japan)</i>
<i>KMM</i>	<i>Kawasaki Motor Manufacturing, Corp. (Plant in Lincoln, NE)</i>
KSA	KSA, INC – Producer of Concrete Crossties
MH	Manhole
MCI	A communication company now owned by Verizon
MEP	Mechanical, Electrical and Plumbing

MPS	<i>Master Program Schedule (7K Railcars)</i>
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
ORD	Operational Readiness Date
PAC	<i>Point Assignment Charts</i>
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	<i>Rail Activation Plan</i>
RCMP	Risk and Contingency Management Plan
RFC	Request for Change
RFMP	Rail Fleet Management Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROE	Right-of-Entry
ROW	Right-of-Way
RSD	Revenue Service Date (synonymous with Revenue Operations Date)
SCADA	<i>Supervisory Control and Data Acquisition</i>
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: April 25, 2013 (reporting current through *March 2013* - Financials through *February 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.

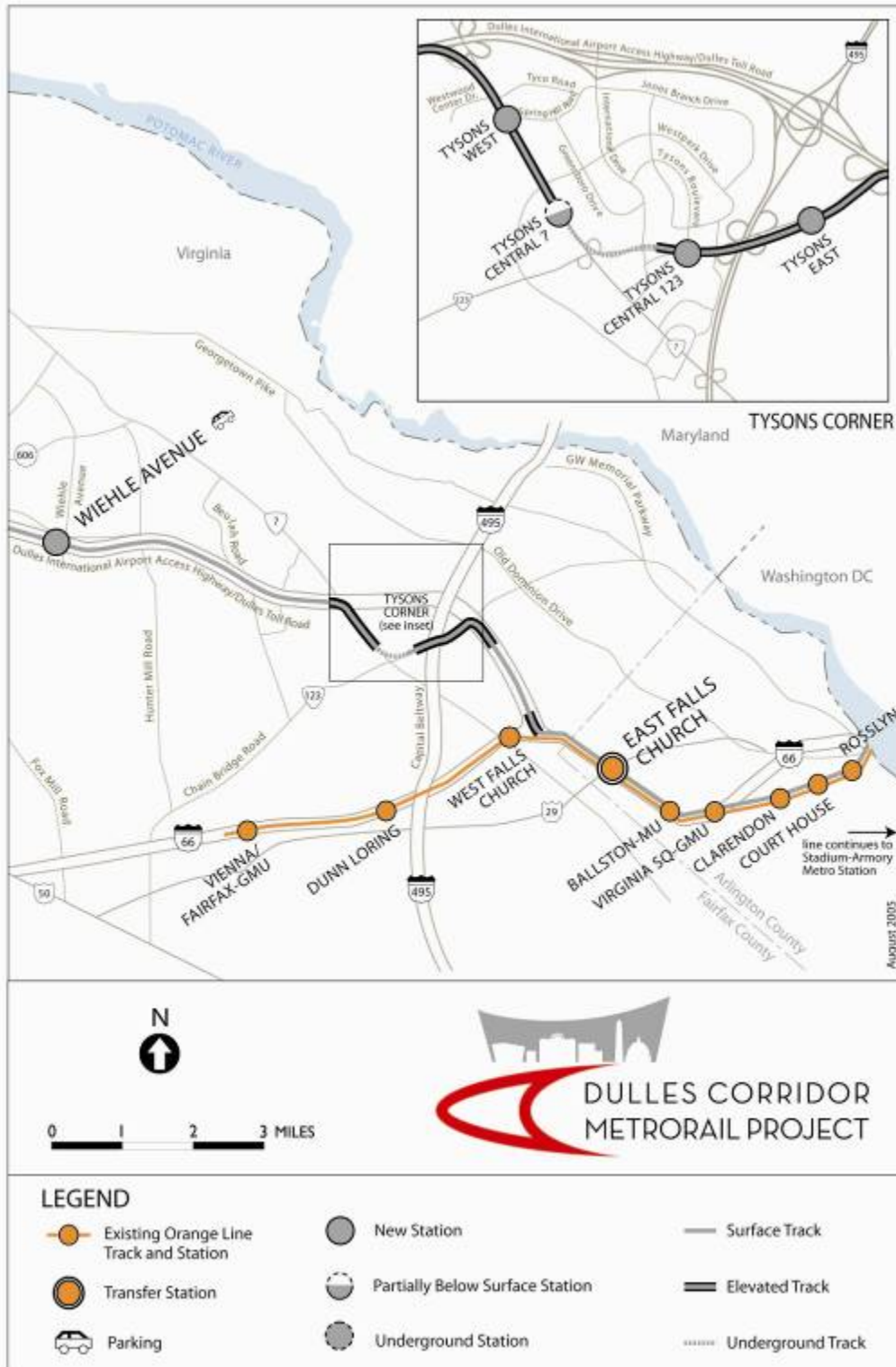
Schedule

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
01/15/14	Revenue Service Date (RSD) <i>as of February 25, 2013</i>		
90.0%	Percent Complete Construction <i>as of March 31, 2013.</i>		
70.0%	Percent Complete Time based on RSD of December 1, 2014 (based on FFGA)		
88.8%	MWAA's Estimate of Project Earned Value through <i>February 2013</i>		

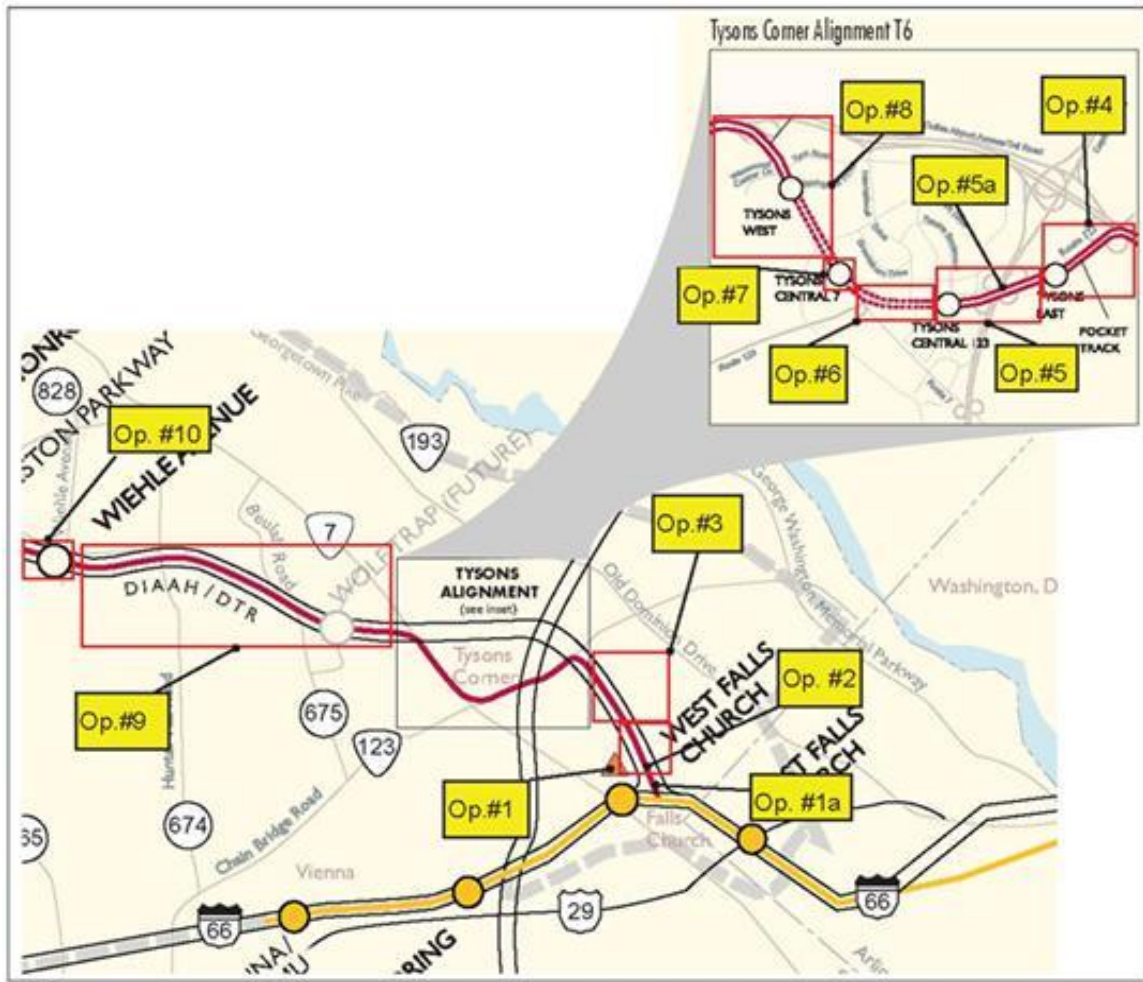
Cost

\$1.490 billion	Total Project Cost (\$YOE) at Approval to Enter PE
\$2.961 billion	Total Project Cost (\$YOE) at Approval to Enter Final Design
\$3.142 billion	Total Project Cost at date of report including \$510 million in Finance Costs
\$2.376 billion	Expenditures through <i>February 2013</i> from total project budget of \$3.142B
75.6%	Percent complete based on federal expenditures.
\$10.96 million	Total project contingency remaining (allocated and unallocated) through <i>February 2013</i> .

Project Map



Construction Operational Areas



APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST

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

Safety and Security Authority	Y/N	Notes/Status
Is the grantee subject to 49 CFR Part 659 State Safety Oversight requirements?	Y	Tri-State Oversight Committee (TOC)
Has the State designated an oversight agency as per Part 659.9?	Y	Tri-State Oversight Committee (TOC)
Has the oversight agency reviewed and approved the grantee's SSPP as per 659.17?	N	An updated WMATA SSPP dated January 20, 2011 was approved by TOC on February 22, 2011.
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	Y	Approved on August 2, 2010
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	TOC had a representative at the November 9, 2011 QPRM.
Has the grantee submitted its safety certification plan to the oversight agency?	N	Plan in progress. TOC participates in monthly meetings.
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	WMATA will be operator.

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

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

Construction Safety	Y/N	Notes/Status
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	DTP's Construction Safety, Health and Security Plan accepted on January 6, 2009.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	
Provide the grantee's OSHA statistics compared to the national average for the same type of work. If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?	Y	DTP has recorded 484 first aid cases and six lost time cases in 12.520 million project man-hours, which is below the national average.
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	

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

APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW

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