

COMPREHENSIVE MONTHLY REPORT

APRIL 2010

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

May 21, 2010

PMOC Contract Number: DTFT60-09-D-00016

Task Order Number: 002, **Project Number:** DC-27-5142, **Work Order NO.** 01

OPs Referenced: 01, 25

Hill International, Inc.

One Penn Square West
30 South 15th Street
Philadelphia, PA 19102

PMOC Lead: [REDACTED]

Length of Time PMOC Assigned to Project: 9.5 years

Length of Time PMOC Lead Assigned to Project: 2 years

Executive Summary

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on *May 6, 2010 to conduct a monthly progress meeting* for work performed in *April 2010. The full time on-site PMOC attended various weekly project meetings throughout this reporting period and toured the construction site on a weekly basis.* 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 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. Based on the short-listed vehicle manufacturers' proposed schedules, the 64th car will be delivered by *April 1, 2014.* The Federal New Starts share is \$900 million for the Initial Operating Segment (extension to Wiehle Avenue). Through Federal fiscal year (FY) 2009, Congress has appropriated \$279 million in Section 5309 New Starts funds and \$77.3 million in American Reinvestment and Recovery Act (ARRA) Capital Investment funds.

The Project Map is located in Appendix B.

2. Project Status Summary

The PMOC met with MWAA on *May 6, 2010 to conduct a monthly progress update meeting* for work accomplished in *April 2010.*

Real estate acquisition continues to keep ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels.

Design progress continues to lag behind the baseline schedule but currently does not affect construction progress. Final Design of the stations was originally anticipated to be completed by the end of the third quarter of 2009. Final design of the station structures has been completed and submitted for review and coordination. Upon receipt and incorporation of all comments, these designs will be permitted and the structures will proceed on foundations already under construction. This design excludes the access pavilions and final bridge alignments subject to coordination with adjacent developers. Overall design completion of the five stations through "Issued for Construction" (IFC) drawings including pavilions is now anticipated to be completed

in the third quarter of the 2010. Overall project design is approaching 90% complete as of the end of *April* 2010. The project design is not currently affecting the schedule's critical path. MWAA needs to provide the PMOC with the impact on cost contingency as a result of finalizing station design. *MWAA reported that property owners adjacent to the station sites are requesting modifications to the design.*

Construction progress is broken into two components: utility relocation, which is 90% complete and design-build (DB) construction, which is approximately 12% complete. The majority of the utility companies are forecast to complete their work in late April 2010. Verizon is forecast to complete its work in late May and MCI is forecast to complete its work in late June. It is anticipated that an east-bound Route 7 road shift will occur in *late* May 2010. The west-bound Route 7 road shift is not scheduled to occur until late summer 2010.

The OP-1 Guideway is approximately 42% complete. The Tysons East Guideway/Station is approximately 26% complete and the NATM Tunnel is approximately 25% complete. Tysons East Station is approximately 5% complete and Tysons Central 123 Station is approximately 3% complete. The Wiehle Avenue Station is approximately 10% complete. The pre-cast yard is approximately 95% constructed and has cast 460 concrete box girders segments to date.

The Schedule continues to slip with the most current update (data date of *March 25, 2010*) showing an additional -29 day loss for a total -99 calendar days variance from the approved baseline schedule. This results in a projected ROD of *February 21, 2014*. *DTP* further shows in the *March* schedule, a West Falls Church Yard upgrade completion of *August 2014* which *has been* disconnected from the critical path since it is beyond the targeted ROD in the same schedule. *DTP* notes that *"the WFCY work will be excluded until design progression allows for a firm schedule for this work and resolution of commercial issues surrounding WFCY"*. MWAA continues to note that it does not agree with the critical paths presented by *DTP* as being reflective of the critical path of the Project. MWAA *continues* to meet with *DTP* to discuss the disagreement on the schedule's critical path *and excusable weather delays*. *However, no agreements have been reached to date*. MWAA anticipates that the discussion and agreement on the critical path will significantly lessen the 99 day loss currently shown on the schedule.

It *remains the* PMOC's opinion that recovery of the reported schedule losses is within the Project's ability via work-arounds and schedule adjustments. Therefore the Contract Completion Date is not considered to be in serious jeopardy at this time. However, the longer disagreement on critical path, *WFCY design and commercial issues* and other logic and delay issues continue, the greater is the risk of irretrievable schedule creep leading to costly schedule compression or constructive acceleration.

Budget status as of *March 25, 2010* indicates that \$638,015,933 (20%) has been expended of the \$3,142,471,634 budget total. *MWAA reports* \$65,398,828 of the available contingency for the first *three* contingency milestones has been utilized with a remaining balance of \$73,601,172 available through the completion of stations *civil design and utility relocation work*, both now anticipated to be completed by *July 2010*. *PMOC does not agree that the Phase 2 contingency milestone has been achieved, and is reviewing MWAA's draft justification paper dated April 20,*

2010, which was presented at the May 6th meeting. MWAA's estimate of the earned value for the Project through March 2010 is 30.7%.

3. PMOC's Assessment of Project Status

The PMOC continues to observe delays in the design development particularly with regard to station design and now with the systems designs. To date, this has had *no known* impact on the critical path. However, some of the late design packages are continuing to accumulate negative float on the *March* schedule. The impact on cost contingency for the complete station design *and utility completion* milestones has not been determined. MWAA continues to meet with DGS, VDOT, WMATA and DTP to coordinate and resolve the design and design review issues. MWAA's ongoing efforts *are* yielding progress.

Utility relocation continues with utility companies striving to meet the requirements of the Project. Efforts to recover lost time caused by harsh winter weather and unforeseen obstacles continues along the Route 7 corridor utilizing extra shifts, weekend work *and other mitigation efforts*. Completion of utility relocation work *continues to be* critical to the project's plans to shift the Route 7 roadway to support construction starts at Tysons Central 7 and Tysons West Station areas. The majority of these utility companies are forecast to complete their work by late *May or early June* 2010. Verizon is forecast to complete its work in *mid-June* and MCI is forecast to complete its work in *mid-July*. It is anticipated that an east-bound Route 7 road shift will occur in *late May* 2010. The west-bound Route 7 road shift is not scheduled to occur until late summer. The civil contractor and the utility contractors meet on a weekly basis to coordinate their efforts and priorities needed to support the upcoming roadway shifts.

The estimated Full Time Equivalent (FTE) total for *April* is 1,397, which is an increase from *March* of 134 and *reflects a slightly earlier ramp up in FTE's than originally planned*. The pre-casting facility has produced 460 of 2,600 pre-cast concrete girder segments. The New Austrian Tunneling Method (NATM) tunneling is on-schedule with the contractor completing 747 of 1,670 feet for the Outbound (OB) track and 507 of 1,686 feet for the Inbound (IB) track.

The final "Plan for Inspection and Testing of the Existing H Piles" (Rev.0) was approved by MWAA on March 30, 2010. The Pier 7 IB PDA testing was successfully completed on March 14, 2010. The PDA testing of seven remaining piers will be conducted during the three successive Orange Line track outages beginning on May 29, 2010. The remaining three piers requiring static load testing are expected to be completed in June 2010.

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1. Grantee's Capabilities & 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.

- **Project Staffing**

The recruitment effort to replace the Manager of Project Administration which *was* the only remaining vacancy in the MWAA Project organization has been completed. MWAA introduced the new Manager of Project Administration, Felicia Payne, at the March 31, 2010 QPRM. Ms. Payne started in mid-April.

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.

The updated project schedule with a data date of March 25, 2010 reflects a -99 calendar day variance with the contractor's baseline schedule with a Revenue Operations Date (ROD) of December 4, 2013. The current variance would result in a ROD of February 21, 2014. It is the PMOC's observation that MWAA continues to carefully scrutinize the schedule update submissions and meets with the contractor within two weeks of the schedule submission to discuss their observations and to discuss mitigation strategies with DTP. The FFGA ROD is December 1, 2014.

MWAA continues to monitor expenditures to date and update the estimate at completion. To date, MWAA has utilized \$65,398,828 of the Phase 1 and Phase 2 contingency total of \$99,000,000. Although MWAA has indicated that the project has progressed to the Phase 3 level of contingency, the PMOC does not agree. At the May 6, 2010, update meeting with MWAA, the Authority presented a justification for moving to the Phase 3 level of contingency. The PMOC is reviewing this document.

The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data. *Through March 2010, of the cumulative total of hours worked of 2,176,840, there have been no lost time events. The required sign-offs on the "System Safety/Security Certifiable Items List" (SCIL) continue to be a problem and are discussed further in section 2e of this report.* Revision 2 of the SCIL was distributed for review and comment on March 15, 2010.

MWAA continues to monitor the risk status and reports this information on a monthly basis.

c. Compliance

It is the PMOC's observation that MWAA *continues to* follow the required statutes, regulations and agreements.

- **Project Management Plan and Sub-plans**

MWAA's Project Management Plan (PMP), Version 6.0 dated September 26, 2008 has been accepted by the FTA. The PMOC did a compliance review of MWAA's compliance with the PMP and issued a Spot Report on December 8, 2009. MWAA is in the process of updating the PMP based on the PMOC's observations and the recent MWAA reorganization to an integrated MWAA and PMSS organization. MWAA anticipates completing the PMP update in late *May* 2010. The PMOC's various compliance reviews performed during 2009 have found MWAA to be in compliance with their various project plans and sub-plans.

- MWAA's Quality Program Plan (QPP), Revision 6, dated June 25, 2008 was accepted by the FTA 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'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 is in the process of addressing the comments *by revising Procedure PM-3.01(Monitoring the Design-Build Contractor Property Acquisition Services) and requesting DTP to revise their Procedure PIQ-5.1.*

- MWAA's Risk Management Plan (RMP) dated October 2008 has been reviewed and accepted by the FTA.

- Since WMATA, rather than MWAA, will be the operator of the completed project the WMATA Rail Fleet Management Plan (RFMP) is the applicable document. The FTA accepted the WMATA RFMP on September 25, 2007. However, WMATA has updated the RFMP to reflect the 7000 Series Cars' quad concept and has submitted a draft copy dated February 26, 2010 to the FTA for review and comment. WMATA plans to discuss the plan with its Board in May with a potential Board adoption in June 2010. 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.

- 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.

2. Project Scope

a. Bidding & Construction Status

- Utility relocation is 90% complete and DB construction is approximately 12% complete. Utility companies continue to relocate their facilities into the duct banks and facilities installed by MWAA's utility contractor. Utility companies are striving to meet the requirements of the Project. Efforts to recover lost time caused by harsh winter weather and unforeseen obstacles continues along the Route 7 corridor with extra shifts and weekend work. Completion of utility relocation work is critical to the project's plans to shift the Route 7 roadway to support construction starts at Tysons Central 7 and Tysons West Station areas. The majority of these utility companies are forecast to complete their work by late April 2010. Verizon is forecast to complete its work in late May and MCI is forecast to complete its work in late June. It is anticipated that an east-bound Route 7 road shift will occur in mid to late May 2010. The west-bound Route 7 road shift is not scheduled to occur until late summer. The civil contractor and the utility contractors meet on a weekly basis to coordinate their efforts and priorities needed to support the upcoming roadway shifts.
- Work continues on the completion of designs, with stations' designs continuing to lag. The problems with regard to stations design are due to a combination of poor quality control of the documents and lack of sufficient resources. MWAA and DTP have met with the various permitting agencies. MWAA has stressed to DTP the need for better quality assurance reviews of their submissions and is reviewing DTP's submissions before submitting them to the permitting agencies. Efforts are also *continuing* by VDOT and WMATA to improve the design review cycle times. Overall basic design for all five stations is reported as complete. However, the "Issued for Permit" (IFP) and subsequent "Issued for Construction" (IFC) drawings are proving to be a drawn out process. *Anticipated submission dates for IFP drawings to VDOT now range from April 26 through June 10 for all five stations. Anticipated issuance dates for IFC drawings now range from May 24, 2010 to July 9, 2010, with the latter date being for the last package for the Tysons Central 7 Station in the Engineering Deliverables Schedule. Issuance of IFC design packages has not yet impacted the project's critical path since DGS has been assisting with the permitting of partial packages. However, various design packages continue to accumulate negative float on the Project schedule. The impact on cost contingency for the complete station design milestone has not been determined.*
- Through *March 2010*, \$231,250,355 of the \$437,278,511 Federal Allowance Items Budget had been awarded to subcontractors and suppliers. *An \$11,870,978 overrun now exists for the 9 of 17 contracts awarded thus far for federal allowance. The remaining contingency for the applicable phase 1, 2 and 3 items is \$70,601,172.*

The following are the major accomplishments of the DB contractor:

- **Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1):** *DTP subcontractor Brayman completed caissons for piers 1-OB and 4-OB, bringing the total to twenty-eight caissons completed to date. One guideway column was poured at pier 6-OB bringing the total to twenty-five completed to date. Preparations for bearing pedestals continued at abutment B-IB and OB and at piers 19-IB, 20-IB and 16-OB. Demolition of the existing pier foundations at pier 6-IB on the WMATA side of I-66 and 5B-OB on the westbound shoulder of I-66 continued. DTP completed the existing pier 7-IB foundation demolition and existing H-pile testing. The installation of additional new H-piles and the setting of new foundation and column rebar continue. Preparation of abutments A and B Bridge deck bearings at Magarity Road Bridge continued. The pouring of concrete for the intermediate pier at the Pimmit Run Bridge was completed, and the placement of concrete for abutment A on the east side continued. Excavation of the first three sections of the WFCY cut and cover tunnel on the median side of the EB Dulles Connector Road continued. The installation of the storm drain east of Pimmit Run continued.*
- **Operations Area OP-4 (Tysons East Guideway/Station):** *Subcontractor completed Tysons East Guideway caissons at piers 15-OB, 16-IB/OB, 20-IB/OB and 26-IB and pile caps for piers 7-IB, 8-IB, 9-IB/OB, 10-IB/OB, 11-IB/OB, 18-IB/OB and 22-IB/OB. Tysons East Guideway pier caps were poured for piers 6-IB/OB and 19-IB/OB. Assembly continued on the segmental erection truss girder crane in the DCR median east of Chain Bridge Road. Tysons East Station caissons at piers 32-OB and 33-OB were completed and subcontractor began forming and placing rebar for the pile caps.*
- **Operations Area 5A (I-495 Crossing/Tysons Central 123 Station):** *Subcontractor completed caissons for piers 64-OB, 65-OB, 65-IB, 66-OB and 66-IB and poured columns for piers 52-OB, 52-IB, 58-IB/OB and 59-IB/OB. Installation of Support of Excavation (SOE) and excavation at the Tysons Central 123 Station continued.*
- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure):** *DTP continued excavation of the OB tunnel completing 747 feet of 1,670 feet to date and the excavation of the IB tunnel completing 507 feet of 1,686 feet to date.*
- **Operations Area OP-6 (West Cut and Cover Tunnel):** *DTP completed excavation of stage 1B-IB/OB. Invert slab for stage 1B-OB was completed and walls and roof forming continue. Installation of waterproofing and pouring of IB tunnel invert slabs also continue.*
- **Operations Area OP-7 (Tysons Central 7 Station):** *The subcontractor completed the retaining wall and drainage piping at the Pikes 7 Shopping Center and west of Gosnell Road. The final grading at the south side of the Route 7 service road continues in preparation for the road shift. Curb and gutter concrete pouring from Best Buy to Marshalls continues on the south side of Route 7.*

- **Operations Area OP-9 (DIAAH):** *DTP grading work continues for retention ponds 1, 5, 6 and 10 adjacent to the Toll Road. Installation of abutment A piles and west intermediate pier piles continues at the W&OB Bridge. Abutment piles on the west side of the Hunter Mill Road Bridge were completed and the east abutment pile installation continues. Construction of the retaining walls on the IB and OB side west of Wiehle Avenue continues, as does clearing and grading work west of Hunter Mill Road.*

Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13): *Subcontractor completed twenty-seven pile caps which completes all of the two and three caisson pile caps. Forming and pouring of the station columns continues, and the placement of pile caps for the pedestrian bridge has begun. The pouring of new concrete barrier walls on the EB Toll Road side continues in preparation for the DIAAH road shift. Subcontractor also began installation of the underground sanitary sewer lines at the Station.*

- **Laydown Area #10 (Pre-cast Yard):** *Casting of segmental box girders continued with 460 completed to date. Preparation of the long line station segment casting area continues.*

b. Third Party Coordination & Agreement Status

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

- Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *April 2010*, 59 of the 99 parcels required for the Project have been acquired.

The table below summarizes acquisition activities for the Project through *April 2010*.

PARCELS ACQUIRED¹
(Number of parcel packages)

LOCATIONS	TOTAL	Period			To Date		
		Planned ²	Actual	Var	Planned ²	Actual	Var
Route 66 / Dulles Connector	1	0	0	0	1	1	0
Route 123	23	0	0	0	19	19	0
Route 7	51	3	0	(3)	36	33	(3)
DIAAH	24	0	0	0	6	6	0
TOTAL	99	3	0	(3)	62	59	(3)

- Notes:
1. Parcels secured through recordation of deed/easement and filing of Certificates of Take. These values do not include rights obtained for another 27 parcels for which Certificates of Take have been filed.
 2. Planned values are based on the March 31, 2010 Property Acquisition Status Update.

c. 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 in April 2010 includes the following:

- **Along Route 7 (Marshall's to Gosnell/Westpark)** – DTP/Lane completed installing the 34.5kV by-pass ductbank and manholes at SAIC. MCI completed lowering cables on the south side between the service road and Route 7, and continues to pull cables in the ductbank at SAIC. The City of Falls Church water service line relocation was completed.
- **Along Route 7 (Gosnell/Westpark to Spring Hill Road)** – TCG Virginia continues splicing cables on the north side of Route 7. Verizon completed installing segment 4 conduits and cables east of Spring Hill Road on the north side. AboveNet continues cable installations on the south side of Route 7 and XO completed tie-ins to ductbanks west of Gosnell Road and continues pulling cables. Quest Government completed pulling cables at Westpark and Gosnell Road. TCG Virginia completed cable installations and splicing on the north side of Route 7. DTP/Lane continues installing the water main on Spring Hill Road north of Route 7. Verizon completed the installation of conduits and cables at the Container Store on the north side of Route 7 and continues splicing activities. Level 3 completed cable installations at Gosnell Road. Dominion Virginia Power (DVP) started ductbank tie-ins at Phase 4 on the north side of Route 7.
- **Along Route 7 (Spring Hill Road to Tyco/Westwood)** – The service road was restored from Spring Hill Road to the Mercedes Dealership, and DTP/Lane completed the installation of the 34.5 kV bypass ductbank at the Aston-Martin Dealership on the south side of Route 7. Cox Communications completed cable installations and continues splicing activities. Dominion Virginia Power completed cable installations and switch pads on the north and south sides of Route 7. TW Telecom completed cable installations on the north side of Route 7, and Fibergate completed cable splicing and cutover of their system.
- **Along Route 7 (Tyco/Westwood to Route 267/Toll Road)** – Verizon completed installing copper cables as part of segment 4 and continues with pedestal installation at Koon's Toyota. Dominion Virginia Power completed pulling cable on the north side of Route 7 and completed installation of switch transformer pads on the north and south sides of Route 7. DTP/Lane continues the installation of 34.5 kV bypass ductbank in front of the Design Center on the south side of Route 7. MCI continues installing inner duct and cables on Route 7. DVP continues tie-in of ductbank west of the Toll Road.
- **Along Route 123 (Route 7 to the Route 267 Connector Road)** – DTP/Lane continues installing electrical ductbank at Colshire Drive and Route 123. AboveNet continues cable installations at Scotts Crossing and Colshire Drive. Verizon completed installation of cables at Scotts Crossing and is preparing to start splicing work.
- **The DIAAH/Dulles Toll Road (Route 7 to Route 267 – DIAAH West)** – DTP/Lane completed jack and bore crossing #157 east of Hunter Mill Road at TPSS #9, and

completed the jack and bore crossing #160 at EB Toll Road just west of Route 7. DTP/Lane also continued traction power ductbank installation in the median between the EB Toll Road and the DIAAH east of Beulah Road, and continued traction power ductbank installations east of Hunter Mill Road. Dominion Virginia Power completed raising the overhead lines at Hunter Mill Road.

d. Vehicle Procurement

WMATA is acquiring the 64 vehicles required for the project. Negotiations have been proceeding with the three proposers selected to submit best and final offers. The WMATA Board chose not to act on the recommendation to award during their March 25, 2010 Board meeting. It is now anticipated that the WMATA Board will review the recommendation again during their *May 2010* Board meeting. MWAA expressed concern that this delay could potentially have an adverse impact on the ROD and plans further discussions with WMATA. MWAA also voiced disagreement with the Project's bearing all the design and prototype related cost for the 300 additional cars that WMATA is purchasing under the same procurement. MWAA CEO Bennett wrote to WMATA GM Sarles on April 7 regarding this matter. MWAA and WMATA plan to discuss this matter further. The schedule requires the last (64th) car to be delivered by September 20, 2013. However, WMATA's presentation to their Board indicated that the delivery of the 64th vehicle is April 1, 2014 (based on a March 26, 2010 award date).

e. Safety & Quality Status

The Airports Authority participated in *five* safety walk downs with DTP during the month of *April*. One was related to utility relocation and four were related to Design-Build work. As of March 31, 2010, DTP had logged a total of 2.2 million project man hours with 56 first aid cases and no lost time cases. There were a total of 97 incident investigation reports, 62 utility hits and 13 vehicular accidents

Revision 2 of the SCIL was distributed for review to the Airports Authority and WMATA on March 16, 2010 with a comment response request date of April 9, 2010. *No responses have been received to date.*

Design Conformance Checklist corrective action by DTP has continued to lag behind schedule. Two 90-day (September 2009 and December 2009) submittals of completed design conformance checklist items were submitted by DTP. Random samplings of items from both submittals were reviewed. As a result of these reviews, both samples failed and were returned to DTP for correction. DTP took no action for several months. On April 13, 2010, MWAA and DTP met to discuss disagreements on the checklist sign-off requirements. Some progress was made and a re-submittal of the two previously rejected design conformance checklists occurred on April 21, 2010 and is currently under review. A third design conformance checklist submittal is overdue. On April 27, 2010, DTP submitted its first 90-day Construction, Procurement and Installation Checklist. No items have been signed-off to date.

The DTP System Safety/Security Certification Management Plan requires Design Conformance Checklist items to be signed-off by DTP Engineering as designs are issued for construction. During the Airports Authority audit of DTP Safety and Security, conducted on

April 26 -27, 2010, it was determined that DTP is not currently tracking design sign-offs nor is this occurring with a consistent follow-up process. The Airports Authority is concerned that completion of the Design Conformance Checklist will continue to lag behind and the PMOC shares that concern.

It is the PMOC's opinion that if the Design Conformance Checklist sign-offs continue to drop behind the issuance of corresponding IFC drawings the intended purpose of the Checklist will have been compromised. It is also the PMOC's opinion that DTP management will need to step in and require the DTP engineering department to take the sign-off process more seriously. This may require the assignment of a DTP employee who has the necessary authority to insist on cooperation between the Engineering and Construction Departments. It appears that DTP's Safety and Security Manager, who is a capable SCIL Manager, still lacks the necessary authority to obtain the requisite cooperation.

The Tri-state Oversight Committee (TOC) continues to meet monthly with the Safety/Security Certification Working Group and continues ongoing involvement in the certification process.

MWAA's QA group continues to monitor DTP's quality program and maintains a schedule of audits and surveillances. In addition, MWAA continues to perform safety walk downs with DTP.

During April 2010 the following QA audits/surveillances were performed:

- *Truland Walker/Seal (Communications) was audited on April 7 and 8, 2010. There were nine observations and MWAA/DTP currently awaits a response.*
- *DTP QA, Document Control and Training were audited on April 14 -16, 2010. There were five issues. One issue has been closed and MWAA awaits a further response.*
- *DTP System Safety & Security was audited on April 26 and 27, 2010. There were five issues. The MWAA report is being prepared.*
- *DTP Construction & QC was audited on April 22 and 23, 2010. There were nine issues and MWAA awaits a response.*
- *DTP Engineering was audited on April 27 and 28, 2010. There were three issues. The MWAA Report is being prepared.*

The QA Audit and Surveillance Schedule through June 2010 as follows:

Tentative Date	Audit (A) Surveillance (S)	Organization/Activity	Joint Audit/ Surv.	Lead
5/4/10	S	Marshall Miller Construction Safety	N	MWAA
5/5-6/10	A	<i>Facchina Construction Safety Program</i>	Y	MWAA
5/12/10	S	DTP Subcontractor/Supplier Submittal Process: DTP Nonconformance Control System	N	MWAA
5/19 –20/10	A	Alstom Signaling	Y	DTP
5/26/10	S	DTP Subcontractor Construction Safety	N	MWAA
6/9/10	S	DuBrook Concrete	Y	MWAA
6/9-10/10	A	Rizzoni De Eccher Construction Safety Program	Y	MWAA
6/16/10	S	<i>Internal surveillance of implementation of PM-5.05</i>	N	MWAA
6/23 –24/10	A	Rizzoni De Eccher QA Program	Y	DTP

3. Project Schedule

The most recent analyzed project schedule update has a data date of *March 25, 2010*. The primary critical path identified by DTP reflects a -99 calendar day variance in the achievement of the SSCD from that reflected in the approved Baseline Schedule. This variance reflects a deterioration of -29 calendar days since the previous schedule update.

The critical path this period originates with the Verizon Business (MCI) utility relocation in the vicinity of Tysons West Station and progresses through the temporary shift of Route 7 to facilitate the construction of the Tysons West Station. The project team mitigation strategy is to use a lift-lay approach for the existing cable into a deep trench excavation as an immediate, temporary measure. This allows DTP’s C-6 Early Roadway subcontractor to proceed with curb and gutter and drainage work approximately four weeks earlier than previously forecasted. This represents a 16-calendar day improvement to the SSCD forecast since the previous monthly update. The critical path now shifts to the Level 3 Communication relocation work along Route 7 in the vicinity of the Tysons West Station.

The above noted work-around has had a positive impact upon the schedule. The unanalyzed schedule with a data date of April 25, 2010 shows a 16-day improvement to the SSCD date reflected as October 22, 2013. It shows an improvement to the shift traffic dates at both locations along Route 7. The Route 7 detour at the Tysons Central 7 Station area is now forecasted to occur by May 21, 2010, an improvement of 12 days from the previous month. The Route 7 detour at the Tysons West Station area is now forecast to occur by August 20, 2010, an improvement of 18 days from the previous month.

However, with the mitigation efforts noted above, DTP states that the critical path now originates with the Level 3 Communication relocation work along Route 7 in the vicinity of the Tysons West Station. DTP recently learned from the Level 3 Communication Project Manager that the hybrid 864-count fiber cable was missed on their cable order and is not readily available. The estimated delivery and installation time has pushed back the completion date

from May 1, 2010 to June 24, 2010. DTP and Level 3 are investigating options to expedite this work to avoid an adverse ripple effect to the scheduled August 20, 2010 Route 7 detour in the Tysons West Station area.

The WFC Yard upgrade work has now been incorporated into the schedule and now reflects a completion of the full facility in October 2014 as compared to the April 2014 completion date forecast last month; however, this work is still disconnected from the SSCD. In April, DTP provided the following response to MWAA's previous review comment on the February Schedule: "DTP has previously advised MWAA that the WFCY schedule will be excluded from the Project SSCD due to the delay imposed on the WFCY work. Until design progression allows for a firm schedule for this work and resolution of the commercial issues surrounding the WFCY, DTP's position remains unchanged. Therefore, the MWAA/PMSS suggestion that the WFCY is the primary critical path is not valid." MWAA has previously stated its disagreement with DTP's completion date in light of the incomplete WFCY scope.

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

- Segmental girder changes for I-495 crossing/schedule conflict with HOT Lanes Project.
- Utility companies meeting the project schedule.
- Utility company redesign/relocation due to interference/conflicts with HOT Lanes Project.
- WFCY Yard design, construction and commissioning.
- Weather Delays.

MWAA previously notified DTP that changes to the critical path from one monthly update to the next must be agreed upon. DTP has been requested to develop a procedure that allows this to occur prior to the monthly update. The resolution is that changes to the critical path agreed upon at the joint monthly update review meeting will have to be incorporated prior to the tenth day of the month pursuant to Division 1, Section 01322, and part 2.03.D of the contract specifications.

Bi-weekly meetings held between MWAA and DTP with regard to the schedule and schedule mitigation efforts *continue* to yield work-arounds and some increased shifts, particularly with regard to the late UR work, VDOT MOT *approvals* and design package reviews. It is the PMOC's opinion that MWAA is maintaining control over the Project master schedule, *with the exception of the WFCY that continues to be of concern relative to meeting the scheduled Project Operational Readiness Date (ORD).* In addition, the critical path, the weather delays and schedule logic issues are yet to be resolved. *Also, MWAA and DTP continue to voice concern with WMATA's and VDOT's abilities to provide timely design review comments.*

It *remains* the PMOC's opinion that recovery of the reported schedule losses is within the Project's ability via work-arounds and schedule adjustments. *However, the October 2014 scheduled completion date (real or not) for the WFCY is a growing concern. The longer the disagreements regarding critical path, logic and delay issues continue, the greater is the risk of irretrievable schedule creep leading to costly schedule compression or constructive acceleration.*

a. Critical Path Evaluation

The PMOC agrees with MWAA's assessment regarding the critical path. A greater effort needs to be put forth to resolve the critical path differences and schedule logic errors *and issues relative to the WFCY scheduled completion date.*

b. Important Activities – 90 Day Look Ahead

The important milestones that are expected to be completed during the next 90 – days include the following:

- Completion of the engineering for the K-Line Tie-in (OP-1),
- Completion of the engineering for the Cut and Cover Tunnel(OP-2),
- Completion of the engineering for Tysons East Station (OP-4),
- Completion of the engineering for Tysons *Central 123 Station* (OP-5).
- Completion of the engineering for NATM Tunnel (OP-6),
- Completion of utility relocation and engineering for Tysons Central 7 Station (OP-7).
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).
- Completion of the engineering for the Tysons West Station (OP-8).
- Completion of the Wiehle Avenue Station AMEP Design (OP-10)
- Award of the 7000 Series Rail Car contract.

4. Project Cost

The SCC Budget and Expenditures summary for the period ending *March 25, 2010* is as follows. Overall, approximately 20% of the budget has been expended through *March 25, 2010*.

FTA SCC CODE	DESCRIPTION	BASELINE BUDGET	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements	\$ 666,500,284	\$ 632,061,759	\$ 74,743,925	\$ 632,061,759
20	Stations	\$ 317,023,977	\$ 320,542,179	\$ 18,393,861	\$ 320,542,179
30	West Falls Church Yard	\$ 51,789,538	\$ 52,027,373	\$ 2,605,333	\$ 52,053,893
40	Site Work & Utility Relocation - PE ²	\$ 24,000	\$ 24,000	\$ 24,000	\$ 24,000
40	Site Work & Utility Relocation - FD ³	\$ 232,936,985	\$ 229,199,264	\$ 72,567,157	\$ 222,757,559
50	Systems – FD	\$ 278,157,645	\$ 283,412,073	\$ 23,342,111	\$ 281,014,545
60	Right of Way Acquisition – FD	\$ 45,953,303	\$ 45,953,303	\$ 48,168,616	\$ 70,207,408
70	Vehicles – PE	\$ 526,000	\$ 526,000	\$ 526,000	\$ 526,000
70	Vehicles – FD	\$ 211,103,775	\$ 211,103,775	\$ 5,751,288	\$ 210,400,012
80	Professional Service – PE	\$ 170,881,000	\$ 170,902,413	\$ 170,902,413	\$ 170,902,413
80	Professional Service – FD	\$ 527,590,480	\$ 545,190,434	\$ 220,990,229	\$ 557,098,159
90	Contingency Mgmt. Reserve	\$ 130,000,075	\$ 141,544,489	\$ -	\$ 114,899,136
100	Finance Charge	\$ 509,984,571	\$ 509,984,571	\$ -	\$ 509,984,571
TOTAL (Federal portion)		\$ 3,142,471,634	\$ 3,142,471,634	\$ 638,015,933	\$ 3,142,471,634

1. Current budget equals FFGA amount plus approved Change Orders CO-001-045 except CO-0044, Directive Letters 001-006 except 005, UR-CO-001-020
2. Preliminary Engineering Period (PE) – Prior to May 25, 2008
3. Final Design Period (FD) – May 25, 2008 through *March 25, 2010*
4. Estimate at Completion (EAC) includes changes and forecast.

a. Explanation of Variances

The major variance is the nearly \$24 million increase in the right-of-way (ROW) acquisition. This was due to a single property that had been anticipated as being a dedication having to be acquired by condemnation.

Monthly Cost Report – March 2010

DESCRIPTION	FFGA AMT. (Original)	EXPENDITURE TO DATE ¹	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION
FEDERAL (FFGA SCOPE)				
Design-Build Contract				
Firm Fixed Price	\$ 1,112,052,172	\$ 295,800,699	\$ 1,058,934,997	\$ 1,354,735,696
Firm Fixed Price Insurance and Bonds	\$ 65,109,408	\$ 60,214,284	\$ 5,253,124	\$ 65,467,409
Firm Fixed Price Subtotal	\$ 1,177,161,580	\$ 356,014,984	\$ 1,064,188,121	\$ 1,420,203,105
Subcontract Allowance	\$ 430,199,817	\$ -	\$ 234,080,872	\$ 234,080,872
Design-Build Contract Prices	\$ 1,607,361,397	\$ 356,014,984	\$ 1,298,268,993	\$ 1,654,283,977
Indexed Commodity Escalation	\$ 77,469,926	\$ -	\$ 58,720,324	\$ 58,720,324
Design-Build Contract Total	\$ 1,684,831,324	\$ 356,014,984	\$ 1,356,989,317	\$ 1,713,004,301
Utility Relocation				
Utility Work	\$ 84,312,807	\$ 56,801,186	\$ 23,117,826	\$ 79,919,012
Terf Tax	\$ -	\$ -	\$ 0	\$ 0
Project Management and Final Design	\$ 8,423,426	\$ 13,010,154	\$ 1,385,531	\$ 14,395,684
Utility Relocation Total	\$ 92,736,233	\$ 69,811,340	\$ 24,503,357	\$ 94,314,696
Right of Way				
Right Of Way Total	\$ 42,443,132	\$ 48,168,616	\$ 22,038,791	\$ 70,207,408
WMATA Agreement				
Vehicles	\$ 195,138,329	\$ 6,277,288	\$ 188,157,279	\$ 194,434,567
Construction and Procurement	\$ 31,484,799	\$ 1,632,468	\$ 27,434,556	\$ 29,067,024
WMATA Force Account Startup	\$ 13,777,100	\$ 136,240	\$ 13,268,781	\$ 13,405,021
Project Management and Final Design	\$ 31,235,400	\$ 6,533,915	\$ 28,195,103	\$ 34,729,017
WMATA Agreement Total	\$ 271,635,628	\$ 14,579,911	\$ 257,055,717	\$ 271,635,628
Preliminary Engineering				
Preliminary Engineering Total	\$ 100,968,646	\$ 93,650,225	\$ 7,318,422	\$ 100,968,646
Airports Authority Services				
General Conditions ²	\$ 28,879,153	\$ 2,853,717	\$ 24,015,967	\$ 26,869,684
Airports Authority Project Management and Wiehle Ave	\$ 23,225,717	\$ 10,870,414	\$ 12,425,303	\$ 23,295,717
Project Management Support	\$ 90,004,649	\$ 42,066,727	\$ 51,510,856	\$ 93,577,583
Airports Authority Services Total	\$ 142,109,519	\$ 55,790,858	\$ 87,952,126	\$ 143,742,984
Contingency⁴				
Contingency Total	\$ 297,762,579	\$ -	\$ 238,613,399	\$ 238,613,399
Finance Costs				
Finance Costs Total	\$ 509,984,571	\$ -	\$ 509,984,571	\$ 509,984,571
Total Federal (FFGA Scope)	\$ 3,142,471,634	\$ 638,015,934	\$ 2,504,455,701	\$ 3,142,471,634
INTERRELATED HIGHWAY IMPROVEMENTS				
Design-Build Contract				
Firm Fixed Price - Engineering	\$ 5,929,082	\$ 3,196,880	\$ 24,439,727	\$ 27,636,607
Firm Fixed Price Insurance and Bonds	\$ 2,889,450	\$ 2,630,134	\$ 377,111	\$ 3,007,245
Firm Fixed Price Subtotal	\$ 8,818,532	\$ 5,827,014	\$ 24,816,838	\$ 30,643,852
Subcontract Allowance	\$ 18,854,682	\$ -	\$ 18,854,682	\$ 18,854,682
Design-Build Contract Total	\$ 27,673,214	\$ 5,827,014	\$ 43,671,519	\$ 49,498,533
Utility Relocation				
Utility Work	\$ 31,552,369	\$ 31,528,740	\$ 10,020,385	\$ 41,549,125
Terf Tax	\$ -	\$ -	\$ -	\$ -
Project Management and Final Design	\$ 4,727,549	\$ 5,933,823	\$ 1,105,405	\$ 7,039,228
Utility Relocation Total	\$ 36,279,918	\$ 37,462,563	\$ 11,125,790	\$ 48,588,354
Right of Way				
Right Of Way Total	\$ 44,772,663	\$ 13,443,284	\$ 4,044,449	\$ 17,487,733
Airports Authority Services				
General Conditions ²	\$ -	\$ 1,288,565	\$ 126,692	\$ 1,415,256
Airports Authority Services Total	\$ -	\$ 1,288,565	\$ 126,692	\$ 1,415,256
Contingency⁴				
Contingency Total	\$ 14,482,435	\$ -	\$ 6,218,352	\$ 6,218,352
Total Interrelated Highway Improvements	\$ 123,208,229	\$ 58,021,426	\$ 65,186,802	\$ 123,208,229
TOTAL PROJECT COST	\$ 3,265,679,863	\$ 696,037,360	\$ 2,569,642,503	\$ 3,265,679,863

¹ Reflects Costs through Mar 25, 2010

² The line item marked General Conditions includes Temporary Facilities Development, Hazardous Material Remediation, Miscellaneous Access Roads and Wiehle Ave Garage

³ Preliminary Engineering Period (PE) - Prior to August 1, 2007

⁴ This amount is subject to adjustment pending the decision on the FTA directive to fund the costs associated with reintroduction of TPSS # 7 and 9 from non federal funding.

b. Project Funding Sources: March 2010

SOURCES OF CAPITAL FUNDING	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE ¹	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
Sec 5309 New Starts Federal Funds					
PE Grant		\$ 54,412,526	\$ 54,412,526		\$ 0
Final Design Grant VA-03-0113-01		\$ 159,001,838	\$ 159,001,838		\$ 0
ARRA Grant VA-36-0001		\$ 77,260,000	\$ 77,260,000		\$ 0
Construction Grant VA-03-0113-02		\$ 28,809,000	\$ 0		\$ 28,809,000
FFGA Balance		\$ 580,516,636			\$ 580,516,636
Subtotal - New Starts	28.64%	\$ 900,000,000	\$ 290,674,364	32.30%	\$ 609,325,636
Other Federal Funds					
VA-95-X056-01		\$ 47,218,109	\$ 14,938,062		\$ 32,280,047
STP Balance		\$ 27,781,891			\$ 27,781,891
Subtotal - STP/Sec. 5307	2.39%	\$ 75,000,000	\$ 14,938,062	19.92%	\$ 60,061,938
Local Funds					
VTA 2000		\$ 51,700,000	\$ 51,700,000		\$ 0
Commonwealth Transportation Bonds ⁴		\$ 125,000,000	\$ 59,258,603		\$ 65,741,397
Fairfax County Funds ²		\$ 523,750,000	\$ 47,000,000		\$ 476,750,000
Dulles Toll Road Revenues ³		\$ 1,467,021,634	\$ 181,525,617		\$ 1,285,496,017
Subtotal - Local Funds	68.97%	\$ 2,167,471,634	\$ 339,484,220	15.56%	\$ 1,827,987,414
Total Project Budget	100.00%	\$ 3,142,471,634	\$ 645,096,646		\$ 2,497,374,988
Interrelated Highway Activities		\$ 123,208,229	\$ 58,021,426		\$ 65,186,803
DTR Revenues/Commonwealth Funds³		\$ 123,208,229	\$ 58,021,426		\$ 65,186,803
TOTAL		\$ 3,265,679,863	\$ 703,118,072		\$ 2,562,561,791

¹ Reflects costs through *March* 2010

² Includes Tax District Revenues (\$400M) plus debt service costs allocated to Project Budget.

5. Project Risks

The PMOC commenced the risk assessment process with the first workshop held April 4-7, 2006. Risk Assessment Workshops were held on June 12-14, 2007 and July 10-12, 2007 at the Project offices.

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 cost 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 *March 25, 2010*, MWAA had utilized *\$65,398,828* of the available authorized contingency of *\$139,000,000* for Contingency Phases 1, 2 and 3. *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 *third* quarter of 2010. *Phase 3 would complete the Utility Relocation Program now anticipated to complete in late June 2010.* Of the total project contingency of *\$297,762,579*, the project has *\$232,363,751* available. The impact of the completion of station design *and utility relocation* on the cost contingency must be determined and remains an unknown. *MWAA presented information to the PMOC at the May 6, 2010 meeting which it feels justifies advancing to Contingency Phase 3. The PMOC is reviewing this information.*

With regard to Schedule Contingency, the Project has utilized 99 calendar days of the total of 510 calendar days. The balance in schedule contingency is 411 calendar days.

MWAA has been following their Risk Management Plan dated October 2008. The following are the Project's top 10 cost and schedule risks, along with their current status.

Top 10 Project Risks

Risk No.	Risk Description	SCC Reference	Risk Category Cost Sched		Status (Change from Previous Month)
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. <i>Nine of sixteen contracts have been awarded to date.</i> The variance of the awarded cost versus allowance budget is \$11.87 million.
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	Unchanged. The contractor is self-performing this work. Mining construction has commenced, with 747-feet of excavation complete on the outbound tunnel and 570-feet of excavation complete on the inbound tunnel.
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.
C-34	Utility companies performing utility relocation are not performing in accordance with the durations incorporated in the project schedule.	40.02	X	X	<i>Increased.</i> Replaced risk C-14. <i>In recent months, utility contractors faced harsh winter weather, heavy spring rains and unforeseen obstacles. Mitigation efforts continue. However, the cost and schedule impacts are not yet known.</i>

Risk No.	Risk Description	SCC Reference	Risk Category Cost Sched		Status (Change from Previous Month)
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	<i>Increased.</i> Bids were received on June 19, 2009. WMATA evaluated the proposals and short-listed three manufacturers. Negotiations commenced on September 25, 2009. The anticipated award date is <i>May 2010</i> .
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 for this risk to increase as more DTP construction activities commence.
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 <i>continues</i> . 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.

6. Action Items

MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
1	2A.01	PMP Update (Nov. 2009)	MWAA's PMP needs to be updated to reflect the new integrated organization.	Y	N	N	The integrated organizational structure has been formally implemented, and the PMP is now being updated to reflect this. MWAA received the PMOC's comments from the PMP Compliance Review held on October 14, 2009. MWAA <i>now</i> anticipates updating the PMP by late May 2010.	R
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	N	<i>PDA tests were successfully conducted on Pier 71B on April 14, 2010. The PDA testing required for seven piers will be conducted during the three successive Orange Line track outages beginning on May 29, 2010. The static load testing of the three remaining piers is scheduled for June 2010.</i>	R

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

ARRA	American Reinvestment and Recovery Act
BFMP	Bus Fleet Management Plan
CD	Calendar Days
CPM	Critical Path Method
DB	Design-Build
DGS	(Virginia) Department of General Services
DIAAH	Dulles International Airport Access Highway
DTP	Dulles Transit Partners, LLC
DVP	Dominion Virginia Power
FFGA	Full Funding Grant Agreement
FTA	Federal Transit Administration
FY	Fiscal Year
IFP	Issued for Proposal
MWAA	Metropolitan Washington Airports Authority
NATM	New Austrian Tunneling Method
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
RFMP	Rail Fleet Management Plan
RMP	Risk Management Plan
ROD	Revenue Operations Date
ROE	Right-of-Entry
ROW	Right-of-Way
SOE	Support of Excavation
SSCD	Scheduled Substantial Completion Date
SSMP	Safety and Security Management Plan
SSWP	Site Specific Work Plan
VDOT	Virginia Department of Transportation
W&OD	Washington and Old Dominion
WFC	West Falls Church
WMATA	Washington Metropolitan Area Transit Authority

APPENDIX E – PMOC TEAM PERFORMING THIS REVIEW

[REDACTED]

Appendix B - Project Overview and Map

Date: *May 21, 2010* (reporting current through *April, 2010*)

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 2300-car parking facility (provided through a joint development agreement), 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 is planning to purchase sixty-four vehicles for Phase 1 which will be procured by WMATA.

Ridership

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

Schedule

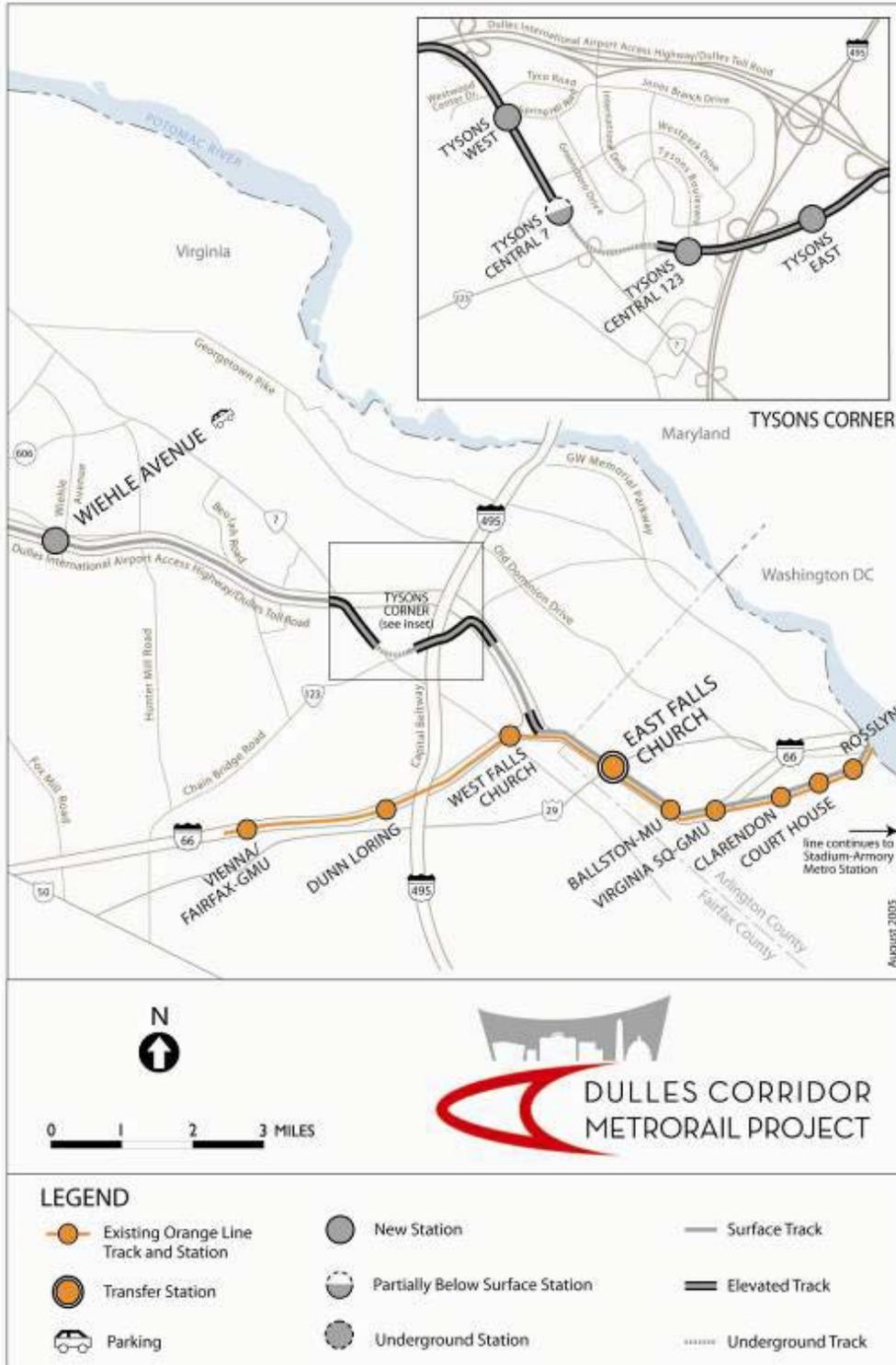
06/10/04	Approval to Enter PE	2011	Estimated Rev Ops at Entry to PE
05/12/08	Approval to Enter FD	12/04/13	Estimated Rev Ops at Entry to FD
03/10/09	FFGA signed	12/01/14	Estimated Rev Ops at FFGA
02/21/14	Revenue Operations Date (ROD) at date of this report		
12.0%	Percent Complete Construction at date of this report		
19.9%	Percent Complete Time based on ROD of December 1, 2014 (based on FFGA)		
30.7%	MWAA's Estimate of Project Earned Value through <i>March 2010</i>		

Cost

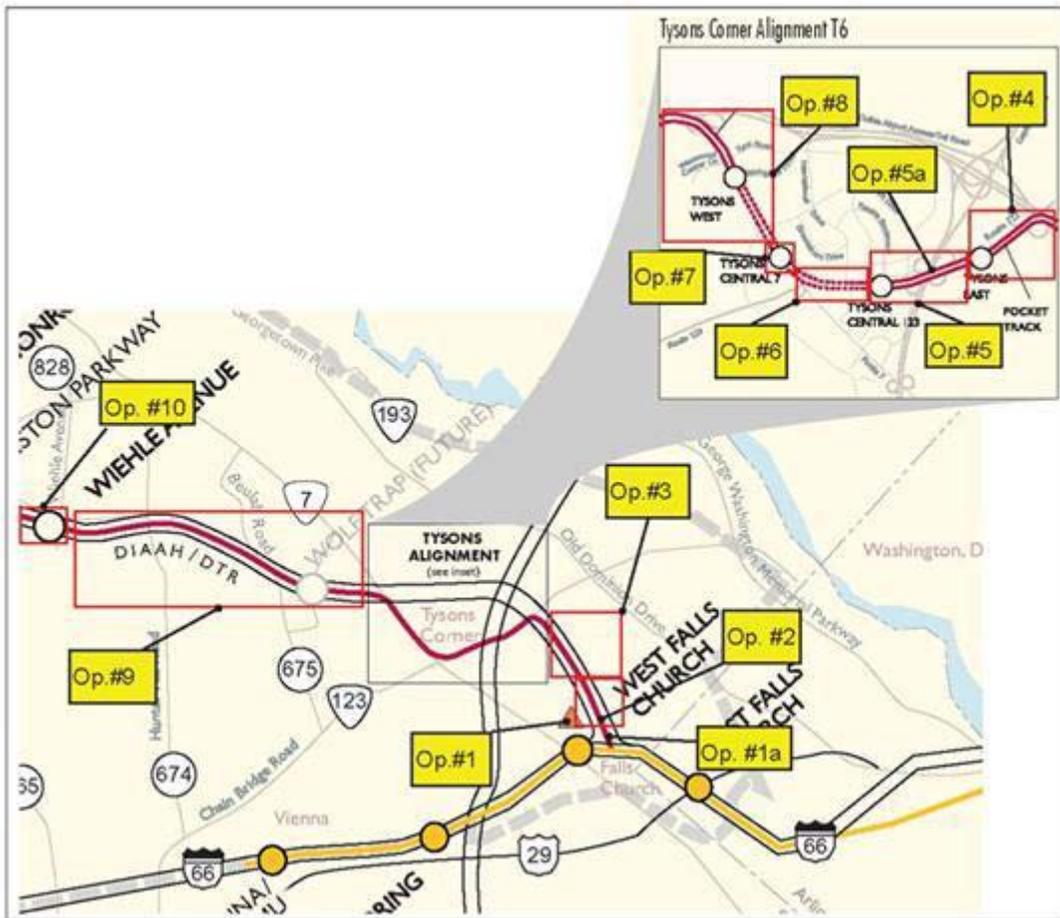
\$1.490 billion	Total Project Cost (\$YOE) at Approval to Enter PE
\$2.961 billion	Total Project Cost (\$YOE) at Approval to Enter Final Design
\$3.142 billion	Total Project Cost at date of report including \$510 million in Finance Costs
\$ 638.0 million	Expenditures to date from total project budget of \$3.142 billion
20%	Percent complete based on expenditures to date
\$232.4 million	Total project contingency remaining (allocated and unallocated)

Project Map

APPENDIX B – METRORAIL EXTENSION TO WIEHLE AVENUE



Operational Areas



APPENDIX C – MWAA SAFETY AND SECURITY CHECKLIST

Project Overview			
Project mode (Rail, Bus, BRT, multimode)		Rail	
Project phase (Preliminary Engineering, Design, Construction, or Start-up)		Design and Construction	
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGG, etc)		Design/Build	
Project Plans	<i>Version</i>	<i>Review By FTA</i>	Status
Safety and Security Management Plan	9/2009		Accepted
Safety and Security Certification Plan			Under development; 98% complete
System Safety Program Plan			WMATA sent the SSPP to TOC on November 13, 2009, and comments were sent back to WMATA. WMATA submitted a revised SSPP to TOC in March 2010 which is under review by TOC.
System Security Plan or Security and Emergency Preparedness Plan (SEPP)			WMATA sent the SEPP to TOC on November 12, 2009, and comments were sent back to WMATA. WMATA submitted a revised SEPP to TOC in March 2010 which is under review by TOC.
Construction Safety and Security Plan			Addressed in PMP which is under revision.
Safety and Security Authority	Y/N		Notes/Status
Is the grantee subject to 49 CFR Part 659 state safety oversight requirements?	Y		Tri-State Oversight Committee (TOC)

Has the State designated an oversight agency as per Part 659.9	Y	
Has the oversight agency reviewed and approved the grantee's SSPP as per 659.17?	N	WMATA's SSMP will be used. SSMP, Rev.1 dated 6/4/09
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?	N	
Did the oversight agency participate in the last Quarterly Program Review Meeting?	N	
Has the grantee submitted its safety certification plan to the oversight agency?	N	Plan in progress. TOC participates in monthly meetings.
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	WMATA will be operator.
SSMP Monitoring		
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 evaluate 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	
Construction Safety		
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	N	

the national average for the same type of work?		
If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?		
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	
Federal Railroad Administration		
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 – ACTION ITEMS

MWAA – DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
1	2A.01	PMP Update (Nov. 2009)	MWAA’s PMP needs to be updated to reflect the new integrated organization.	Y	N	N	The integrated organizational structure has been formally implemented, and the PMP is now being updated to reflect this. MWAA received the PMOC’s comments from the PMP Compliance Review held on October 14, 2009. MWAA anticipates updating the PMP by late May 2010.	R
1	2B.01	Final Testing Plan for Re-used Piers (March 2010)	MWAA approved the final testing plan proposed by DTPRev.0) for the Re-used Piers on March 30, 2010.	Y	Y	N	The final testing plan (Rev.0) was approved by MWAA on March 30, 2010. <i>PDA tests were successfully conducted on Pier 7IB on April 14, 2010. The PDA testing required for seven piers will be conducted during the three successive Orange Line track outages beginning on May 29, 2010. The static load testing of the three remaining piers is scheduled for June 2010.</i>	R

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.