

COMPREHENSIVE MONTHLY REPORT

FEBRUARY 2010

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

March 19, 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 March 3, 2010 to conduct a monthly progress meeting for work performed in February 2010 and attended various project meetings on the afternoon of March 3, 2010.* As of February 15, Hill is providing a full-time, on-site PMOC presence at the Dulles Corridor project office. The anticipated schedule of PMOC monthly progress meetings is that they will occur during the last 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 September 20, 2013. 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 March 3, 2010 to conduct a monthly progress update meeting for work accomplished in February 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, particularly with regard to stations' design, continues to lag. Designs for stations were originally anticipated to be completed by the end of the third quarter of 2009. *During this period, station design efforts focused on coordinating design disciplines and progressing associated architectural, mechanical, electrical and plumbing (AMEP) designs.* Overall design completion of the five stations is now anticipated to be completed *by April 30, 2010* with the completion of the Tysons Central 123 Station as shown in *the Engineering Deliverables schedule.* Overall design is approximately 85% complete as of the end of *February*

2010. The above noted April 30, 2010 date for most major station design completion includes "Issued for Construction" (IFC) Drawings.

Construction progress is broken into two components: utility relocation which is 85% complete (a 3% increase during February) and design-build (DB) construction which remains at approximately 10% complete. Both utility relocation and DB construction were seriously hampered by harsh winter weather. DTP reports a lost productivity in excess of 50% for the work on the project's critical and near critical paths in their Schedule Narrative that accompanied the January 25, 2010 Schedule Update. The contractor will continue to analyze ways to mitigate the weather impacts. Utility companies continue to relocate their facilities into the duct banks and facilities installed by MWAA's utility contractor. (Both utility relocation and DB construction are the responsibility of MWAA's contractor, Dulles Transit Partners, DTP.) The PMOC's review of the schedule update indicates a scheduled completion of Verizon's cable splicing along Route 7 is now anticipated to be complete by March 19, nearly three weeks beyond the March 1, 2010 required completion date. As a result, the follow-on EB Route 7 road shift is now scheduled for completion on April 9 and the WB Route 7 road shift between July 13 and October 8, 2010. Verizon completed fiber optic splicing in manholes at SAIC (Segment 2) and continues installing Segment 4 conduits east of Spring Hill Road on the north side along with installation of copper and fiber splices. DTP's utility subcontractor completed installing the SAIC Communications Ductbanks and the 34.5-kV bypass ductbanks at the Best Western, in front of Ernst & Young Wall and at the Honda auto dealership and continues to install at the Westwood Center Drive. Installation of the 34.5-kV ductbank continues along the DIAAH/Dulles Toll Road from Route 7.

The Schedule continues to slip with the most current (analyzed) update (data date of January 25, 2010) showing an additional -29 day loss for a total -50 calendar days variance from the approved construction baseline schedule. This results in a projected ROD of January 23, 2014. DTP further shows in the January schedule, a West Falls Church Yard upgrade completion of March 28, 2014, which has apparently been disconnected from the critical path since it is far beyond the projected ROD in the same schedule. MWAA has noted that it does not agree with the critical paths presented by DTP as being reflective of the critical path of the Project. In the case of the WFC Yard, MWAA does not agree with DTP's schedule since items of scope have yet to be finalized and will likely alter this path in the schedule. The February 25, 2010 schedule update, which has not yet been analyzed, shows another -20 calendar day loss, bringing the total loss to -70 calendar days.

It is the PMOC's opinion that a 49 day loss in a 59 day period is illogical and that some portion of those losses must be reflective of DTP's failure to correct logic and critical path errors on the schedule. It is further the PMOC's opinion that recovery of the remaining portion of the reported schedule losses is well 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.

Budget status as of January 25, 2010 indicates that \$587,794,109 (19%) has been expended of the \$3,142,471,634 budget total. \$62,416,521 of the available contingency for the first two contingency milestones has been utilized with a remaining balance of \$36,583,479 available through the completion of stations design, which is now anticipated to be completed on April 30, 2010 for the Tysons Central 123 Station. (Please note that there was a net increase of

\$6,066,771 in the contingency balance in February due to a correction/reallocation to the non-Federal contingency for costs related to two Traction Power Sub-Stations). MWAA's estimate of the earned value for the Project through January 2010 is 28.4%.

3. PMOC's Assessment of Project Status

The PMOC continues to observe delays in the design development particularly with regard to station design. To date, this has not had an impact on the critical path. The major problem has been DTP's lack of familiarity with the requirements of the various permitting agencies and the need for multiple submittals. DTP's quality reviews of their submittals have been poor. MWAA has met with DGS, VDOT and WMATA relative to the quality and completeness issues associated with DTP's submittals. The feedback from the reviewing agencies has been forwarded to DTP. In addition, MWAA has had internal meetings to discuss what the Project staff can do to review submittals before forwarding them to the reviewing agencies. *As a result, DTP spent much of February implementing design drawing revisions.* The PMOC views this as a positive step, although somewhat overdue.

Utility relocation is nearing completion, and the utility companies' relocation of their facilities into the newly constructed ductbanks and manholes, while a challenge, is generally proceeding on schedule. *However, the Verizon cable and splicing work along Route 7 was again adversely impacted by February snow storms, resulting in a three week delay.*

The estimated Full Time Equivalent (FTE) total count for February is 1,072, which is a decrease from the January actual count of 1,096. The decrease is primarily attributable to the natural reduction in engineering staff and a temporary reduction in DTP craft people caused by two winter storms. The pre-casting facility has produced 223 of 2,600 pre-cast concrete girder segments. The quality of the pre-cast concrete by Titan Concrete, Co. continued to be a cause of concern. Therefore the decision was made to replace Titan in the near future with the Dubrook Concrete Company. The New Austrian Tunneling Method (NATM) tunneling is proceeding with the contractor completing 450 of 1,670 feet for the Outbound (OB) track and 201 of 1,686 feet for the Inbound (IB) track.

DTP submitted their proposed plan for inspecting and testing the existing foundations (Rev A) to MWAA on January 22, 2010. This plan was reviewed by MWAA and their consultant, Haley and Aldrich and returned to DTP with comments. On February 17, 2010, DTP submitted "Revised Drawings for Inspection and Testing of the Existing H-Piles", dated February 3, that outlines the detailed activities for each individual pier foundation. DTP also provided an informal copy of the "Plan for Inspection and Testing of the Existing H-Piles" Rev. 0, dated 2/12/10, but has yet to make a formal submission. On March 3, MWAA and CTI met to introduce Mr. Bruce Spiro from CTI who would serve as MWAA's test expert to oversee DTP's test activities. The Inspection Plan was reviewed again during this meeting with additional revision requests made by Mr. Spiro. MWAA and CTI met again the same day with Mr. Lloyd Young who is DTP's test expert and who developed the test plan. A final Rev.1 of the Test Plan and test schedule should be officially submitted in the very near future for distribution to all stakeholders. Pier 7-IB is tentatively scheduled for testing on March 18 and Pier 4-IB (within WMATA ROW) is tentatively scheduled for testing the weekend of May 15 if SSWP-18 and track access is approved.

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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 continues to replace the Manager of Project Administration which is the only remaining vacancy in the MWAA Project organization.

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 Quality Assurance (QA) group maintains an active schedule of audits and surveillances. *However, sign-offs on the SCIL are lagging behind as are the necessary corrective actions cited from the first 90-day SCIL sign-off. Revision 2 of the SCIL for distribution is expected in early March.*

c. Compliance

It is the PMOC's observation that MWAA is following 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 *mid March* 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'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.
- 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 is in the process of updating the RFMP to reflect the 7000 Series Cars' quad concept and expects to complete the revision in *late March 2010*.
- Since WMATA, rather than MWAA, will be the operator of the completed project the WMATA Bus Fleet Management Plan (BFMP) is the applicable document. The FTA accepted the WMATA BFMP on September 25, 2007. However, WMATA updated the BFMP to reflect the updated bus fleet needs and re-assessment of storage and maintenance facilities and submitted a draft BFMP to FTA on February 2, 2010. The WMATA BFMP was reviewed by the PMOC and comments were submitted to the FTA on February 26, 2010.
- MWAA's Safety and Security Management Plan, Revision No. 6 dated January 2009 was accepted by the FTA on January 27, 2009.

2. Project Scope

a. Bidding & Construction Status

- Utility relocation is 85% complete and DB construction *is approximately 10% complete*. Utility companies continue to relocate their facilities into the duct banks and facilities installed by MWAA's utility contractor. Utility companies are meeting the requirements of the Project. *However, harsh winter weather has again had an adverse impact upon the completion of utility relocation. The scheduled completion of Verizon's cable splicing along Route 7 is now anticipated to be complete by March 19, nearly three weeks beyond the required completion date. As a result, the follow-on EB Route 7 road shift is now scheduled for completion on April 9 and the WB Route 7 road shift between July 13 and October 8, 2010. Verizon completed fiber optic splicing in manholes at the SAIC (Segment 2) and continues installing Segment 4 conduits east of Spring Hill Road on the north side along with installation of copper and fiber splices. DTP's utility subcontractor completed installing the SAIC Communications Ductbanks and the 34.5-kV bypass ductbanks at the Best Western, in front of Ernst & Young and at the Honda*

Dealership and continues to install at the Westwood Center Drive. Installation of the 34.5-kV ductbank also continues along the DIAAH/Dulles Toll Road from Route.

- *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. However, this has not yet impacted the project's critical path. 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. As a result, station design efforts in February primarily focused on incorporating design coordination and progressing associated architectural, mechanical, electrical and plumbing (AMEP) designs. Overall design completion of the five stations is now anticipated to be complete by April 30, 2010 with the completion of the Tysons Central 123 Station as shown in the Engineering Deliverables Schedule. Overall design is approximately 85% complete. The above noted April 30, 2010 date for most major station design completion includes "Issued for Construction" (IFC) Drawings.*
- *Through January 2010, \$239,143,222 of the \$437,278,511 Allowance Items Budget had been awarded to subcontractors and suppliers. A \$23,237,893 overrun now exists for the 9 of 15 Allowance Line Items awarded thus far.*

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):** *The subcontractor completed the caisson for pier 6-OB during February, bringing the total number of completed caissons to twenty-five. Guideway columns were poured at 13-IB, 15-IB, 16-IB and 17-IB, bringing the total to twenty-three completed to date. Pier caps at 17-IB, 18-IB and 19-IB were poured, bringing their total to twenty complete to date. The Contractor continued SOE for abutment "B" OB and wall forming at abutment "B" IB. Mobilization occurred in February for the start of SOE installation at existing pier foundation 6-IB on the WMATA side of I-66 and at Pier 7-IB on the Connector Road side of I-66. Forming and pouring of abutment "A" walls at the Magarity Road Bridge continued as did pile driving at the east abutment of the Pimmit Run Bridge. Installation of the barrier rails MOT at the WFC Yard lead tunnel area on the left lane of the EB Connector Road was completed. The Contractor started SOE drilled piles for the WFC Yard Cut & Cover tunnel at the median side of the EB Connector Road.*
- **Operations Area OP-4 (Tysons East Guideway/Station):** *Caissons at pier 9 and 10-OB on the Dulles Connector Road (DCR) and caissons at pier 25 on Rte 123 near the Mitre Building have been completed. Rebar placement at the pier 6 IB/OB pile cap and forming and rebar placement for the wall at abutment A at the east end of the guideway continued. Installation of bearings began for pedestals on caps at piers 1, 2 and 3 IB/OB and forming and rebar placement for the cap at pier 4 IB/OB continued and the pier 12 IB/OB column was poured. The Contractor started caissons at the Tysons East Station and completed caissons at pier 31-OB and continued caisson drilling at pier 30-OB/IB and at 33-OB.*

- **Operations Area 5A (I-495 Crossing):** Contractor completed caissons at pier 53, continued installation of caissons at piers 46 and 54 and started excavation for pile caps at piers 53 and 58. Contractor also continued installing SOE soldier piles and lagging at Tysons Central 123 Station.
- **Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover):** Contractor completed drilling of the eleventh set of arch canopy tubes in the OB tunnel and continued excavation of the OB tunnel, completing 450 ft of 1,670 ft to date. In addition, the Contractor started drilling the arch canopy tubes at the ninth section of the IB tunnel. Excavation of the IB tunnel has progressed 201 ft of 1,686 ft to date.
- **Operations Area OP-6 (West Cut and Cover Tunnel Site):** Excavation was completed on stage IB, OB and continues on the IB. Pouring of mud mats began in preparation for invert slab and waterproofing placement.
- **Operations Area OP-7 (Tysons Central 7 Station):** Contractor continued retaining wall forming at the Pikes 7 Shopping Center and west of Gosnell Road, as does the grading at the south side of the Route 7 service road for the road shift. Also continuing is the installation of the storm drain piping at the south side in front of the Pikes Shopping Center.
- **Operations Area OP-9 (DIAAH):** DTP grading work continues for work on retention ponds 3 and 4 and was started on pond 5 adjacent to the EB DTR and for ponds 1 and 6 adjacent to the WB DTR. Contractor completed the pier column and cap at the W&OD Bridge east intermediate pier and continued installing soldier piles for the W&OD Bridge west abutment B. Also continuing is the installation of SOE for the West Abutment B at the Hunter Mill Road Bridge.
- **Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13):** Contractor continued with the installation of caissons for the Station substructure and completed 76 of 86 caissons. Excavation and construction of pile caps continued and four pile caps have been completed to date. The preparation for H-pile installation at the pedestrian bridge also continues.
- **Laydown Area #10 (Pre-cast Yard):** Casting of segmental box girders continued with 223 completed to date and has setup to cast the first pier segment. The Gantry crane set up on the east side of the canopy building has been completed and is in operation. The pouring of foundations for 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 *February 2010*, 58 of the 99 parcels required for the Project have been acquired.

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

PARCELS ACQUIRED¹
(Number of parcel packages)

LOCATIONS	TOTAL	Period			To Date				
		Planned ²	Actual	Var	Planned ²	Actual	Var	WITH CONDEMN ³	
								ACT.	VAR.
Route 66 / Dulles Connector	1	0	0	0	1	1	0	1	0
Route 123	23	0	4	4	7	10	3	18	11
Route 7	51	0	0	0	31	17	(14)	33	2
DIAAH	24	0	0	0	16	3	(13)	6	(10)
TOTAL	99	0	4	4	55	31	(24)	58	3

- Notes:
1. Parcels secured through recordation of deed/easement. 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 August 25, 2008 data date schedule.
 3. These values include rights acquired through filing of a certificate of Take and Deeds.

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 *February 2010* includes the following:

- **Along Route 7 (Marshall's to Gosnell/Westpark)** – Verizon completed fiber optic splicing in manholes at the SAIC (Segment 2) and removed the pedestal and lowered the duct at Hour Eyes. DTP/Lane completed installing SAIC Communications ductbanks and the 34.5 kV bypass ductbanks at the Best Western. DTP/Lane continues installing the 24 inch waterline crossing Route 7. MCI continues to lower cables on the south side between the service road and Route 7.
- **Along Route 7 (Gosnell/Westpark to Spring Hill Road)** –DTP/Lane completed the 34.5 kV bypass ductbank at the Infinity Dealer and at the Embassy Suites, east of Spring Hill Road and the 34.5 kV bypass manhole and ductbanks in front of the Ernst & Young Wall. TCG Virginia continues tying into ductbanks at Spring Hill Road and Westpark Dr. Verizon continues installing Segment 4 conduit east of Spring Hill and Quest completed pulling cable on the south side.
- **Along Route 7 (Spring Hill Road to Tyco/Westwood)** – DTP/Lane completed the 34.5 kV ductbank at the Honda dealership on the south side and continued with the bypass duct at Westwood Center Drive. Washington Gas continues regulator installations at the Mercedes Dealership and Verizon continues with copper and fiber splicing in segment 4.

- *Along Route 7 (Tyco/Westwood to Route 267/Toll Road) – DTP/Lane continues with the 34.5 kV bypass manhole and ductbank installations in front of the Sheraton Hotel. Verizon continues installing copper and fiber cables as part of segment 4 and TCG Virginia and Dominion continues pulling cable into ductbanks on the north side. Dominion also continues with ductbank and switch/transformer pads on the south side.*
- *Along Route 123 (Route 7 to the Route 267 Connector Road) – DTP/Lane continues electrical ductbank installations to Crossings #115 at Colshire/Route 123 and installing waterline and connections to existing at the Rt. 123/Dulles Connector Road. Washington Gas completed the gas line installation between Tysons Blvd and Westpark Drive and continues from Scotts Crossing to Capitol One. Abovenet continues cable installations at Scotts Crossing and MCI continues installing conduits at Scotts Crossing.*
- *The DIAAH/Dulles Toll Road (Route 7 to Route 267 – DIAAH West)- Lane/DTP continued installation of the 34.5 kV traction power ductbank in the median of the Toll Road west of Route 7 and installing SOE for the jack and bore crossing #157 east of Hunter Mill Road at TPSS #9. They also continued the traction power ductbank installation at the median between the WB Toll Road and the DIAAH east of Wiehle Ave. Dominion Virginia Power started installation of foundations for raised transmission towers at the W&OD Bridge.*

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 contract award is now anticipated for the *March 25, 2010* WMATA Board Meeting. The schedule requires the last (64th) car to be delivered by September 20, 2013.

e. Safety & Quality Status

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 walkdowns with DTP. In December 2009, the third crane incident by a DTP subcontractor occurred on the O-1 Guideway when a reinforcing cage swung briefly over the Airport Connector Road inner traffic lane. An incident investigation was conducted and an incident review board convened which was chaired by DTP and attended by MWAA representatives. MWAA expressed their concern by letter dated December 15, 2009, which was responded to by DTP on December 28, 2009. The response is under review by MWAA. Actions instituted by DTP include the assignment of a rigging engineer to supervise all lifts by the subcontractor. In addition, MWAA *conducted* an audit of the subcontractor's safety program on February 3-4, 2010. *No additional actions related to crane safety were identified as a result of the audit.*

During February 2010 the following QA audits were performed:

- *DTP's Subcontractor Brayman had its Construction Safety Program audited on February 3 - 4, 2010. Fourteen issues and 2 recommendations were provided. A response is due March 9, 2010.*
- *DTP's Construction Safety Program was audited on February 17 - 18, 2010. Fourteen issues and 3 recommendations were provided. A response is due March 12, 2010.*

- *DTP led an audit of its subcontractor Powell Electric on February 17-19, 2010. One recommendation was provided. A report is to be issued by DTP by March 5, 2010.*

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

Tentative Date	Audit (A) Surveillance (S)	Organization/Activity	Joint Audit/ Surv.	Lead
TBD	S	DuBrook Concrete	Y	DTP
3/3-4/10	A	DTP Acquisitions	Y	MWAA
3/10/10	S	DTP Subcontractor/Supplier Submittal Process: DTP Nonconformance Control System	N	MWAA
3/17-18/10	A	DTP Construction and QC	N	MWAA
3/24-25/10	A	DTP QA, Document Control, Training	Y	MWAA
4/7 – 8/10	A	Truland Walker Seal JV	Y	DTP
4/21 –22/10	A	DTP Safety and Security	N	MWAA
4/28 –29/10	A	DTP Engineering	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	Titan Concrete	Y	DTP
5/26/10	S	DTP Subcontractor Construction Safety	N	MWAA
6/10/10	S	DuBrook Concrete	Y	MWAA
6/9-10/10	A	Rizzoni De Eccher Construction Safety Program	Y	MWAA
6/23 –24/10	A	Rizzani De Eccher	Y	DTP

3. Project Schedule

The most recent analyzed project schedule update has a data date of January 25, 2010. The primary critical path identified by DTP reflects a -50 calendar days 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 primary critical path, as identified by DTP, involves Design-Build construction within the Tysons East corridor, specifically originating with the installation of substructure foundations (caissons for Wiehle Avenue Station) and moving to caisson installation at Tysons 123 Station. The path progresses from Tysons 123 Station aerial guideway substructure through fit-out of the Traction Power Sub Station and the Automatic Train Control rooms and systems testing. MWAA again does not agree with the critical paths presented by DTP as being reflective of the critical path of the Project. It is apparent that some of these delays can be attributable to weather. However, MWAA feels that in most cases the slippage is greater than the number of days attributable to weather. In the case of the WFC Yard, MWAA does not agree with DTP’s schedule since items

of scope have yet to be finalized. The scope items once finalized could significantly alter this path in the schedule. In addition, it should be noted that the WFC Yard upgrade work has been disconnected from the overall schedule's critical path since the January 25 forecast shows a WFCY completion of March 28, 2014 as compared to the January 23, 2014 forecast ROD. The February 25, 2010 schedule update which has not yet been analyzed shows another -20 day loss, bringing the total loss to -70 calendar days.

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 Co. redesign/relocation due to interference/conflicts with HOT Lanes Project.*
- *WMATA Art in Transit information has not been received for any of the stations.*
- *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, part 2.03.D of the contract specifications.

Despite the bi-weekly meetings held between MWAA and DTP with regard to the schedule and schedule mitigation efforts, each schedule update reflects a different critical path that is yet to be agreed upon. It is the PMOC's opinion that MWAA is maintaining control over the Project master schedule. However, it is apparent that critical path issues and schedule logic issues are yet to be resolved.

It is also the PMOC's opinion that a 49 day loss in a 59 day period is illogical and that some portion of those losses must be reflective of DTP's failure to correct logic and critical path errors on the schedule. It is further the PMOC's opinion that recovery of the remaining portion of the reported schedule losses is well 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.

a. Critical Path Evaluation

The PMOC agrees with MWAA's assessment regarding the critical path *and a greater effort needs to be put forth to resolve the critical path differences and schedule logic errors.*

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 and the engineering of the Route I-66 Crossing (OP-2), Completion of the engineering for Tysons East Station (OP-4),
- Completion of the engineering for Tysons East Aerial Guideway (OP-5).
- Completion of the engineering for NATM Tunnel (OP-6),

- Completion of the engineering for the 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).
- Award of the 7000 Series Rail Car contract.

4. Project Cost

The SCC Budget and Expenditures summary for the period ending *January 25, 2010* is as follows.

FTA SCC CODE	DESCRIPTION	BASELINE BUDGET	CURRENT BUDGET ¹	EXPENDED TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements	\$ 666,500,284	\$ 628,465,771	\$ 60,773,335	\$ 628,465,771
20	Stations	\$ 317,023,977	\$ 319,895,095	\$ 14,261,887	\$ 319,895,095
30	West Falls Church Yard	\$ 51,789,538	\$ 52,011,360	\$ 2,339,126	\$ 52,037,880
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	\$ 229,324,077	\$ 67,572,841	\$ 222,882,372
50	Systems – FD	\$ 278,157,645	\$ 277,365,897	\$ 19,368,038	\$ 274,968,369
60	Right of Way Acquisition – FD	\$ 45,953,303	\$ 45,953,303	\$ 47,556,637	\$ 69,784,663
70	Vehicles – PE	\$ 526,000	\$ 526,000	\$ 526,000	\$ 526,000
70	Vehicles – FD	\$ 211,103,775	\$ 211,103,775	\$ 1,558,050	\$ 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	\$ 542,883,075	\$ 202,911,783	\$ 554,790,801
90	Contingency Mgmt. Reserve	\$ 130,000,075	\$ 154,032,298	\$ -	\$ 127,809,688
100	Finance Charge	\$ 509,984,571	\$ 509,984,571	\$ -	\$ 509,984,571
TOTAL (Federal portion)		\$ 3,142,471,634	\$ 3,142,471,634	\$ 587,794,109	\$ 3,142,471,634

1. Current budget equals FFGA amount plus approved Change Orders CO-001 through CO-053 & 089 excluding C)-036, 054, 056, 057, 074, 076, 078 & 080-088.
2. Preliminary Engineering Period (PE) – Prior to May 25, 2008
3. Final Design Period (FD) – May 25, 2008 through *January 2010*

Overall, approximately 19% of the budget has been expended through *January 25, 2010*.

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; January 2010

Monthly Cost Report; January 2010

DESCRIPTION	FFGA AMT. (Original)	EXPENDITURE TO DATE ¹	ESTIMATE TO COMPLETE	ESTIMATE AT COMPLETION
FEDERAL (FFGA SCOPE)				
DTP Contract				
Firm Fixed Price	\$ 1,112,052,172	\$ 266,044,467	\$ 1,068,694,037	\$ 1,334,738,504
FFP Insurance and Bonds	\$ 65,109,408	\$ 55,277,354	\$ 9,838,232	\$ 65,115,586
FFP Subtotal	\$ 1,177,161,580	\$ 321,321,820	\$ 1,078,532,269	\$ 1,399,854,090
Subcontract Allowance	\$ 430,199,817		\$ 238,697,929	\$ 238,697,929
DTP Contract Prices	\$ 1,607,361,397	\$ 321,321,820	\$ 1,317,230,198	\$ 1,638,552,019
Commodity Index Payments	\$ 77,469,926		\$ 60,215,773	\$ 60,215,773
DTP Contract Total	\$ 1,684,831,324	\$ 321,321,820	\$ 1,377,445,971	\$ 1,698,767,792
Utility Relocation				
Utility Work	\$ 84,312,807	\$ 54,539,902	\$ 25,379,110	\$ 79,919,012
Terf Tax			\$ 0	\$ 0
Project Management and Final Design	\$ 8,423,426	\$ 12,337,356	\$ 1,839,328	\$ 14,176,684
Utility Relocation Total	\$ 92,736,233	\$ 66,877,258	\$ 27,218,439	\$ 94,095,696
Right of Way				
Right Of Way Total	\$ 42,443,132	\$ 47,556,637	\$ 22,228,027	\$ 69,784,663
WMATA Agreement				
Vehicles	\$ 195,138,329	\$ 2,084,050	\$ 192,350,517	\$ 194,434,567
Construction and Procurement	\$ 31,484,799	\$ 823,162	\$ 28,243,861	\$ 29,067,024
WMATA Force Account Startup	\$ 13,777,100	\$ 88,540	\$ 13,316,481	\$ 13,405,021
Project Management and Final Design	\$ 31,235,400	\$ 5,509,189	\$ 29,219,828	\$ 34,729,017
WMATA Agreement Total	\$ 271,635,628	\$ 8,504,941	\$ 263,130,687	\$ 271,635,628
Preliminary Engineering				
Preliminary Engineering Total	\$ 100,968,646	\$ 93,650,225	\$ 7,318,422	\$ 100,968,646
MWAA Services				
General Conditions 2	\$ 28,879,153	\$ 2,821,269	\$ 24,048,416	\$ 26,869,684
MWAA Project Management and Wiehle Ave Garage	\$ 23,225,717	\$ 9,637,138	\$ 13,658,579	\$ 23,295,717
Project Management Support	\$ 90,004,649	\$ 37,424,822	\$ 56,152,761	\$ 93,577,583
MWAA Services Total	\$ 142,109,519	\$ 49,883,229	\$ 93,859,756	\$ 143,742,984
Contingency				
Contingency Total	\$ 297,762,579	\$ -	\$ 253,491,652	\$ 253,491,652
Finance Costs				
Finance Costs Total	\$ 509,984,571		\$ 509,984,571	\$ 509,984,571
Total Federal (FFGA Scope)	\$ 3,142,471,634	\$ 587,794,109	\$ 2,554,677,525	\$ 3,142,471,634
INTERRELATED HIGHWAY IMPROVEMENTS				
Firm Fixed Price - Engineering				
Firm Fixed Price - Engineering	\$ 5,929,082	\$ 3,063,889	\$ 24,372,743	\$ 27,436,632
FFP Insurance and Bonds	\$ 2,889,450	\$ 2,411,616	\$ 593,947	\$ 3,005,564
FFP Subtotal	\$ 8,818,532	\$ 5,475,506	\$ 24,966,691	\$ 30,442,196
Subcontract Allowance	\$ 18,854,682	\$ -	\$ 18,854,682	\$ 18,854,682
DTP Contract Total	\$ 27,673,214	\$ 5,475,506	\$ 43,821,372	\$ 49,296,878
Utility Relocation				
Utility Work	\$ 31,552,369	\$ 30,550,908	\$ 10,998,217	\$ 41,549,125
Terf Tax		\$ -		
Project Management and Final Design	\$ 4,727,549	\$ 5,645,197	\$ 1,394,032	\$ 7,039,228
Utility Relocation Total	\$ 36,279,918	\$ 36,196,105	\$ 12,392,248	\$ 48,588,354
Right of Way				
Right Of Way Total	\$ 44,772,663	\$ 13,220,782	\$ 4,045,054	\$ 17,265,835
MWAA Services				
General Conditions 2		\$ 1,296,672	\$ 118,584	\$ 1,415,256
MWAA Services Total	\$ -	\$ 1,296,672	\$ 118,584	\$ 1,415,256
Contingency				
Contingency Total	\$ 14,482,435	\$ -	\$ 6,641,906	\$ 6,641,906
Total Interrelated Highway Improvements	\$ 123,208,229	\$ 56,189,065	\$ 67,019,164	\$ 123,208,229
TOTAL PROJECT COST	\$ 3,265,679,863	\$ 643,983,174	\$ 2,621,696,689	\$ 3,265,679,863

¹ Reflects Costs through Jan 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

b. Project Funding Sources

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		\$ 159,001,838	\$ 152,283,772		\$ 6,718,066
ARRA		\$ 77,260,000	\$ 77,260,000		\$ 0
FFGA Balance		\$ 609,325,636	\$ 0		\$ 609,325,636
Subtotal - New Starts	28.64%	\$ 900,000,000	\$ 283,956,298	31.55%	\$ 616,043,702
Other Federal Funds					\$ 0
STP/Sec. 5307	2.39%	\$ 75,000,000	\$ 0	0.00%	\$ 75,000,000
Local Funds					
VTA 2000		\$ 51,700,000	\$ 51,700,000		\$ 0
Commonwealth Transportation Bonds ²		\$ 125,000,000	\$ 58,686,701		\$ 66,313,299
Fairfax County Funds ³		\$ 523,750,000	\$ 25,000,000		\$ 498,750,000
Dulles Toll Road Revenues ^{2,4}		\$ 1,467,021,634	\$ 168,451,110		\$ 1,298,570,524
Subtotal - Local Funds	68.97%	\$ 2,167,471,634	\$ 303,837,811	14.02%	\$ 1,863,633,823
Total Project Budget	100.00%	\$ 3,142,471,634	\$ 587,794,109		\$ 2,554,677,525
Interrelated Highway Activities		\$ 123,208,229	\$ 56,189,065		\$ 67,019,164
DTR Revenues/Commonwealth Funds³		\$ 123,208,229	\$ 56,189,065	45.60%	\$ 67,019,164
TOTAL		\$ 3,265,679,863	\$ 643,983,174		\$ 2,621,696,689

¹ Reflects costs through January 2010

² \$23.6M previously identified as pay-go Dulles Toll Road (DTR) Revenues have been correctly reclassified as Commonwealth Transportation Board (CTB) funds. This reclassification reduces the contribution from DTR revenues and increases the contribution from CTB funds.

³ Includes Tax District Revenues (\$400M) plus debt service costs allocated to Project Budget

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

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 *January 25, 2010*, MWAA had utilized \$62,416,521 (*includes a \$6,066,771 return to the contingency due to a correction related to two Traction Power Substation draw downs*) of the available authorized contingency of \$99,000,000 for Contingency Phases 1 and 2. These phases 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 2010. Of the total project contingency of \$297,762,579, *the project has \$235,346,058 available.*

With regard to Schedule Contingency, the Project has utilized *fifty* calendar days of the total of 510 calendar days. *The balance in schedule contingency is 460 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		Status (Change from Previous Month)
			Cost	Sched	
M-21	Allowance items- a substantial part of the contract price is tied to "Allowance Subcontracts."	10, 20, 30, 40, 50	X	X	Unchanged. The award in November of the trackwork/contact rail subcontract, Allowance Items C1 and C16, signifies that nearly half of the value for all the Allowance Items has been procured and the cost has been transferred to Fixed Price. The variance of the awarded cost versus allowance budget is \$23.24 million.

Risk No.	Risk Description	SCC Reference	Risk Category		Status (Change from Previous Month)
			Cost	Sched	
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 450-feet of excavation complete on the outbound tunnel and 201--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>Unchanged.</i> Replaced risk C-14. Although the utility companies are outside the direct control of the Project’s management most of the utility companies have cooperated in any delay mitigation efforts including working additional shifts, nights and weekends for critical work.
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	Unchanged. 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>March 25, 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.

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 has begun. 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 anticipates updating the PMP in April 2010.	R
1	2B.01	Final Testing Plan for Re-used Piers (Feb. 2010)	MWAA needs to approve the final testing plan proposed by DTP for the Re-used Piers.	Y	N	N	DTP submitted their proposed testing plan for the existing piers to be re-used for the Project. MWAA has returned comments to DTP. The Final Testing Plan, including schedule, must be approved by MWAA.	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]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[Redacted]

[Redacted]

[Redacted]

Appendix B - Project Overview and Map

Date: *March 19, 2010* (reporting current through *February 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

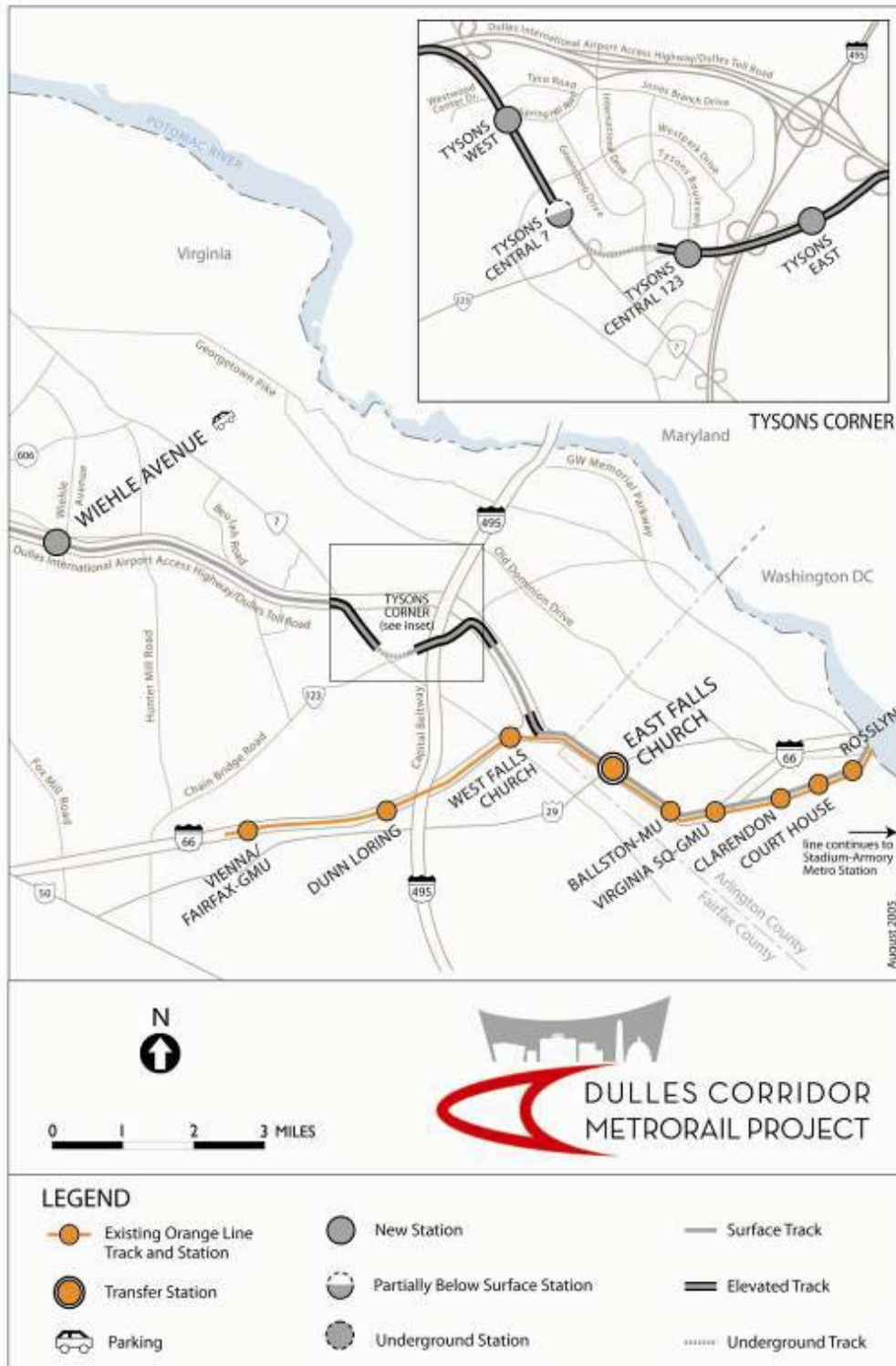
06/10/04	Approval to Enter PE	2011	Estimated Rev Ops at Entry to PE
05/12/08	Approval to Enter FD	12/04/13	Estimated Rev Ops at Entry to FD
03/10/09	FFGA signed	12/01/14	Estimated Rev Ops at FFGA
1/23/14	Revenue Operations Date (ROD) at date of this report		
10.0%	Percent Complete Construction at date of this report		
17.2%	Percent Complete Time based on ROD of December 1, 2014 (based on FFGA)		
28.47%	MWAA's Estimate of Project Earned Value through January 2010		

Cost

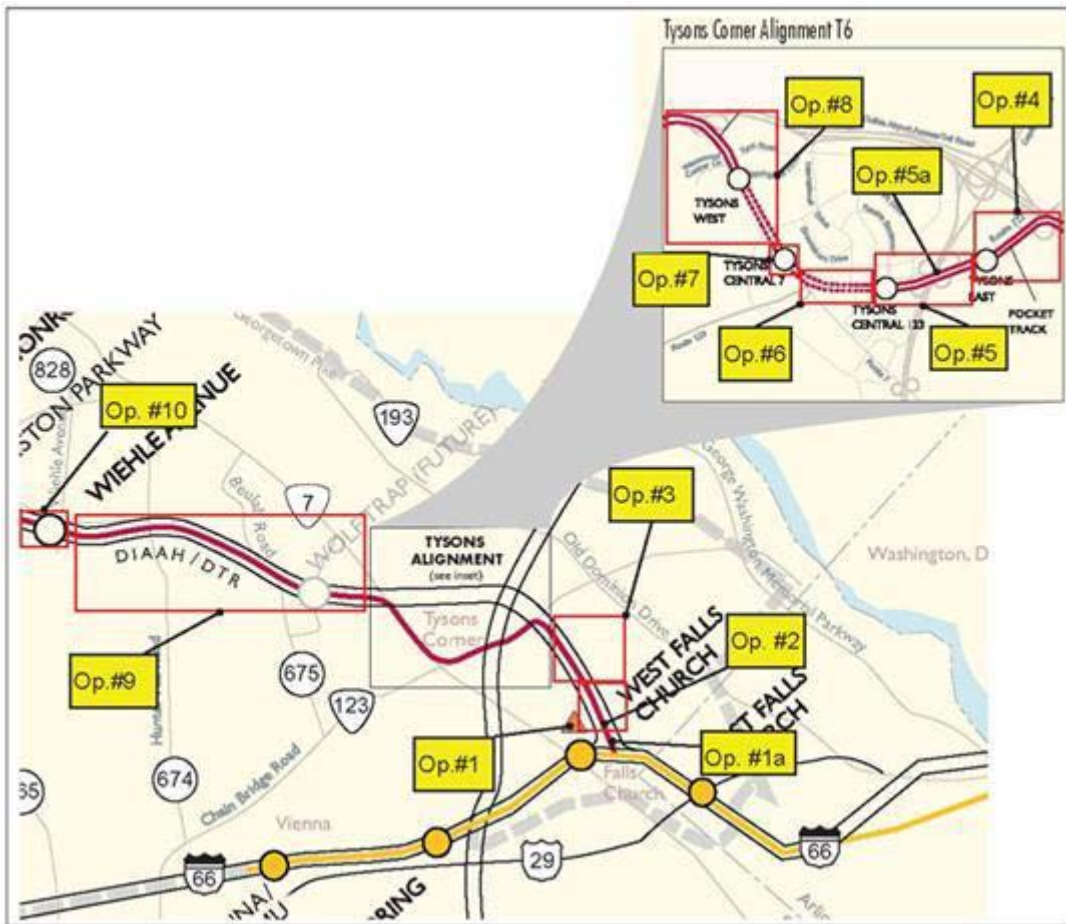
\$1.490 billion	Total Project Cost (\$YOE) at Approval to Enter PE
\$2.961 billion	Total Project Cost (\$YOE) at Approval to Enter Final Design
\$3.142 billion	Total Project Cost at date of report including \$510 million in Finance Costs
\$ 569.8 million	Expenditures to date from total project budget of \$3.142 billion
19 %	Percent complete based on expenditures to date
\$235.3 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
System Security Plan or Security and Emergency Preparedness Plan (SEPP)			WMATA
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 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	
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 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	
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 <i>now</i> anticipates updating the PMP in <i>April</i> 2010.	R
<i>1</i>	<i>2B.01</i>	<i>Final Testing Plan for Re-used Piers (Feb. 2010)</i>	<i>MWAA needs to approve and accept the final testing plan proposed by DTP for the Re-used Piers.</i>	<i>Y</i>	<i>N</i>	<i>N</i>	<i>DTP submitted their proposed testing program for the existing piers that are proposed to be re-used for the Project. MWAA has submitted comments to DTP. The final testing plan, including schedule, must be approved by MWAA.</i>	<i>R</i>

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.