

**COMPREHENSIVE MONTHLY REPORT**

**June 2011**

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

July 20, 2011

**PMOC Contract Number:** DTFT60-09-D-00016

**Task Order Number:** 002, **Project Number:** DC-27-5142, **Work Order No.** 02

**OPs Referenced:** 01, 25

**Hill International, Inc.**

One Penn Square West

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

Philadelphia, PA 19102

**PMOC Lead:** [REDACTED]

**Length of Time PMOC Assigned to Project:** 10.5 years

**Length of Time PMOC Lead Assigned to Project:** 3.0 years

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## EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *July 6, 2011* to conduct a monthly progress *update* meeting for work performed in *June 2011*. The full time on-site PMOC attended various project meetings and site tours throughout this reporting period. Additional information for this report was obtained from MWAA during the *second* week of *July 2011*. 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. Sixty-four additional rail cars are required to provide service for the Project. Based on the Full Funding Grant Agreement (FFGA), the Revenue Operations Date (ROD) is December 1, 2014. The Federal New Starts share is \$900 million, *along with \$75 million in Surface Transportation Program (STP) funds*, for the Initial Operating Segment (extension to Wiehle Avenue). Through Federal fiscal year (FY) 2011, Congress has appropriated \$524.5 million *in Section 5309 New Starts funds* for the Project. The FTA has awarded \$404,483,364 *in Section New Starts and \$68,499,999 in STP funds to date* for the Project.

### **2. Project Status Summary**

The PMOC met with MWAA on *July 6, 2011* to conduct a monthly progress review meeting. The status information is as of *June 30, 2011*, 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.
- **Rail car Procurement** moved forward with the July 27, 2010 contract award by WMATA to Kawasaki and a Notice-To-Proceed (NTP) on August 16, 2010. The contractual requirements indicate that the 64<sup>th</sup> rail car will be conditionally accepted on January 15, 2015 as an early completion date, which does not comply with the FFGA date of December 1, 2014. The March 11, 2011 Japan earthquake has impacted Kawasaki's ability to meet the agreed schedule. At a June 9, 2011 meeting Kawasaki reported that they anticipated providing their revised schedule to WMATA in late June that would reflect the delays and mitigation efforts. *MWAA reported that WMATA received the schedule on July 1, 2011 reflecting a six month delay. WMATA rejected the schedule. MWAA expects to get an update on the mitigation*

efforts at the July 14, 2011 Progress Review Meeting. The current expectation is that the PDRs will not be completed until the end of July 2011, three months past the baseline schedule date of May 3, 2011. In order to improve the schedule of submittals, Toshiba has opened an office in Yonkers, NY to support the project.

- **Design progress** on the Extension to Wiehle Avenue project continues to lag behind the baseline schedule but currently does not affect construction progress. The associated pavilions and pedestrian bridge alignments are subject to coordination with adjacent developers who have requested design changes to accommodate their development plans. The PMOC anticipates that MWAA will execute agreements with the developers to reimburse the Project for these additional costs. Overall project design is 97% complete as of the end of June 2011. DTP has now achieved completion of all five total station permit packages with DGS approvals of the final (AMEP) permit packages and the issuance of associated IFC drawings.

MWAA hired an independent third party consultant to review Alstom’s safety analysis of the Generation 4 track circuit modules proposed for use on the Dulles Extension. MWAA issued NTP to Battelle on January 10, 2011 to begin the “Safety Analysis Review and Assessment.” Battelle’s current schedule indicates a submission of its final report in September 2011. However, Battelle stated in its June 7, 2011 Monthly Status Report that they would be submitting a new schedule addressing recent schedule impacts. MWAA does not anticipate a meaningful delay. The Battelle safety review is progressing with the completion of the review of non-proprietary data and the interviews with WMATA. Battelle is currently arranging to conduct their review of proprietary data at Alstom’s facilities in Rochester, NY in July.

- **Construction progress** is broken into two components: utility relocation (UR), which is 99% complete, and design-build (DB) construction, which is approximately 42% complete. Significant accomplishments for June included continued segmental box girder installation on the Tyson East Guideway including balanced cantilever segmental erection with Launch Girder Truss LG3; significant pier construction progress on the Tysons West Guideway; major foundation work on all five stations; mezzanine steel erection at the Tysons East and Wiehle Avenue Stations; completed the OB NATM tunnel arch liner and poured 10 IB liner arch sections; completed the IB invert waterproofing and invert pouring. Launch Girder Truss LG2 has completed its work on the Tysons East Guideway and has been relocated to the Tysons West Guideway to begin segmental guideway erection in mid July 2011.

CONSTRUCTION PROGRESS THROUGH JUNE 2011			
GUIDEWAYS AND TRACKWAYS	% COMPLETE	STATIONS	% COMPLETE
O-1 Guideway	94%	Tysons East	25%
Tysons East Guideway	92%	Tysons Central 123	28%
NATM Tunnel	78%	Tysons Central 7	11%
Tysons West Guideway	46%	Tysons West	19%
O-3 Trackway	63%	Wiehle Avenue	29%
O-9 Trackway	75%		

- **The DTP Schedule** with a data date of *May 25, 2011* showed a -56 day loss as compared to the -71 calendar day *loss* reflected in the *April 25, 2011* update due to re-sequencing of Powell's scope of work related to WMATA's requested change orders for TPSS and ETS Remote Monitoring. *Despite some improvement between the April and May schedule updates*, MWAA has not agreed with this update because DTP has not *fully* adjusted the follow-on work to reflect the re-sequencing by Powell. This unapproved variance moves the forecast SSCD to *October 4, 2013*. This results in a projected ROD of *February 7, 2014*. *The WFCY completion date, which is still disconnected from the mainline schedule, has slipped another -37 days yielding a projected completion date of May 9, 2014*. The FFGA ROD is December 1, 2014.

DTP submitted a zero loss recovery schedule on January 12, 2011. The schedule proposed a mitigation period of fourteen months, extending from January 2011 through February 2012. *MWAA conditionally approved the schedule and authorized the constructive acceleration on a time and material basis*. MWAA and DTP continued to meet regularly to review and discuss DTP's recovery schedule *and monthly schedule updates*. DTP submitted its cost proposal for \$11.5 million March 2, 2011. *Negotiations have been difficult and protracted*.

The Project needs to increase its efforts to resolve differences relative to the *DCMP mainline extension and the West Falls Church Yard (WFCY) schedule*. *The Project schedule has nearly reached the 50% mark in expended calendar days and the risk of irretrievable schedule creep leading to costly schedule compression continues to grow*.

*It appears to the PMOC that little to no progress is being made on schedule agreement. DTP's June 25, 2011 schedule update (not yet analyzed) reflects another -29 day loss as a "result of delayed resolution of the existing Williams-Transco gas pipeline that has prevented Design-Build civil from progressing in the area west of the Wiehle Avenue Station."* This alleged loss of time to the contract completion date for an activity in the tail tracks of the Project suggests that DTP may be misusing the schedule for claim posturing purposes instead of tracking real time progress and accurate completion projection. In addition, there has been a failure to agree on costs to implement the recovery scheduled/acceleration plan that was conditionally approved to buy back -113 calendar days as of December 2010. Now DTP claims an additional -86 days as of June 25, 2011. Although it would appear to the PMOC that losses portrayed in the schedule update are recoverable, the ability of DTP and MWAA to come to agreement puts the contract completion date in serious jeopardy if the current path forward is maintained much longer.

- **Budget** status as of *May 25, 2011* indicates that \$1,303,803,406 (41 %) has been expended of the \$3,142,471,634 budget total. MWAA reports \$171,244,674 (86%) of the available contingency for the first five contingency milestones have been utilized with a remaining contingency balance of \$28,755,326 (14%) available through the current phase of construction. *Because the federal portion of Allowance Items that have been awarded to date is \$44,748,673 over budget, the PMOC is concerned that remaining allowance items cost will utilize most of the remaining contingency*.

MWAA's estimate of the earned value for the Project through *May 2011* is 52.71%.

- **Risk** -- The PMOC reviewed MWAA's updated Risk Assessment dated April 15, 2011. It was decided that the assessment needed to include an analysis of what the potential Kawasaki 7000 series cars delay will have on the Project schedule and FFGA completion date. MWAA decided that it would do an internal revision to the Draft Risk Assessment and would communicate adjustments and progress on a bi-weekly basis with the PMOC. MWAA submitted a draft "Risk Management Plan" on June 3, 2011. *The PMOC provided comments on July 5, 2011 and MWAA, FTA and the PMOC met on July 6, 2011. MWAA will edit the Plan and resubmit in two weeks.*

### **3. PMOC's Assessment of Project Status**

The Full Time Equivalents (FTE) estimated total for *June* is 1,762, which is *an increase* of 2 from the *May* actual of 1,760 and appears to provide suitable support to the scheduled activities. The pre-casting facility continues to produce pre-cast concrete girder segments and long line station segments in advance of their erection schedule.

Piers Re-Use Testing Reports and Program Status: The DTP Inspection and Test Program Final Report for the existing pile foundations and the CTI Report of the monitoring of the DTP inspection and test program have been completed. MWAA/QA conducted an audit of the associated pier design and the test findings to verify incorporation of the existing pier inspection and test program results into the final pier designs. The PMOC found the reports to be full and comprehensive, and that the existing piers are suitable for re-use. MWAA President and Chief Executive Officer sent a wrap-up letter to the FTA Administrator on April 8, 2011, which stated that the MWAA had complied with the FTA's direction and had accepted the DTP Inspection and Test Program Final Report for Existing Pile Foundations. It also outlined follow-up testing that will be performed, and noted that it had directed DTP to follow-up with the anti-corrosion measures recommended by UTRS. Upon receipt of the schedule for the follow-up measures, the PMOC will issue a spot report with regard to the overall Inspection and Test Program. The excavation, bonding and successful continuity testing of the pile bonding for pier 5B-OB was completed on June 8, 2011. MWAA is still trying to obtain a plan and schedule for the remaining UTRS-recommended remaining corrosion control activities. Subsequent to construction, all piers must be tested for stray currents and track to earth resistance to determine if any corrective measures are required. *WMATA notified MWAA by letter dated June 22, 2011 that the testing program results were acceptable to WMATA.*

*To address potential budget overruns*, the PMOC concludes that MWAA needs to review what items may be betterments and can be billed to the responsible parties. In addition, mitigation measures need to be implemented to keep the scope creep and increased costs under control. It is the PMOC's opinion that the WMATA-requested change orders for ETS and TPSS Remote Monitoring impacts to schedule and cost contingency need to be examined and considered carefully to determine whether or not they are betterments, and therefore should not be funded under the federal portion of the program.

# MAIN REPORT

## 1. Grantee's Capabilities and Approach

### a. Technical Capacity and Capability

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

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.

### 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.

Discussions between MWAA and DTP were concluded at the executive level with regard to a recovery schedule. This effort resulted in the issuance of two "Directive Letters" to DTP to conduct a constructive acceleration effective December 15, 2010 on a time and materials basis not to exceed \$7 million. DTP submitted a zero loss recovery schedule on January 12, 2011 that included a preliminary acceleration cost of \$23.7 million. The schedule proposes a mitigation period of fourteen months, extending from January 2011 through February 2012. A detailed review and additional discussions led to MWAA's conditional acceptance of the Recovery Schedule via letter dated February 7, 2011. Both parties have agreed to work toward a lump sum Change Order based upon the agreed Recovery Schedule scope. MWAA completed their independent estimate and *continues* evaluating DTP's revised cost proposal for \$11.5 million submitted on March 2, 2011. *MWAA expects to reach closure on this issue in sixty days.*

DTP's updated project schedule with a data date of *May 25, 2011* showed a -56 day loss as compared to the -71 calendar day *loss* reflected in the *April 25, 2011* update. This loss adjusted the forecast SSCD to October 4, 2013. This results in a projected ROD of February 7, 2014. The

FFGA ROD is December 1, 2014. MWAA is not in agreement with these reported losses and discussions with DTP continue.

It is the PMOC's observation that MWAA continues to carefully scrutinize the schedule update submissions and meets with DTP within two weeks of the schedule submission to discuss their observations and mitigation strategies to resolve the disagreements with regard to the actual critical path. This continues to be a contentious process because DTP is constantly striving to submit a schedule that will support a future delay claim.

MWAA continues to monitor expenditures to date and to update the estimate at completion. Through *May 25, 2011*, MWAA has utilized *\$171,244,674* of the Phase 1 through 5 allotted contingency of \$200,000,000. The contingency utilization reflects expended and obligated costs.

*MWAA is in the process of updating the project Risk and Contingency Management Plan. 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 *June 2011*, of the cumulative total of *6,542,279* hours worked, there have been *four* lost time accidents. MWAA received Revision 5 of the SCIL, on March 31, 2011. MWAA's comments to Revision 5 were sent to DTP on May 18, 2011. *A few remaining unresolved comments are expected to be resolved by the end of July.*

DTP submitted revisions to the System Safety/Security Management Plan 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 on August 16, 2010. The revised plan and procedures were resubmitted on November 23, 2010. MWAA accepted these documents on December 6, 2010. The FTA and PMOC met with MWAA, WMATA and DTP on April 29, 2011 to discuss development of a revised SSMP to integrate WMATA and MWAA systems testing, interface management and pre-revenue operations. A follow-up meeting will be scheduled for late September 2011.

### **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 Mitigation Report to the FTA for the first quarter of 2011 on April 29, 2011.

## **2. Project Scope**

### **a. Design Status**

*Work has been completed with the receipt of permit approvals on the station designs with the exception of the associated pedestrian bridges and pavilions. Issued for Construction" (IFC)*

*drawings for all five stations have also been completed. WMATA review and approval of ATC submittals continues to meet the needs of the project.*

The associated station pavilion and pedestrian bridge designs are delayed to as late as *August 2011. The late issuance of IFP and IFC design packages has had no apparent adverse impact on the project's critical path, due in part to DGS permitting of partial packages. However, the remaining design packages continue to accumulate negative float on the Project schedule.*

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

Through *May 2011*, \$305,294,501 of the \$437,278,511 Federal Allowance Items Budget had been awarded to subcontractors and suppliers, *which reflects no change from April 2011. A \$44,748,673 overrun exists for the 22 of 35 sub-contract packages awarded thus far for federally-funded allowance items. In addition, MWAA has forecasts a \$39+ million increase due to Station finishes and mechanical, electrical and plumbing work in the next few months.*

Utility relocation is 99% complete and DB construction is approximately 42% complete. All utility relocation efforts relating to the Route 7 road shifts in the Tysons West Station area have been completed. The final Route 7 road shift occurred on May 27, 2011.

The following are the major accomplishments of the DB contractor during *June 2011*:

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1)** – *Continued with retaining walls at the K-Line tie-in area. Completed approach walls at abutment A-IB, B-IB and B-OB. Continued with approach slabs at abutment A-IB, B-IB and B-OB. Continued storm drain installation between the O-1 Guideway abutments and Idylwood Road. Continued constructing retaining walls in the median of the DCR west of abutments A and B. Continued placing sub ballast between the retaining walls on the DCR between Pimmit Run and Chain Bridge Road. Remobilized track welding operations in the DCR median. Continued backfilling at retaining walls first phase of the WFCY Cut and Cover tunnel and continued grading work for the upcoming DCR road shift. Continued jack and bore operations at TPSS #1 and TPSS#2 and continued duct bank installations at TPSS#1, TPSS#2 and TBS #2.*
- **Operations Area OP-4/5A (Tysons East Guideway/Station/I-495 Crossing)** – *Continued segmental box girder guideway erection with Truss LG1 completing spans 28-OB, 29-OB and 29-IB for a total of fifty-eight spans completed to date. Demobilized Truss #2 from the Tysons East Station/Guideway and relocated it to Tysons Central 7/Tysons West Guideway. Continued balanced cantilever segmental girder erection with Truss LG3 on span 51-IB and 52-IB with a total of six completed to date. Continued trackwork installation with 2,300 LF of rail plinths on the OB track and started installation of the No. 10 double crossover between piers 20 and 22.*
- **Operations Area OP-5 (Tysons Central 123 Station)** – *Continued form and rebar installation and pouring structural foundation walls and interior columns. Continued forming platform beams at piers 68 and 69. Continued forming track deck on AASHTO girders between spans 73 and 75.*

- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure)** – Continued pouring base slab and forming walls and installing rebar for the East Ventilation Structure. Completed waterproofing and concrete pouring of the IB tunnel invert. Began pouring arch sections in the IB tunnel completing ten arch sections to date. Completed pouring of the arch sections of the OB tunnel.
- **Operations Area OP-6 (West Cut and Cover Tunnel)** – Continued SOE installation and excavation at stage 2A and continued forming and rebar installation for the first invert slab section. Continued base slab and wall construction at the West Ventilation Structure.
- **Operations Area OP-7 (Tysons Central 7 Station)** – Continued foundation slab construction. Continued pouring foundation walls for TPSS #5. Continued forming and pouring platform walls. Continued with in-slab piping and electrical conduit installations.
- **Operations Area OP-8 (Tysons West Station/Guideway)** – Water main installation along WB Route 7 continues between Spring Hill Road and Tyco Road. Completed pile caps at IB/OB piers 21, 40, 41 and 42-OB for a total of forty-three completed to date. Completed columns at IB/OB piers 19, 20, 34, 35, 36 and 47 for a total of sixty completed to date. Completed pier caps at IB/OB piers 17, 18, 23-IB, 24-IB, 30-IB, 30-OB and 52 IB/OB for a total of thirty-three completed to date. Installed mezzanine beams at pier 30 at the Tysons West Station for a total of eight completed to date. Continued pouring straddle bent 50 over the DIAAH. Set forms and started construction of Bent 48 over Dulles Toll Road. Completed the installation of pile cap at abutment B in the median of the DIAAH.
- **Operations Area OP-9 (DIAAH)** – Completed the Difficult Run Bridge steel girders and continued with deck forming. Continued with retaining walls on the OB and IB sides between Hunter Mill Road and east of Beulah Road. Storm drain installation east of Beulah Road continues in the median. Continued jack and bore operations to TPSS #7, #8, #9, #10 and #11. Installing duct banks and vaults at TPSS#9.
- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13)** – Continued finishing barrier walls between the track way and the DIAAH. Continued installation of power conduits in the platform utility chase and through penetrations into the service rooms. Installation of elevator casings continued.
- **Laydown Area 10 (Pre-cast Yard)** - Continued casting of segmental box girders; completed 2,360 of 2,772 concrete box girder segments and station girders to date.

### c. Third Party Coordination & Agreement Status

All Intergovernmental Agreements and Agreements with utility companies were executed prior to the FFGA.

#### d. Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *June 2011*, 73 of the 102 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *June 2011*.

#### PARCELS ACQUIRED<sup>1</sup> (Number of parcel packages)

LOCATIONS	TOTAL	Period			To Date		
		Planned <sup>2</sup>	Actual	Var	Planned <sup>2</sup>	Actual	Var
Route 66 / Dulles Connector	1	0	0	0	1	1	0
Route 123	23	2	0	(2)	23	19	(4)
Route 7	51	3	3	0	51	45	(6)
DIAAH	27	1	1	0	15	12	(3)
<b>TOTAL</b>	<b>102</b>	<b>6</b>	<b>4</b>	<b>(2)</b>	<b>90</b>	<b>77</b>	<b>(13)</b>

- Notes: 1. Parcels acquired through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 31 parcels for which Certificates of Take have been filed.  
2. Planned values are based on the March 31, 2011 Property Acquisition Status Update.

#### Condemnation Status

Thirty-one parcel packages have been obtained with the filing of twenty-seven Certificates of Take. In *June 2011*, one *Petition in Condemnation* was filed (Parcel 29, Westpark Corporate Center LLC), one case was finalized (Parcel 19, Koons Ford/Sherwood Tysons, LLC) and two other cases are close to having the Final Order entered for Agreements After Certificate (Parcel 035, Embassy Suites, and Parcel 36, Container Store/CG Tysons Corner, LLC). The rehearing of the appeal (Parcel 23, Pike 7) is anticipated in late 2011. There is one case currently scheduled for trial. The one case currently scheduled for trial as of *June 30, 2011* is Parcel 56, HBL Mercedes/George C. Andreas, Tr, et al – December 13, 2011.

#### e. Utility Coordination

The various utility companies continue to relocate their facilities for the project. Utility coordination meetings are held with the various utilities to schedule and coordinate work. Specific utility relocation work completed and continuing through *June 2011* includes the following:

- **Dulles Connector Road (DCR) East – (K-Line to Route 123)** – Continue installation of ductbanks and manholes to bridge crossings at Magarity Road and Pimmit Run.
- **Route 123 (DCR to Route 7)** - AboveNet completed directional boring and cable installations at Route 123 and Scotts Crossing. Splicing and cutovers are pending customer notifications.

- **Route 7 (Route 123 to Spring Hill Road)** – All work complete.
- **Route 7 (Spring Hill Road to Tyco/Westwood)** – AboveNet continues to prepare for splicing and cutover work on the north side of Route 7.
- **Route 7 (Tyco/Westwood to Route 267/Toll Road)** – AboveNet continues to schedule splicing with customers on the north side of Route 7 at Koon’s Toyota.
- **DIAAH West -- (Route 7 to Wiehle Avenue)** – DTP/Lane continues the installation of the traction power ductbank and manholes for bridge crossings. Washington Gas continues relocation work at the TPSS #10 site. Continue with manhole conduit re-configurations for DVP to pull cables.

**f. 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 Board approved the award of a contract and a sharing of development costs with MWAA at its May 27, 2010 meeting. The MWAA Board agreed at its June 2, 2010 meeting to share the development costs associated with the railcar procurement equally with WMATA.

WMATA awarded a contract to Kawasaki on July 27, 2010. The manufacturer’s proposed schedule showed the 64<sup>th</sup> car would be delivered by September 12, 2014 based on a July 12, 2010 notice to proceed (NTP), *but* WMATA did not issue the Notice-To-Proceed (NTP) until August 16, 2010. Thus the contract indicates that the 64<sup>th</sup> rail car would be conditionally accepted on January 15, 2015 as an early completion date, which does not comply with the FFGA date of December 1, 2014. The contractual milestones for this procurement are:

<b>Activity</b>	<b>Planned Date</b>	<b>Actual Date</b>
Notice to Proceed	July 12, 2010	August 16, 2010
Preliminary Design Review Submission	March 31, 2011	
<i>Preliminary Design Review Complete</i>	<i>May 1, 2011</i>	
<i>Approval of Master Test Plan</i>	<i>August 23, 2011</i>	
<i>Approval of A-Car Mock-up</i>	<i>October 24, 2011</i>	
Final Design Review Submission	October 31, 2011	
<i>Final Design Review Complete</i>	<i>December 1, 2012</i>	
<i>Carbody/Truck First Article Inspection Approval</i>	<i>March 30, 2012</i>	
Delivery of first 4 pilot cars	September 16, 2013	
Conditional acceptance of 4 pilot cars	March 16, 2014	
Conditional acceptance of 64 <sup>th</sup> car	January 15, 2015	

WMATA, MWAA, and the PMOC held a kick-off progress status meeting on October 28, 2010 to begin monitoring this procurement. The PMOC also attended the Monthly Progress

Review meetings held between WMATA and Kawasaki on February 10, 2011, March 3, 2011, April 14, 2011 and June 9, 2011.

The Conceptual Design Review phase was completed on January 31, 2011 and the program is in the Preliminary Design Review phase. This is slightly behind WMATA's original schedule, however WMATA has noted that the submittals are more detailed than expected, being closer to what is expected for Preliminary Design Review (PDR). As a result, some level of PDR work has already taken place and the design development is proceeding at the expected rate. At the March 3, 2011 WMATA/Kawasaki Progress Meeting it was reported that Kawasaki anticipated completing PDR submittals on May 3, 2011 which was two days behind the accepted schedule completion date for PDRs. The current expectation is that the PDRs will not be completed until the end of July.

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 of March 11, 2011. The major impact appears to be relative to Toshiba, which is located in a zone that is only receiving power for half a day. This loss of production is exacerbated by the fact that Toshiba must recalibrate their equipment after each outage, which further reduces productive time. Toshiba reports that two of their suppliers for semi-conductors and capacitors have been affected and is seeking other sources for these materials. Toshiba is attempting to relocate key personnel to Houston, TX. The software delays may have a trickledown effect on other manufacturers that are reliant on the Toshiba software. Kawasaki and Toshiba were to present a recovery schedule to WMATA during the week of April 18, 2011. That meeting did not take place until the night of April 27, 2011. A mitigation schedule was not presented at that meeting, but rather another meeting was scheduled to occur in the following thirty to forty-five days when the full impact of the disaster can be quantified. This meeting was scheduled for June 9, 2011, but Kawasaki again failed to provide a revised schedule. Instead, Kawasaki reported that they anticipate providing their revised schedule to WMATA in late June that will reflect the Toshiba delays and mitigation efforts. Kawasaki reported that they had received Toshiba's recovery schedule, but they had not completed their analysis nor incorporated it into the overall project recovery schedule. *MWAA reported that WMATA received a schedule on July 1, 2011 reflecting a six month delay. WMATA rejected the schedule. MWAA expects to get an update on the mitigation efforts at the July 14, 2011 Progress Review Meeting. WMATA's review of this schedule, if submitted, would likely extend into August 2011.*

Kawasaki reported that as of May 16, 2011, Toshiba has relocated two project managers to Kawasaki's Yonkers, New York facility to help reduce the backlog of submittals. Since travel to Japan has not been possible, the PDRs are being done at WMATA's headquarters.

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

*The PMOC will continue to monitor both the progress of the procurement and WMATA's support of the project.*

#### **g. Safety and Quality Status**

MWAA participated in *five* safety walk downs with DTP during the month of *June*. All were related to Design-Build work. As of *June 30, 2011*, DTP had logged 6.542 million project man-hours with 250 first aid cases and *four* lost time cases. There have been a total of 407 incident investigation reports, 80 utility hits and 15 vehicular accidents.

Revision 4 to the SCIL was submitted on November 24, 2010. Comments on Revision 4 were transmitted to DTP on January 7, 2011. The DTP response to the comments along with Revision 5 of the SCIL was received by MWAA on March 31, 2011 and MWAA responded with comments to DTP on May 18, 2011. *A few remaining unresolved comments are expected to be resolved by the end of July.*

DTP and MWAA continue to meet every two weeks to review the status of issued for construction designs (including subcontractor designs) and to determine the status of sign-offs of the Design Conformance Checklist (DCC) and Construction/Procurement/Installation Conformance Checklist (CCC) items related to all issued for construction designs.

A DCC was submitted for MWAA's review on September 2, 2010 with seventy items signed off. Its review was completed with forty-nine items accepted. The acceptance of another eleven items was deferred pending issuance of "Issued for Construction" associated design drawings and ten items were not accepted. DTP submitted a DCC for MWAA's review on December 2, 2010 with forty-eight items signed off. Its review was completed with thirty-eight items accepted. DTP submitted another DCC on March 2, 2011. Of the eight items submitted that had been signed off on this update, six were accepted, one accepted as noted and one item was not accepted. DTP submitted another DCC on June 2, 2011 with 540 signed off items. *This submission was returned to DTP due to missing checklist sign-off item reference criteria. Resubmission is expected in mid July with over 800 signed off items.* "Issued for Construction Drawings" (IFC) for all stations have now been issued. Since signed off items must be based upon IFC drawings, the number of signed off items on future submissions will be much larger as the DCC nears closeout in the months to come.

A Construction/Procurement/Installation Conformance Checklist (CCC) was received on October 4, 2010 with six items signed off. MWAA transmitted final comments on this checklist to DTP on January 3, 2011. MWAA and DTP resolved disagreements related to the acceptability of the six items on February 25, 2011. The next submittal of signed-off items is currently scheduled for *July 11, 2011*. WMATA is also currently conducting a 100% review of the submitted DCC and CCC items.

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. A SCWG meeting was held on *June 21, 2011*.

Revision 5 of the DTP System Safety/Security Certification Management Plan was transmitted to the FTA on December 8, 2010. MWAA's Safety and Security Management Plan, Revision 8 was submitted to the FTA on February 17, 2011. An FTA/PMOC Safety/Security Program Review Meeting was conducted with all stakeholders on April 29, 2011. FTA explained the requirement for a complete SSMP for the Dulles Corridor project -- not just for the MWAA portion. MWAA and WMATA agreed to develop a revised SSMP that will cover the roles and responsibilities of both MWAA and WMATA for this project -- including the vehicles, the approach for integrated testing and interface management, joint safety and security certification activities and hand-offs, and pre-revenue operations. WMATA will also determine how it will manage its role in the safety and security certification process and identify and develop the required plans or procedures. MWAA and WMATA plan to hold bi-weekly meetings to address these issues. Another meeting will be held with FTA at the end of September 2011 to present the approach they developed and also to clarify what documentation FTA will need. The April 29<sup>th</sup> meeting was productive, and in the PMOC's opinion, both MWAA and WMATA appreciate the importance of resolving these issues and are on the right track to having a meaningful proposed approach ready for presentation by the end of September 2011. *MWAA reported that WMATA has hired Delcan Transportation, Inc. to review all of the quality work done on the project and to develop a WMATA Project Acceptance Plan and Procedure. MWAA/QA met with Delcan on June 21, 2011 to discuss the effort.*

During *June* 2011, MWAA performed the following QA audits/surveillances:

- *DTP Engineering: An audit was conducted on June 1, 2011. There no issues. The audit is closed.*
- *Wiehle Avenue Station Platform Quality and Survey Records: Surveillance was conducted on June 3, 2011. There were three issues. A response is due in mid July.*
- *Delta Railroad Construction: A DTP audit was conducted on June 8, 2011. There were seven issues. A report has been prepared and awaits DTP QA Manager Signature.*

### The MWAA QA Audit and Surveillance Schedule through December 2011

TENTATIVE DATE	AUDIT (A)/ SURVEY (S)	ORGANIZATION/ACTIVITY	JOINT AUDIT/ SURVEY	LEAD
7/6/11	S	DTP Subcontractor/Supplier Submittal Process: DTP/Subcontractor Nonconformance Control Systems	N	MWAA
7/13-14/11	A	DTP Construction and QC	N	MWAA
7/20-21/11	A	Flippo Construction (Wayside Facilities)	Y	DTP
7/27/11	S	Long Fence (ROW Fence)	Y	DTP
8/3-4/11	A	MWAA QA Program	N	MWAA
8/17-18/11	A	DTP Contractor and Subcontractor Construction Safety Programs	N	MWAA
8/24-25/11	A	M.C. Dean (MEP Above Grade)	Y	DTP
9/6/11	S	Truland Walker Seal (Communications)	Y	DTP
9/14-15/11	A	DTP Environmental	N	MWAA
9/21-22/11	A	Lane Construction (Early MEP)	Y	DTP
9/28/11	S	DTP Subcontractor/Supplier Submittal Process: DTP/Subcontractor Nonconformance Control Systems	N	MWAA
10/5-6/11	A	Turner Construction (Shell Enclosure Trades)	Y	DTP
10/12-13/11	A	DTP Engineering	N	MWAA
10/26-27/11	A	CTI Consultants (Special Inspection Program)	N	MWAA
11/9-10/11	A	Kone (Elevators and Escalators)	Y	DTP
11/16-17/11	A	DTP QA, Document Control, Training	N	MWAA
12/5-6/11	A	Delta Railroad (Trackwork)	Y	DTP
12/12/11	S	DTP Subcontractor/Supplier Submittal Process: DTP/Subcontractor Nonconformance Control Systems	N	MWAA

### 3. Project Management Plan and Sub-plans

MWAA submitted its draft PMP update of Version 7.0 on September 3, 2010. This plan was reviewed by the PMOC and six recommendations were made for inclusion in the PMP. FTA forwarded the PMOC's comments to MWAA for them to address in Version 7.0 Final. Dialogue

continued between MWAA and the PMOC with regard to MWAA's proposed revisions relative to the six recommendations and the revised PMP was submitted to the FTA on January 25, 2011. On February 11, 2011, the PMOC recommended that the FTA approve PMP Version 7.0 Final dated January 2011. The FTA accepted the PMP Version 7.0 Final on February 14, 2011.

- The FTA accepted MWAA's Quality Program Plan (QPP), Revision 6, dated June 25, 2008 on September 19, 2008. MWAA submitted a revised QPP, Revision 7 to FTA on January 7, 2010. MWAA awaits FTA's comments on the revised plan or an indication that no comments will be forthcoming. MWAA reported that three Project Management Procedures were updated in the period from March through May 2010.
- 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) and has requested DTP to revise their Procedure PIQ-5.1.
- MWAA's Risk Management Plan (RMP) dated October 2008 was reviewed and accepted by the FTA. The PMOC requested MWAA to begin the process to update the RMP by the end of the summer 2010 with a meeting to discuss the update to be scheduled after MWAA completes their risk plan update. A consultant submitted a draft of the Risk Analysis, a primary component of the RMP, to MWAA in December 2010. MWAA and the PMOC discussed the draft on January 26, 2011 and determined that some refinements were needed. MWAA submitted a hard copy draft Risk Assessment (Analysis) Report on January 31, 2011 and an electronic copy for review on February 24, 2011. The FTA and PMOC requested that the Report be revised. The PMOC provided guidance to arrive at an acceptable reformatting. The PMOC reviewed MWAA's updated risk assessment dated April 15, 2011. The FTA and PMOC met with MWAA on May 3, 2011 to discuss the PMOC's review comments. It was decided that the assessment needed adjustment to accurately reflect the changing realities of the Project, to include an analysis of what the potential Kawasaki 7000 series cars delay will have on the Project schedule and FFCA completion date. MWAA decided that it would do an internal revision to the Draft Risk Assessment and would communicate adjustments and progress on a bi-weekly basis with the PMOC. MWAA submitted a draft "Risk and Contingency Management Plan" on June 3, 2011. *The PMOC provided comments to MWAA on July 5, 2011. A meeting to discuss the comments was held on July 6, 2011. MWAA will edit the Plan and resubmit in two weeks.* MWAA continues to monitor the risk status and reports this information on a monthly basis.
- 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 the 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 provided comments to WMATA on March 15, 2010

based on the PMOC's Spot Report. The PMOC met with WMATA on April 6, 2010 to review the comments on the draft RFMP. The PMOC again met with WMATA on June 2, 2010, at WMATA's request, to further discuss the comments. WMATA submitted the revised draft RFMP on September 17, 2010 and a draft Spot Report summarizing the PMOC's review findings was issued to the FTA on November 8, 2010. The PMOC held a meeting with WMATA on November 15, 2010 to review the findings. A follow-up meeting will need to be scheduled in the near future after WMATA submits the revised RFMP. The PMOC reviewed the RFMP dated January 31, 2011 and recommended that the FTA not accept the document. On March 1, 2011, the FTA Regional Administrator requested that WMATA revise and resubmit the RFMP. WMATA has hired a consultant to prepare the revised RFMP. A submittal date has not been determined.

- MWAA's Safety and Security Management Plan, Revision No. 6 dated January 2009 was accepted by the FTA on January 27, 2009. MWAA submitted the SSMP, Revision 7, to the FTA on September 23, 2009. The changes in Revision 7 were minor in nature and reflected changes in personnel assignments, integration of the Fire/Life Safety Working Group with the Safety/Security Certification Working Group, and updates to schedules. Due to the minor nature of the changes, no response is expected from the FTA. SSMP, Revision 8 was provided to the PMOC on February 28, 2011 and is under review. A meeting was conducted on April 29, 2011 between the PMOC, MWAA, WMATA, DTP and TOC to review the SSMP, Safety Certification Program and other issues. MWAA and WMATA agreed to develop a revised SSMP that will cover the roles and responsibilities of both MWAA and WMATA for this project -- including the vehicles, the approach for integrated testing and interface management, joint safety and security certification activities and hand-offs, and pre-revenue operations. WMATA will also determine how it will manage its role in the safety and security certification and identify and develop whatever plans or procedures are required. MWAA and WMATA plan on bi-weekly meetings to address these issues. Another meeting will be held with FTA at the end of September 2011 to present the approach they developed and also to clarify what documentation FTA will need.
- FTA requested an update to the Appendices in the Permitting Plan on June 17, 2010. MWAA provided that information on December 21, 2010.

#### **4. Project Schedule**

The most recent MWAA analyzed project schedule update has a data date of *May 25, 2011*. The primary critical path identified by DTP showed a -56 day loss as compared to the -71 calendar *loss* reflected in the *April 25, 2011* update due to re-sequencing of Powell's scope of work related to WMATA's requested change orders for TPSS and ETS Remote Monitoring. *Despite some improvement since April, MWAA has not agreed with this update because DTP has not fully adjusted the follow-on work to reflect the re-sequencing by Powell. This is causing the delay to be erroneously extended. MWAA has again notified DTP of their finding and is still awaiting DTP's response. This unapproved variance moves the forecast SSCD to October 4, 2013. This results in a projected ROD of February 7, 2014. The FFGA ROD is December 1, 2014. MWAA has been requesting corrections and re-submittals of DTP's schedule updates when it disagrees with the critical path. However, DTP does not honor those requests. DTP's schedule with a data*

date of *June 25, 2011* reflecting a *-86 calendar day* variance to the plan has not yet been analyzed by MWAA.

On February 12, 2011, Launching Gantry No. 2 (LG2) suffered structural damage during the launching operation to the next pier. To help mitigate delays, the Contractor sent the LG2 crew to the LG1 operations to operate a second shift. In addition, the contractor mobilized a *ground-based* crane, assembled *girder* segments on the ground *and lifted them into place*. The gantry crane was repaired and back in service on April 4, 2011 after seven weeks down time. *MWAA and DTP have yet to agree on the overall schedule impacts.*

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

The WFC Yard upgrade work schedule continues to drop further behind, with a completion of the full facility *now shown to be May 9, 2014* according to the *May 25* schedule update which is still disconnected from the Project schedule's critical path. MWAA continues to state its disagreement with DTP's completion date in light of the incomplete WFCY scope. *DTP continues to progress the WFCY upgrade and DCMP tie in design build effort on a "time and material" basis in accordance with MWAA issued directive letters. MWAA's position has been that DTP's completion date is incorrect in light of the questionable portrayal of the WFCY scope. A schedule developed by MWAA indicates that completion of the WFCY is approximately feasible by the original SSCD of July 31, 2013. The PMOC is in agreement that completion of the WFCY could be accomplished in the third or fourth quarter of 2013 as historically demonstrated with the upgrade of WMATA's Shady Grove Yard which was a larger and more complex upgrade. MWAA states that a large portion of the WFCY construction is being accomplished as "Allowance Items" which also presents the opportunity to include subcontract completion dates in the RFP's that supports the Project ROD. During the June monthly meeting, MWAA reported that the schedule and costs presented by DTP are still being reviewed and that they are nearing a settlement that will support the Project's Operational Readiness Date. MWAA reported that they have proposed managing the work and the interface activities with WMATA. DTP was in favor of the proposal and the details are still being worked out.*

DTP has made numerous presentations of its West Falls Church Yard Tie-In Execution Plan to MWAA and WMATA. The last presentation was on November 16, 2010. A very detailed and informative presentation helped to involve more key WMATA personnel who will be needed to support the tie-in and integration process of the WFCY to the DCMP. *MWAA, WMATA and DTP continue to discuss and refine DTP's Tie-in Plan and proposed track outage plan. DTP awarded a subcontract to Lane Construction Company in December 2010 for early Civil Sitework and work began in mid-January 2011. The clearing and grubbing was completed and the backfill of the area within the loop tracks that will accommodate the building of the S&I Shop and new storage tracks continues. In addition, MWAA has issued a change order to Lane Construction for the WFCY early utility work.*

The WFCY Civil/Sitework final design was completed and issued for permit in October 2010. The S&I Building Issued for Permit (IFP) drawings were submitted for permitting to DGS on May 2, 2011. The Sound Cover Box IFP drawing submission to DGS for permitting occurred on May 18, 2011. *Comment resolution with DGS is nearing a conclusion and permits are*

*anticipated in mid July. A Request for Proposal (RFP) for both the Annex and Sound Box was issued to prospective bidders on May 10, 2011 and addendums were issued for DGS generated changes on June 20, 2011. A bid opening took place on July 7, 2011 with four bidders (Patchen, Whiting Turner, Lane and Facchina) and is currently under review. DTP has obtained the federal permit for the necessary stream restoration and the restoration work has begun.*

*It remains the PMOC's opinion that MWAA is vigorously pursuing control over the Project master schedule, but with limited cooperation from DTP. MWAA reports progress with the WFCY schedule disagreements in that they are nearing a cost settlement with DTP that yields a WFCY completion date that supports the Project ORD. However, the DCMP mainline schedule continues to be problematic. It appears to the PMOC that little to no progress is being made on schedule agreement. DTP's June 25, 2011 schedule update (not yet analyzed) reflects another -29 day loss as a "result of delayed resolution of the existing Williams-Transco gas pipeline that has prevented Design-Build civil from progressing in the area west of the Wiehle Avenue Station." This alleged loss of time to the contract completion date for an activity in the tail tracks of the Project suggests that DTP may be misusing the schedule for claim posturing purposes instead of tracking real time progress and developing an accurate completion projection. In addition, there has been a failure to agree on costs to implement the recovery scheduled/acceleration plan that was conditionally approved to buy back -113 calendar days as of December 2010. As of June 25, 2011, an additional -86 days are being claimed by DTP. Although it would appear to the PMOC that alleged losses portrayed in the schedule update are recoverable, the ability of DTP and MWAA to come to agreement puts the contract completion date in serious jeopardy if the current path forward is maintained much longer.*

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

- Potential conflict with Launching Girder #3 erecting segmental box girders over I-495 and the on-going Hot Lanes work in the area.
- Re-casting of damaged or otherwise unacceptable segments.
- Time lost correcting misaligned dowels at Tysons West Station Piers 25, 26 and 27 and regaining the pier construction schedule.
- WFCY design, construction and commissioning (*currently separate from the Project SSCD*).
- Inability of DTP to achieve design finalizations.
- Implementing the Remote Monitoring and Control (RMC) modifications pursuant to Directive Letter 27.
- Other potential systemwide upgrade programs by WMATA could have numerous technical scope changes impacting Traction Power, Automatic Train Control and Communications.
- Remaining or new property acquisitions resulting from design finalization or changes in support of Station Pavilions, DVP duct banks and detention ponds.
- As construction progresses discovering additional Utility conflicts requiring relocation.
- Discovery of hazardous materials requiring removal.
- Obtaining required weekend outages from WMATA for K-Line Tie-in work.
- *Potential delay to delivery of the 64 Rail Cars for Phase I.*

## a. Critical Path Evaluation

The PMOC agrees with MWAA's assessment regarding the critical path. The Project will need to continue its efforts to resolve disagreements relative to the WFCY, critical path, logic and delay issues in order to minimize the risk of irretrievable schedule creep leading to costly schedule compression or constructive acceleration. *The project is nearing its half way point in the schedule and therefore these ongoing and new issues are becoming more critical.* Although MWAA and DTP have agreed to a zero loss time recovery schedule with a data date of December 25, 2010, new disagreements continue to mount for claimed weather delays and change order impacts to the schedule.

The schedule update with a data date of *May 25, 2011* was again not agreed to by MWAA. DTP has included a rough order of magnitude schedule for the Remote Monitoring and Control (RMC) change requested by WMATA and directed by MWAA through Directive Letter 27. However, DTP has not adjusted the follow-up work, *both self-performed and by other subcontractors, to mitigate delays caused by the revisions to Powell's fabrication plans.* This is causing the delay to be erroneously extended. MWAA has notified DTP of their findings and is awaiting DTP's response.

Through the *May 2011 Schedule Update*, DTP submitted notices of delay for 27 weather days. *Eight* of these were contractually anticipated and accounted for in DTP's work plan and DTP later retracted their position for three days. MWAA assessed seven of the remaining *16* days as excusable and debited it to the 45 day Force Majeure reserve included within the terms of the A&R D-B contract adjusting the SSCD to August 9, 2013. The remaining *nine* days continue to be disputed. *MWAA reports that the effects of these excusable days are being formalized by Minor Change Orders (MCO) and/or letters issued by MWAA, as appropriate.*

In the *May 2011 Schedule Update Meeting*, MWAA presented a schedule performance analysis demonstrating that DTP is falling behind both in terms of extensions of planned durations and significant shortfall in achieving planned start and finish dates. This results in DTP falling behind the recovery schedule which is not evident due to the reported delay caused by the systems change orders. MWAA is working with DTP to address *these performance concerns.* MWAA reports that their analysis of the *April and May 2011 Schedule Updates* considers DTP's Critical Path No. 4, originating with Launch Girder (LG1) operations in the Tysons East Guideway, as the Project's Critical Path No. 1.

In addition, MWAA continues to disagree with DTP's scheduling of the WFC Yard. As submitted, DTP's schedule now reflects a completion date of *May 9, 2014*, a variance of *-115* calendar days from DTP's proposed plans and still does not accurately reflect the scope of Final Design Submittal for the Service and Inspection (S&I) Annex Building. In June 2010, DTP resubmitted RFC-065 for the WFCY which included a schedule showing completion of the full facility in January 2014. MWAA's position has been that DTP's completion date is incorrect in light of the questionable portrayal of WFCY scope. A schedule developed by MWAA indicates that completion of the WFC yard is feasible by the original SSCD of July 31, 2013. A large portion of the WFC Yard construction is being accomplished as Allowance Items which presents the opportunity to make Recovery Schedule scheduled completion a requirement for prospective bidders. The allowance items C-3 for the WFCY sound box and C-12 for the WFCY S&I

Building were advertised on May 10, 2011. This fact along with the current progress of the early civil site and utility work suggests that a SCCD of July 31, 2013 is achievable and the PMOC agrees with this assessment.

MWAA completed *schedule related* negotiations with the goal of reaching a mutually agreed recovery plan. This effort resulted in the issuance of two “Directive Letters” to DTP to conduct a constructive acceleration effective December 15, 2010 on a time and material basis not to exceed seven million dollars. DTP submitted a zero loss recovery schedule on January 12, 2011. The schedule proposed a mitigation period of fourteen months, extending from January 2011 through February 2012. A detailed review and additional discussions led to MWAA’s conditional acceptance of the Recovery Schedule via letter dated February 7, 2011. Both have agreed to work toward a lump sum Change Order based upon the agreed Recovery Schedule scope. MWAA has completed an independent cost estimate but no substantive *progress toward settlement* has occurred to date. MWAA is currently reviewing a revised acceleration proposal from DTP.

The PMOC considers the issuance of these directive letters and agreement on the recovery schedule scope to be a good first step toward recovery of the Contract Completion Date. However, the Project will need to reach a timely agreement on the acceleration costs and maintain this forward momentum in order to recover the -113 day mainline construction loss accrued through December 25, 2010. MWAA has completed their estimate of the acceleration cost and will *continue* negotiations with the contractor on the cost of the recovery schedule. In addition, the Project needs to increase its efforts to resolve disagreements relative to the West Falls Church Yard (WFCY) schedule in order to minimize the risk of irretrievable schedule creep leading to costly schedule compression or at least to minimize constructive acceleration costs. This need becomes increasingly critical as the current WFCY yard completion date of *May 9, 2014 (another 37 day loss)* as reflected in DTP’s *May 25, 2011* schedule update is far later than the original SCCD of July 31, 2013.

The majority of the design related permit issues were resolved during the second quarter of 2011. However, confidence that schedule recovery will begin and be sustained remains tentative until MWAA and DTP agree upon the mainline recovery schedule costs and the WFC Yard recovery schedule and costs.

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	June2008 Baseline Schedule	December 2010 RECOVERY SCHEDULE	April 2011	May 2011
Receipt of FFGA	03/03/09 <sup>1</sup>	03/10/09 <sup>^</sup>	03/10/09 <sup>^</sup>	03/10/09 <sup>^</sup>
Station Design Complete	10/21/09 <sup>1</sup>	02/18/11 <sup>1</sup>	08/01/11	08/11/11
Utility Relocation Complete	03/05/10 <sup>1</sup>	09/13/11	11/01/11	12/20/11
Aerial/Station Foundations Complete	3/4/11 <sup>1</sup>	09/01/11	08/17/11	06/28/11
NATM Tunnels Mined	01/29/11	12/03/10 <sup>^</sup>	12/03/10 <sup>^</sup>	12/03/10 <sup>^</sup>
K-Line Tie-In	12/23/11	03/28/12	04/05/12	04/05/12
Guideway Complete	2/12/12	09/13/12	07/17/12	07/20/12
Train Control Complete	10/26/12	10/29/12	11/07/12	11/13/12
Substantial Completion	07/31/13	07/31/13	10/18/13	10/04/13
Revenue Operations - Target	11/27/13	01/20/14	02/21/14	02/07/14
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14	12/01/14

<sup>^</sup> Actual Date

<sup>1</sup> Date was not met.

## b. Important Activities – 90-Day Look Ahead

The important milestones scheduled for the next 90 days include:

- Completion of *station's pedestrian bridges and pavilions designs.*
- Completion of utility relocation.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- *Property acquisition for Operations Area 9 and 10.*

## 5. Project Cost

The SCC Budget and Expenditures summary for the period ending *May 25, 2011* is as follows. Overall, approximately *41.5 %* of the budget has been expended through *May 25, 2011*.

FTA SCC CODE	DESCRIPTION	BASELINE BUDGET	CURRENT BUDGET <sup>1</sup>	EXPENDED TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements	\$ 666,500,284	\$ 649,477,849	\$ 344,958,209	\$ 649,477,849
20	Stations	\$ 317,023,979	\$ 297,868,718	\$ 69,703,829	\$ 297,868,718
30	West Falls Church Yard	\$ 51,789,539	\$ 49,928,014	\$ 3,573,037	\$ 49,856,383
40	Site Work & Utility Relocation	\$ 232,936,987	\$ 234,553,395	\$ 170,924,050	\$ 255,861,687
50	Systems	\$ 278,157,645	\$ 297,534,823	\$ 52,992,878	\$ 294,796,292
60	Right of Way Acquisition	\$ 45,953,303	\$ 67,631,026	\$ 53,096,578	\$ 66,295,154
70	Vehicles	\$ 211,629,775	\$ 211,629,775	\$ 20,825,600	\$ 210,926,012
80	Professional Service	\$ 698,471,472	\$ 719,451,940	\$ 539,929,531	\$ 767,214,063
90	Contingency Mgmt. Reserve	\$ 130,000,075	\$ 104,411,522	\$ -	\$ 40,190,904
100	Finance Charge	\$ 509,984,571	\$ 509,984,571	\$ 47,799,694	\$ 509,984,571
<b>TOTAL (Federal portion)</b>		<b>\$ 3,142,471,634</b>	<b>\$ 3,142,471,634</b>	<b>\$ 1,303,803,406</b>	<b>\$ 3,142,471,634</b>

Current budget equals FFGA amount plus approved Change Orders CO-001-069, 071-077 & 080-081, Directive Letters 001-030 and UR-CO-001-033 & 039. Estimate at Completion (EAC) for Contingency reflects the amount approved for utilization per PM-5.07.

## a. Explanation of Variances

The major variances in the project budget are associated in four categories as noted below:

1. SCC10 – Guideway and Track Elements has been reduced approximately \$17 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 SCC-80 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 increased by \$5.87 million due to a combination of add and subtract change orders, the most notable additions being the transfer from the tunnel subcontract and the recent award of the station MEP package which was over budget.
3. SCC40 – Site work and Utility Relocation has been increased by approximately \$22.39 million as a result of a combination of change events (change orders, directive letters and scope transfers) and forecasted overruns. The forecast adjustments are predominantly due to cost overruns in utility relocations.
4. SCC60 – Right of Way Acquisition experienced nearly \$21.84 million increase in the right-of-way (ROW) acquisition that was primarily due to the adjustment of project cost for the revised federal/non-federal split of \$21.68 million.
5. SCC80 – Professional Services increased approximately \$65.24 million due to a combination of change events (\$17.8 million) and forecast adjustments (\$47.44 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 a forecasted cost overrun of soft costs including MWAA, PMSS and VDOT. In addition, WMATA budget transfers are treated as forecast adjustments.
6. SCC90 – Contingency Management Reserve estimate at completion of \$16,987,939 is available for future use. This contingency level fails to meet the minimum of one percent of total project cost, \$27 million. Of the original \$130,000,075 in unallocated contingency, the Project has utilized \$113,012,136 to fund scope changes and forecasts. The \$64,320,617 which is the difference between the current budget and estimate at completion for SCC90 is the unallocated contingency utilized for funding the forecast increases only.

## b. Monthly Cost Report, May 2011

DESCRIPTION	FFGA AMOUNT (Original)	EXPENDITURE TO DATE <sup>1</sup>	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION
<b>FEDERAL (FFGA SCOPE)</b>				
<b>Design-Build</b>				
Firm Fixed Price	\$ 1,112,052,172	\$ 786,473,066	\$ 721,119,703	\$ 1,507,592,769
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 64,830,377	\$ 4,573,377	\$ 69,403,754
Firm Fixed Price Subtotal	\$ 1,177,161,580	\$ 851,303,443	\$ 725,693,080	\$ 1,576,996,523
Subcontract Allowance	\$ 430,199,817		\$ 161,023,928	\$ 161,023,928
Design-Build Contract Prices	\$ 1,607,361,397	\$ 851,303,443	\$ 886,717,008	\$ 1,738,020,451
Indexed Commodity Escalation	\$ 77,469,926	\$ -	\$ 51,915,794	\$ 51,915,794
Design-Build Contract Total	\$ 1,684,831,324	\$ 851,303,443	\$ 938,632,802	\$ 1,789,936,245
<b>Utility Relocation</b>				
Utility Work	\$ 84,312,807	\$ 92,277,950	\$ 9,933,025	\$ 102,210,974
Terf Tax		\$ -	\$ 0	\$ 0
Project Management and Final Design	\$ 8,423,426	\$ 17,814,456	\$ 881,955	\$ 18,696,411
Utility Relocation Total	\$ 92,736,233	\$ 110,092,406	\$ 10,814,980	\$ 120,907,385
<b>Right of Way</b>				
Right Of Way Total	\$ 42,443,132	\$ 53,357,674	\$ 13,562,480	\$ 66,920,154
<b>WMATA Agreement</b>				
Vehicles	\$ 195,138,329	\$ 20,825,600	\$ 173,608,966	\$ 194,434,567
Construction and Procurement	\$ 31,484,799	\$ 1,794,832	\$ 26,833,038	\$ 28,627,870
WMATA Force Account Startup	\$ 13,777,100	\$ 1,265,653	\$ 12,139,368	\$ 13,405,021
Project Management and Final Design	\$ 31,235,400	\$ 12,779,930	\$ 22,388,241	\$ 35,168,171
WMATA Agreement Total	\$ 271,635,628	\$ 36,666,016	\$ 234,969,613	\$ 271,635,628
<b>Preliminary Engineering<sup>2,3</sup></b>				
Preliminary Engineering Total	\$ 100,968,646	\$ 100,730,999	\$ -	\$ 100,730,999
<b>Airports Authority Services</b>				
General Conditions <sup>4</sup>	\$ 28,879,153	\$ 5,819,010	\$ 21,885,273	\$ 27,704,283
Airports Authority Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 21,056,434	\$ 24,984,359	\$ 46,040,793
Project Management Support	\$ 90,004,649	\$ 76,977,730	\$ 40,428,883	\$ 117,406,613
Airports Authority Services Total	\$ 142,109,519	\$ 103,853,174	\$ 87,298,516	\$ 191,151,690
<b>Contingency<sup>5</sup></b>				
Contingency Total	\$ 297,762,579		\$ 91,204,961	\$ 91,204,961
<b>Finance Costs</b>				
Finance Costs Total	\$ 509,984,571	\$ 47,799,694	\$ 462,184,877	\$ 509,984,571
<b>Total Federal (FFGA Scope)</b>	\$ 3,142,471,634	\$ 1,303,803,406	\$ 1,838,668,228	\$ 3,142,471,634
<b>INTERRELATED HIGHWAY IMPROVEMENTS</b>				
<b>Design-Build</b>				
Firm Fixed Price - Engineering	\$ 5,929,082	\$ 9,197,408	\$ 18,745,860	\$ 27,943,268
Firm Fixed Price Insurance and Bonds	\$ 2,889,450	\$ 947,843	\$ 142,235	\$ 1,090,078
Firm Fixed Price Subtotal	\$ 8,818,532	\$ 10,145,252	\$ 18,888,094	\$ 29,033,346
Subcontract Allowance	\$ 18,854,682	\$ -	\$ 18,854,682	\$ 18,854,682
Design-Build Contract Total	\$ 27,673,214	\$ 10,145,252	\$ 37,742,776	\$ 47,888,027
<b>Utility Relocation</b>				
Utility Work	\$ 31,552,369	\$ 36,374,720	\$ 3,661,951	\$ 40,036,672
Terf Tax		\$ -	\$ -	\$ -
Project Management and Final Design	\$ 4,727,549	\$ 7,950,620	\$ 589,492	\$ 8,540,111
Utility Relocation Total	\$ 36,279,918	\$ 44,325,340	\$ 4,251,443	\$ 48,576,783
<b>Right of Way</b>				
Right Of Way Total	\$ 44,772,663	\$ 17,891,220	\$ 3,508,766	\$ 21,399,987
<b>Airports Authority Services</b>				
General Conditions <sup>4</sup>		\$ 1,306,585	\$ 356,444	\$ 1,663,029
Airports Authority Services Total	\$ -	\$ 1,306,585	\$ 356,444	\$ 1,663,029
<b>Contingency<sup>5</sup></b>				
Contingency Total	\$ 14,482,435	\$ -	\$ 3,680,403	\$ 3,680,403
<b>Total Interrelated Highway Improvements</b>	\$ 123,208,229	\$ 73,668,397	\$ 49,539,832	\$ 123,208,229
<b>TOTAL PROJECT COST</b>	\$ 3,265,679,863	\$ 1,377,471,803	\$ 1,888,208,060	\$ 3,265,679,863

1 Reflects Paid costs through May 25, 2011.

2 Preliminary Engineering Period (PE) - Prior to August 1, 2007.

3 Preliminary Engineering actuals have been agreed to be \$100,730,999. This is \$237,646 under the original budget of \$100,968,646. The under run is transferred to unallocated contingency.

4 The line item marked General Conditions includes Temporary Facilities Development, Hazardous Material Remediation, Miscellaneous Access Roads and Wiehle Avenue Garage.

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

### c. Project Funding Sources: May 2011

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE <sup>1</sup>	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
<b>Sec 5309 New Starts Federal Funds</b>						
Preliminary Engineering Grants			\$ 54,412,526	\$ 54,412,526	100%	\$ -
Final Design Grant	VA-03-0113-00		\$ 159,001,838	\$ 159,001,838	100%	\$ -
ARRA Construction Grant	VA-36-0001-00		\$ 77,260,000	\$ 77,260,000	100%	\$ -
FFGA Construction Grant	VA-03-0113-02		\$ 28,809,000	\$ 28,809,000	100%	\$ -
FFGA Construction Grant	VA-03-0113-03		\$ 85,000,000	\$ 85,000,000	100%	\$ -
FFGA Construction Grant (amendment for FTA review)	VA-03-0113-04		\$ 19,799,000		0%	\$ 19,799,000
FFGA Balance	Planned		\$ 475,717,636	\$ -	0%	\$ 475,717,636
<b>Subtotal - New Starts</b>		<b>28.64%</b>	<b>\$ 900,000,000</b>	<b>\$ 404,483,364</b>	<b>44.94%</b>	<b>\$ 495,516,636</b>
<b>Other Federal Funds</b>						
<b>Sec 5307 Surface Transportation Program</b>						
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 47,218,109	100%	\$ -
Construction Grant	VA-95-X056-02		\$ 21,281,890	\$ 8,562,331	40%	\$ 12,719,559
STP Balance	Planned		\$ 6,500,001	\$ -	0%	\$ 6,500,001
<b>STP/Sec. 5307</b>		<b>2.39%</b>	<b>\$ 75,000,000</b>	<b>\$ 55,780,440</b>	<b>74%</b>	<b>\$ 19,219,560</b>
<b>Local Funds</b>						
VTA 2000			\$ 51,700,000	\$ 51,700,000	100%	\$ -
Commonwealth Transportation Bonds <sup>2</sup>			\$ 125,000,000	\$ 113,433,213	91%	\$ 11,566,787
Fairfax County Funds <sup>3</sup>			\$ 523,750,000	\$ 94,000,000	18%	\$ 429,750,000
Dulles Toll Road Revenues <sup>2,4</sup>			\$ 1,467,021,634	\$ 584,406,390	40%	\$ 882,615,244
<b>Subtotal - Local Funds</b>		<b>68.97%</b>	<b>\$ 2,167,471,634</b>	<b>\$ 843,539,602</b>	<b>38.92%</b>	<b>\$ 1,323,932,032</b>
<b>Total Project Budget</b>		<b>100%</b>	<b>\$ 3,142,471,634</b>	<b>\$ 1,303,803,406</b>	<b>41.49%</b>	<b>\$ 1,838,668,228</b>
<b>Interrelated Highway Activities</b>						
			\$ 123,208,229	\$ 73,668,397	59.79%	\$ 49,539,832
<b>DTR Revenues/Commonwealth Funds<sup>3</sup></b>			<b>\$ 123,208,229</b>	<b>\$ 73,668,397</b>	<b>59.79%</b>	<b>\$ 49,539,832</b>
		<b>TOTAL</b>	<b>\$ 3,265,679,863</b>	<b>\$ 1,377,471,803</b>	<b>42.18%</b>	<b>\$ 1,888,208,060</b>

1 Reflects costs through May 2011.

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.

## 6. Project Risks

In August 2008, the PMOC was directed by the FTA to resume the risk process and to prepare a report that combines the requirements of PG-40: Subtasks PG-40E, PG-40F, and PG-40G. These subtasks are to identify the framework for primary and secondary mitigation of project cost and schedule. A draft PG-40EFG report was prepared and the Risk Register was updated. The documents were shared with MWAA and a workshop was held on August 26-27, 2008 to review the Risk Register, reach a consensus on the top ten costs and schedule risks and to identify MWAA's cost, schedule and secondary mitigation procedures. The PMOC issued the Final PG-40EFG spot report on October 6, 2008.

Through May 25, 2011, MWAA reports that it has utilized \$171,244,674 of the available authorized federal contingency of \$200,000,000 for Contingency Phases 1 through 5. The contingency utilization reflects expended and obligated costs. Phases 1 and 2 were to carry the Project through the completion of stations design, which was anticipated to have been completed by the end of the third quarter of 2009. The completion of stations design is now anticipated

during the second quarter of 2011. *DGS permits have now been received for all stations.* Phase 3 would complete the Utility Relocation Program now anticipated to be fully complete in the third quarter of 2011. MWAA reports that it has \$35,312,946 obligated from Phase 6 through 10 monies. Of the total project contingency of \$297,762,579, the project has \$91,204,959 available.

New Top Ten Risks as identified from the draft Risk Assessment were included in the handouts for this Monthly Update Meeting and *are being* reviewed by the FTA and PMOC. It is anticipated that once agreed upon, the Top Ten Risks as identified from the Risk Analysis would replace those previously reported. MWAA will complete the RCMP upon incorporation of PMOC review comments, if any. MWAA continues to monitor the risk status and reports this information on a monthly basis.

With regard to Schedule Contingency, MWAA and DTP agreed to a zero loss recovery schedule with a data date of December 25, 2010. This conditionally approved recovery schedule has a mitigation period of fourteen months, extending from January 2011 through February 2012 to recover 113 calendar days of the total of 510 calendar days. Schedule contingency is 445 calendar days, based upon the *May 25* schedule update.

The following are the Project’s current top 10 cost and schedule risks, along with their status.

### Top 10 Project Risks

Risk No.	Risk Description	SCC Reference	Risk Category		Status (Change from Previous Month)
			Cost	Sched	
M-21	Allowance items- a substantial part of the contract price is tied to “Allowance Subcontracts.” There is potential risk for increased project cost and schedule if the actual subcontracts exceed the allocated cost and schedule components in the contract.	10, 20, 30, 40, 50	X	X	Unchanged. Twenty-two of thirty-five sub-contract packages have been awarded to date. The variance of the awarded cost versus allowance budget is \$44.74 million. A sharp increase is expected in the coming quarter.
C-8	NATM tunnel–there are a limited number of qualified tunneling contractors, unforeseen conditions, tunnel collapse, production rate slower than anticipated, and possible critical path delay.	10.07	X	X	Closed.
C-29	Soils Management – risk that costs for disposal of soil (clean and contaminated) may exceed budget.	40.1	X	X	Unchanged. Agreements with MWAA allow “clean” soils, which represent about 90% of all project soils to be transferred to Laydown Area #11, and management of contaminated soils is being mitigated as schedule progresses.

Risk No.	Risk Description	SCC Reference	Risk Category		Status (Change from Previous Month)
			Cost	Sched	
D-29	WFCY maintenance annex – Design constraints and WMATA requirements may erode the cost reductions anticipated.	30	X		Unchanged.
C-34	Utility companies performing utility relocation are not performing in accordance with the durations incorporated in the project schedule.	40.02	X	X	Schedule risk closed. Cost risk remains. (Replaced risk C-14.) Utility contractors have completed all critical relocation work in October 2010. As of May 25, 2011, five UR change orders remain under review.
M-16	Cost risk for vehicle procurement – size and timing of base order and options could change the car manufacturer’s interest in project and proposal pricing; vehicles may not be available in time for revenue operations.	20.01 20.02	X	X	Cost risk closed. Schedule risk remains. Bids were received on June 19, 2009. The WMATA Board awarded the contract to Kawasaki on July 27, 2010. NTP was issued on August 16, 2010. However, the conditional acceptance of the 64 <sup>th</sup> car for the Project, as contained in the bid, is not scheduled until January 15, 2015, which does not support Project needs. In addition, the earthquake/tsunami may delay the procurement further. PMOC requested MWAA to include a schedule risk since the schedule does not currently meet the FFGA date.
M-12	Unpredictability of ROW settlement costs.	10.04	X		Unchanged. Use of condemnation has increased the ROW costs.
C-20	WMATA scope of work, including site access support, technical support and WMATA construction elements may exceed the budget and schedule. In addition, there is the risk that WMATA will have difficulty supporting the DB contractor’s requirements.	10.00 20.00 50.00	X	X	Unchanged. Technical support for design has been generally provided in a timely manner. SSWPs required to access WMATA property are lengthy. There is potential risk with WMATA directing systems design upgrades for ATC, Traction Power and Communications systems.

Risk No.	Risk Description	SCC Reference	Risk Category Cost Sched		Status (Change from Previous Month)
D-19	Cost of Dominion Virginia Power (DVP) 34.5 kV distribution – Level of design is not typical of 100% PE design.	50.04	X		Unchanged. Design of ductbank that will contain 34.5 kV power the length of project has been completed and the ductbank construction continues. Design by DVP to bring power to project has not been completed.
D-27	Permit Approvals – Potential delays due to the Virginia Department of Transportation (VDOT) requiring their review/approval of final design plans prior to Issued for Proposal (IFP) submittals. Potential delays due to the Department of General Services (DGS) making design-related comments rather than strictly permit/code comments.	10.00 20.00 40.00	X	X	Unchanged. The issuance of construction permits is taking longer than anticipated and the contractor is claiming that its costs are increasing. The Six Sigma process improved turn-around time with VDOT. The VDOT requirement for final design plans prior to IFP submittals may increase the risk. In addition, DGS is making design-related comments rather than strictly code/permit evaluations.

## 7. Action Items

### MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
1	2B.01	Final Testing Plan for Re-used Piers (Feb. 2010)	MWAA approved the final testing plan (Rev 0) proposed by DTP for the Re-used Piers on March 30, 2010.	Y	Y	Y	DTP and CTI Final Reports and MWAA's audit of the findings and pier designs were submitted to the FTA, PMOC and WMATA on October 19, 2010 for review. The PMOC recommended that continuity testing data be submitted for all eleven newly constructed piers on existing pier foundations Three interim reports covering the acceptable continuity testing on ten of eleven piers were transmitted to the FTA by letters dated November 24, 2010, December 17, 2010 and January 24, 2011. Continuity testing of Pier 5B-OB was completed on June 8, 2011. The Airports Authority President and Chief Executive Officer sent a wrap-up letter to the FTA Administrator on April 8, 2011, stating that it had accepted the DTP Inspection and Test Program Final Report for Existing Pile Foundations. It also outlined follow-up testing to be performed with the anti-corrosion measures recommended by UTRS. A plan and schedule for conducting these remaining tasks will be forwarded to the FTA upon receipt and approval by the Airports Authority.	R

4	2A.03	Update Risk and Contingency Management Plan (RCMP) (October 2010)	The original Risk Management Plan was prepared in October 2008 and needs to be updated to reflect the current Project Status.	N	N	N	MWAA has engaged their Risk Management Consultant who has prepared a draft revised Risk Assessment (Analysis). The analysis was submitted to the FTA and PMOC on January 31, 2011. It is anticipated that once agreed upon, the Top Ten Risks as identified from the Risk Analysis will replace those previously reported MWAA submitted a draft "Risk Management Plan" on June 3, 2011. <i>The PMOC provided comments to MWAA on July 5, 2011. A meeting to discuss the comments was held on July 6, 2011. MWAA will edit the Plan and resubmit in two weeks. Upon incorporation of PMOC review comments, if any, the RCMP will be completed by MWAA.</i>	R
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**KEY ITEM**

Subtask 2A  
Subtask 2B

CLIN 0002A – PMP Review  
CLIN 0002 – On-Site Monitoring

**LEGEND**

**PRIORITY (PR)**

1- Most Critical  
2- Critical  
3- Least Critical

**GRANTEE ACTION**

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

**PMO CONTRACTOR STATUS**

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

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

# APPENDICES

## APPENDIX A – LIST OF ACRONYMS

AAC	Agreement After Certificate
AMEP	Architectural/Mechanical/Electrical/Plumbing
ARRA	American Reinvestment and Recovery Act
ASSHTO	American Association of State Highway and Transportation Officials
BFMP	Bus Fleet Management Plan
CAR	Corrective Action Request
CCC	Construction/Procurement/Installation Conformance Checklist
CD	Calendar Days
CPM	Critical Path Method
CTI	CTI Consultants, Inc.
CY	Calendar Year
DB	Design-Build
DCC	Design Conformance Checklist
DCN	Design Change Notice
DGS	(Virginia) Department of General Services
DIAAH	Dulles International Airport Access Highway
DR	Deficiency Report
DTP	Dulles Transit Partners, LLC
DTR	Dulles Toll Road
DVP	Dominion Virginia Power
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FTE	Full Time Equivalent
FY	Fiscal Year
HOT	High Occupancy Toll
IFC	Issued For Construction
IFP	Issued for Proposal
IRR	Issue Requiring Resolution
KSA	KSA, INC – Producer of Concrete Crossties
MH	Manhole
MCI	A communication company now owned by Verizon
MEP	Mechanical, Electrical and Plumbing
MOT	Maintenance of Traffic
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
ORD	Operational Readiness Date
PDA	Pile Driving Analysis
PDR	Preliminary Design Review (7K Railcars)
PE	Preliminary Engineering
PMOC	Project Management Oversight Contractor
PMSS	Project Management Support Services
PMP	Project Management Plan
QA	Quality Assurance
QC	Quality Control

QPP	Quality Program Plan
RAMP	Real Estate Acquisition Management Plan
RCMP	Risk and Contingency Management Plan
RFMP	Rail Fleet Management Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROE	Right-of-Entry
ROW	Right-of-Way
SAIC	Scientific Applications International Corporation
SCC	Standard Cost Category
SCIL	Safety and Security Certifiable Items List
SOE	Support of Excavation
SSCD	Scheduled Substantial Completion Date
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan
STP	Surface Transportation Program
TBD	To Be Determined
TOC	Tri-state Oversight Committee
TPSS	Traction Power Substation
UR	Utility Relocation
VDOT	Virginia Department of Transportation
W&OD	Washington and Old Dominion
WFC	West Falls Church
WFCY	West Falls Church Yard
WMATA	Washington Metropolitan Area Transit Authority
XO	Executive Officer

## APPENDIX B -- PROJECT OVERVIEW AND MAP

### Project Overview

**Date:** July 20, 2011 (*reporting current through June 2011- Financials through May 2011*)

**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.

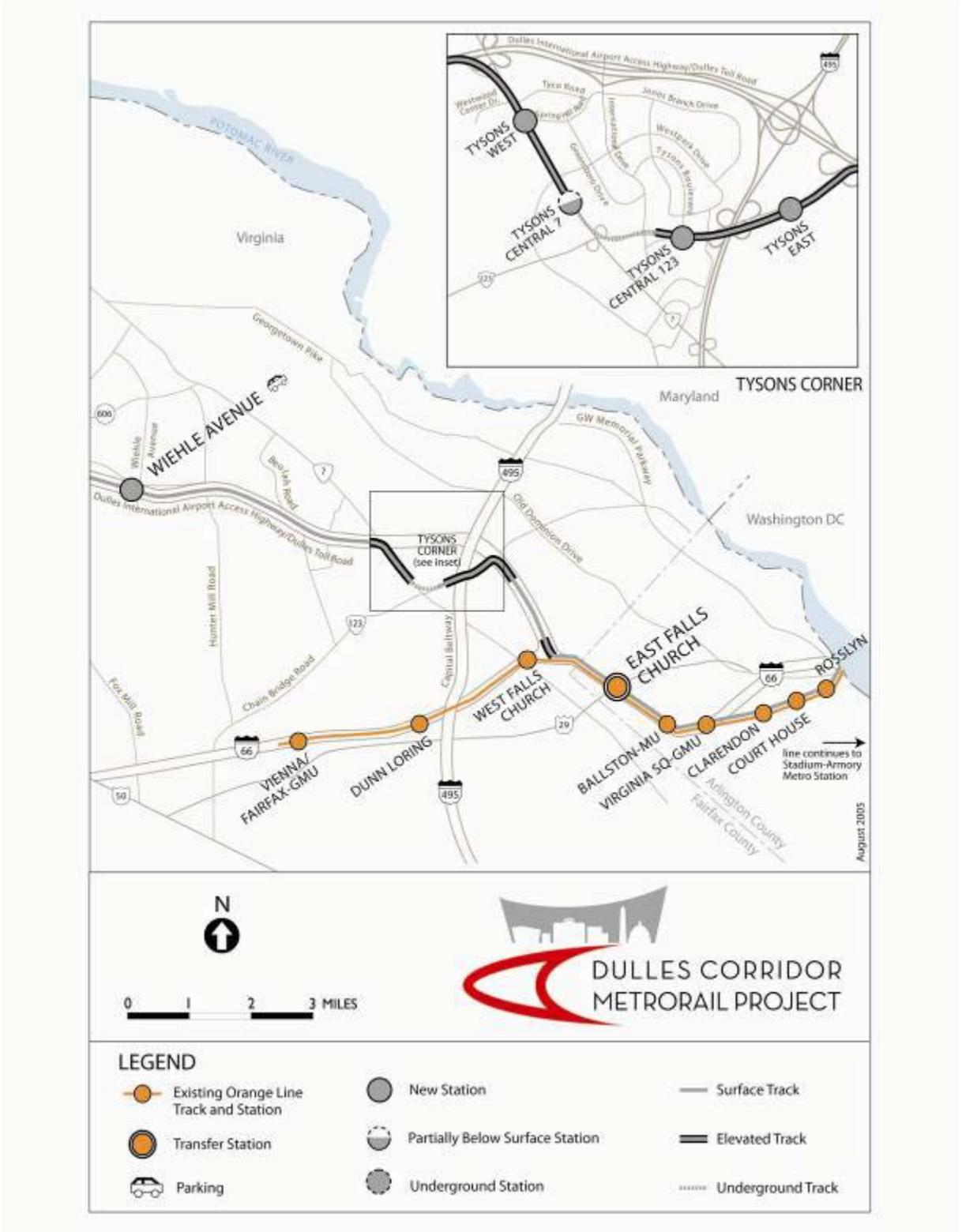
### Schedule

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
02/23/14	Revenue Operations Date (ROD) <i>as of May 25, 2011</i>		
42.0%	Percent Complete Construction <i>as of June 30, 2011.</i>		
40.3%	Percent Complete Time based on ROD of December 1, 2014 (based on FFGA)		
52.71%	MWAA's Estimate of Project Earned Value through <i>May 2010</i>		

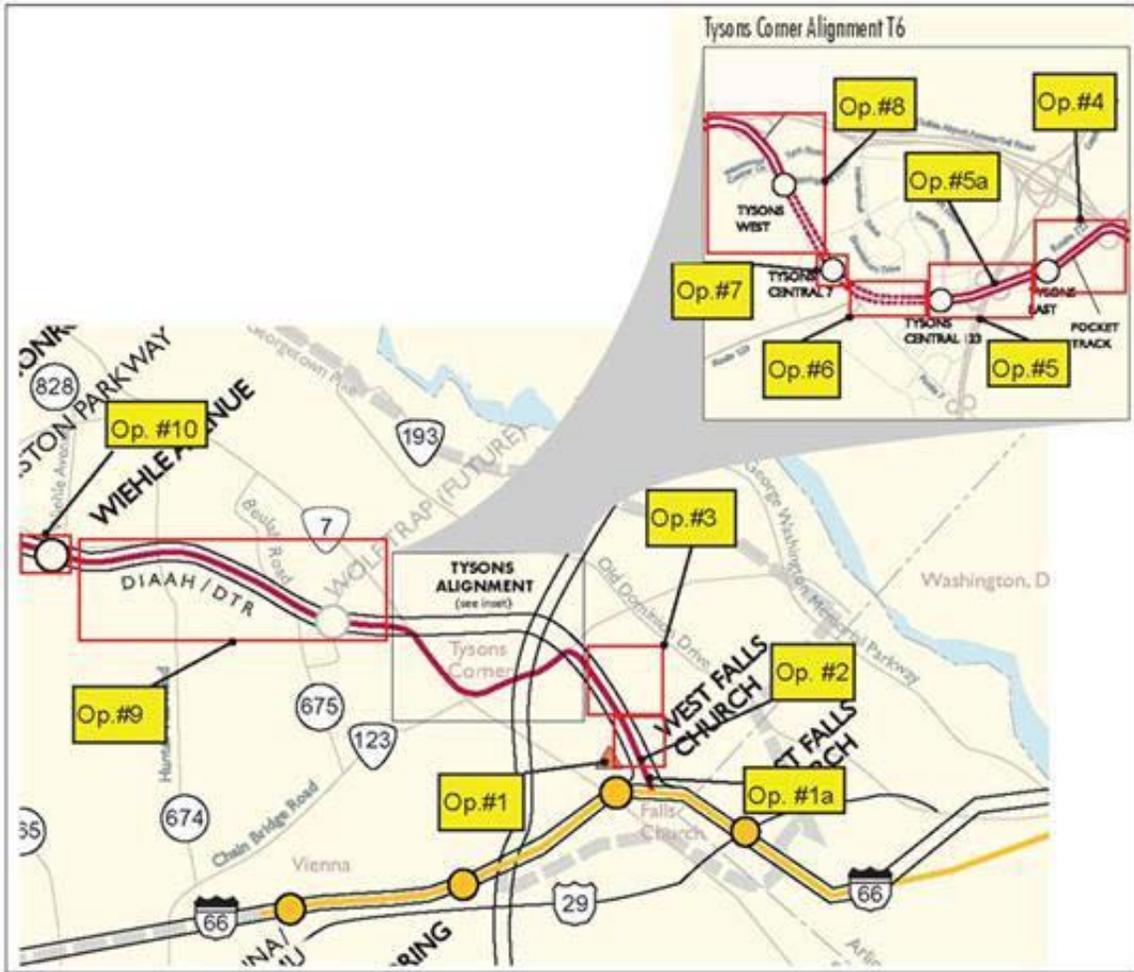
**Cost**

\$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
\$1.303 billion	Expenditures through <i>May 2010</i> from total project budget of \$3.142 billion
41.0%	Percent complete based on <i>federal</i> expenditures through <i>May 2011</i> .
\$91.205 million	Total project contingency remaining (allocated and unallocated) through <i>May 2011</i> .

# Project Map



**Construction Operational Areas**



**APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST**

<b>Project Overview</b>	<b>Dulles Corridor Metrorail Project</b>		
Project Mode (Rail, Bus, BRT, multimode)	Rail		
Project Phase (Preliminary Engineering, Design, Construction, or Start-up)	Design and Construction		
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGG, etc)	Design/Build		
<b>Project Plans</b>	<i>Version</i>	<i>Review By FTA</i>	<b>Status</b>
Safety and Security Management Plan	9/2009		Accepted
Safety and Security Certification Plan			Under development; 98% complete
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, which is under revision.

<b>Safety and Security Authority</b>	<b>Y/N</b>	<b>Notes/Status</b>
Is the grantee subject to 49 CFR Part 659 State Safety Oversight requirements?	Y	Tri-State Oversight Committee (TOC)
Has the State designated an oversight agency as per Part 659.9?	Y	Tri-State Oversight Committee (TOC)
Has the oversight agency reviewed and approved the grantee’s SSPP as per 659.17?	N	An updated WMATA SSPP dated January 20, 2011 was approved by TOC on February 22, 2011.

Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	Y	Approved on August 2, 2010
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	TOC had two representatives at the January 26, 2011 QPRM.
Has the grantee submitted its safety certification plan to the oversight agency?	N	Plan in progress. TOC participates in monthly meetings.
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	WMATA will be operator.

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

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, 98% complete.
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	Y	
Has the grantee issued final safety and security certification?	N	
Has the grantee issued the final safety and security verification report?	N	

<b>Construction Safety</b>	<b>Y/N</b>	<b>Notes/Status</b>
Does the grantee have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	
Does the grantee's contractor(s) have a documented company-wide safety and security program plan?	Y	DTP's Construction Safety, Health and Security Plan accepted on January 6, 2009.
Does the grantee's contractor(s) have a site-specific safety and security program plan?	Y	
Provide the grantee's OSHA statistics compared to the national average for the same type of work?	N	

If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?		
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	

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

**APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW**

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