COMPREHENSIVE MONTHLY REPORT

August 2010

Dulles Corridor Metrorail Project Extension to Wiehle Avenue

Metropolitan Washington Airports Authority Washington, DC

September 24, 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:

Length of Time PMOC Assigned to Project: 10.0 years **Length of Time PMOC Lead Assigned to Project:** 2.6 years

EXECUTIVE SUMMARY

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) staff on *September 9*, 2010 to conduct a monthly progress meeting for work performed in *August 2010*. The full time on-site PMOC attended various project meetings throughout this reporting period and toured the construction site on a regular 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 additional rail cars are required to provide service for the Project. Based on the Full Funding Grant Agreement (FFGA), the Revenue Operations Date (ROD) is December 1, 2014. The Federal New Starts share is \$900 million 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 September 9, 2010 to conduct a monthly progress review meeting.

- **Real estate acquisition** continues to keep ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels. *MWAA has identified three properties for condemnation court action*.
- Rail car Procurement moved forward with the July 27, 2010 contract award by WMATA to Kawasaki. The manufacturer's proposed schedule showed the 64th car would be delivered by September 12, 2014 based on a July 12, 2010 notice to proceed (NTP). WMATA provided Notice-To-Proceed (NTP) on August 16, 2010. The kick-off meeting was held on August 23, 2010 with technical review meetings held during that week to review the technical requirements of the 7K Series Car Procurement.

I August 2010

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. Agency reviews and the incorporation of all comments continue, along with subsequent permitting by VDOT and DGS. This design excludes the access pavilions and final *pedestrian* bridge alignments at the stations that are subject to coordination with adjacent developers. Anticipated overall design completion of the five stations through "Issued for Construction" (IFC) drawings, including pavilions, continues to be the fourth quarter of 2010 for civil work and the fourth quarter of 2011 for systems work. Overall project design is at 94% complete as of the end of August 2010. The *delay in* project design does not appear to have adversely impacted the schedule's critical path at this point in time. This is due to the DGS permitting of prioritized segments of the design packages. MWAA provided the PMOC with the impact on cost contingency as a result of overdue IFP and IFC station designs. The PMOC will review and comment on this submission. MWAA reported that property owners adjacent to the station sites are requesting modifications to the design to accommodate their facilities.

On August 3, 2010, WMATA sent a letter to MWAA indicating they would not progress further ATC reviews until Alstom provides documentation that they have complied with the two NTSB recommendations directed to Alstom related to the WMATA collision on June 22, 2009. The Airports Authority has notified DTP of WMATA's requirements and directed them to obtain the necessary information from their subcontractor, Alstom. For many months, WMATA has failed to respond to numerous requests to review and comment on the ongoing Project ATC design. The reason given was always lack of resources. Now WMATA has the resources and a better effort by WMATA could be made now to progress the ATC design.

On August 25, 2010, DTP/Alstom made a presentation to MWAA and WMATA regarding its investigation of the June 2009 Red Line accident and relevant design changes for the Dulles Corridor Metrorail Project. Unfortunately, although WMATA train control personnel were able to attend the presentation, Mr. Kubicek, Acting Deputy General Manager, could not attend. On September 8, 2010, MWAA sent a letter to WMATA which provided the requested documentation to demonstrate that DTP/Alstom had complied with the two NTSB recommendations and requested "that WMATA provide confirmation that this information is sufficient to allow resumption of ATC design reviews for the Project." Impact on the project schedule is not yet known.

• Construction progress is broken into two components: utility relocation (UR), which is 97% complete and design-build (DB) construction, which is approximately 19% complete. The east-bound Route 7 road shift to accommodate the *Tysons* Central 7 Station construction was accomplished on June 5, 2010. The west-bound Route 7 road shift to accommodate the Tysons Central 7 Station construction occurred on July 23, 2010. The east-bound Route 7 road shift to accommodate the Tysons West Station construction occurred on September 2, 2010. Several more Route 7 road shifts are expected during September and October to complete the road shift process.

II August 2010

The O-1 Guideway is approximately 73% complete. The Tysons East Guideway/Station is approximately 51% complete and the NATM Tunnel is approximately 44% complete with the contractor completing 1,404 of 1,670 feet for the Outbound (OB) track and 1,125 of 1,686 feet for the Inbound (IB) track. Tysons East Station is approximately 15% complete and Tysons Central 123 Station is approximately 12% complete. The Wiehle Avenue Station is approximately 17% complete. The pre-cast yard is now 100% constructed, and has cast 1,079 of 2,600 concrete box girders segments to date. During August, CTI (the special inspections consultant) recorded significant 28 day concrete strength deficiencies in a number of segments. MWAA is investigating the causes of the concrete strength problems. The casting of station guideway segments in the long line casting yard continues and the assembly of balanced cantilever box girder molds has been completed and eighteen cantilever box girders have been cast.

• The Schedule showed a 1 calendar day improvement with the most current analyzed update schedule (data date of July 25, 2010) showing a total -91 calendar days (-92 in the June update) variance from the approved baseline schedule. This results in a projected ROD of March 5, 2014. However, DTP's August schedule update, which has not yet been analyzed, reflects a total -98 calendar days delay. MWAA continues to note that it does not agree with the critical paths presented by DTP as being reflective of the actual critical path of the Project. MWAA and DTP continue to meet regularly to review and discuss DTP's recovery schedule, which was finalized and submitted to MWAA on July 26, 2010 with a request for Change RFC-112 Rev. 0 entitled "Design-Build Acceleration for Delays through June 25, 2010." DTP submitted a recovery schedule on August 12, 2010 with an updated request for Change RFC-112 (Rev.1) entitled "Design-Build Acceleration for Delays through June 25, 2010." RFC-112 provided a recovery schedule that will mitigate ninety-one days of delay to the Project SSCD. The RFC included an acceleration cost of \$23.7 million. The RFC was rejected by MWAA in August.

It remains the PMOC's opinion that recovery of the reported schedule losses is within the Project's ability via work-arounds, schedule adjustments and schedule compression. It is becoming apparent that if the Project wants to maintain the December 2013 ROD, a decision to recover excusable and or inexcusable delays will likely require a directed acceleration. Therefore, it is the PMOC's opinion that MWAA should continue fast tracking discussions/negotiations of RFC-112. Failure to obtain a timely path forward may result in a contract ROD delay and/or higher recovery costs.

The Contract Completion Date is not considered to be in serious jeopardy at this time. The Project will need to continue its efforts to resolve disagreements relative to the West Falls Church Yard (WFCY) critical path, logic and delay issues in order to minimize the risk of irretrievable schedule creep leading to costly schedule compression or at least to minimize constructive acceleration costs. It is the PMOC's opinion that the majority of the UR work and design related permit issues will be resolved within the next several months and that schedule recovery will progress during the fourth quarter of 2010. Whether or not sufficient recovery can be gained before winter time without a directed acceleration remains to be seen.

• **Budget** status as of *July 25, 2010* indicates that \$789,941,797 (25%) has been expended of the \$3,142,471,634 budget total. *MWAA* reports \$71,239,302 of the available contingency for

III August 2010

the first three contingency milestones has been utilized with a remaining balance of \$67,760,698 available through the completion of stations design and utility relocation work, which are expected to be completed by December 2010 and September 2010, respectively.

The PMOC does not agree that the Phase 2 contingency milestone has been achieved, and has reviewed MWAA's draft justification paper dated April 20, 2010, which was presented at the May 6th meeting. The PMOC reported during the June 3, 2010 update meeting that its position remains unchanged since the justification addresses only schedule and not cost. MWAA provided the FTA and PMOC with a white paper documenting why MWAA believes that both Phase 2 schedule and cost contingency have been completed. The PMOC has again informed MWAA that its position remains unchanged, in part due to lack of information on the cost contingency. MWAA is to provide the PMOC with the information on cost contingency. MWAA's estimate of the earned value for the Project through July 2010 is 38.53%.

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 because of the work-around efforts in the field and the division of design packages resulting in prioritized permitting by DGS. However, some of the late design packages are continuing to accumulate negative float, as shown on the *July 25th* schedule update. The impact on cost contingency for the complete station design and utility completion milestones has not been determined. However, MWAA and DTP continue to voice concerns with the lengthy review cycles by WMATA, VDOT and DGS. MWAA also *remains* concerned about the poor quality control of DTP's documents.

Utility relocation continues with utility companies striving to meet the requirements of the Project Completion of utility relocation work continues to be critical to the project's *two* upcoming Route 7 road shifts in the Tysons West Station area. The remaining utility companies are expected to complete their work in *late September 2010*.

The Full Time Equivalent (FTE) total for August is 1,729, which is an increase from July of 141 and appears to provide suitable support to the scheduled activities. The pre-casting facility continues to produce pre-cast concrete girder segments and long line station segments in advance of their erection schedule. However, the concrete strength problems observed during August and their resolution could have the potential to negatively impact the schedule depending upon the determination of cause.

Load tests on all eleven existing pier foundations were completed in June 2010. The peripheral tests, i.e. soils, metallurgical, stray current, corrosion and concrete tests were completed in the field and laboratory during the months of June and July. DTP submitted its comprehensive report to MWAA on July 20, 2010. CTI, the special inspections consultant, submitted an independent test report for the existing foundations to MWAA on August 16, 2010. MWAA reviewed both reports and provided comments back to both DTP and CTI for package refinement purposes. MWAA and CTI will be conducting an audit of DTP's design calculations and related test data on September 15, 2010 to ensure that the test data supports the design requirements. MWAA will

IV August 2010

submit the completed comprehensive reports to the FTA and PMOC soon after the audit is completed.

DTP has submitted a test plan for use of existing piles at the Difficult Run Bridge and MWAA submitted the plan to WMATA and VDOT for review. The Project team has reviewed and "Accepted as Noted" the plan. The plan is similar to the one for testing the existing piers at the O-1 Guideway. These tests will also be witnessed by CTI in the same manner as for the O-1 Guideway tests. The SCIL has been revised to include the witnessing of the tests by CTI and the conduct of the QA audit of DTP engineering by the Project team to verify proper inclusion of the test results into the final design for the O-1 Guideway piers and the Difficult Run Bridge Abutment. Unlike the O-1 Guideway piers, DTP has obtained the "as-built" drawings for the piles to be re-used.

MWAA submitted its draft PMP, Version No. 7, to the PMOC on September 3, 2010. The PMOC is currently reviewing the updated plan.

V August 2010

TABLE OF CONTENTS

\mathbf{E}^{2}	XE(CUTIVE SUMMARY	I
1.		PROJECT DESCRIPTION	I
2.		PROJECT STATUS SUMMARY	I
3.		PMOC'S ASSESSMENT OF PROJECT STATUS	IV
1.		GRANTEE'S CAPABILITIES AND APPROACH	1
	a.	Technical Capacity and Capability	1
	b.	Project Controls	1
	c.	Compliance	2
2.		PROJECT SCOPE	2
	a.	Design Status	2
	b.	Bidding and Construction Status	3
	c.	Third Party Coordination & Agreement Status	5
	d.	Real Estate	5
	e.	Utility Coordination	6
	f.	Vehicle Procurement	
	g.	Safety and Quality Status	
3.		PROJECT MANAGEMENT PLAN AND SUB-PLANS	9
4.		Project Schedule	10
	a.	Critical Path Evaluation	
	b.	Important Activities – 90 Day Look Ahead	14
5.		Project Cost	
	a.	Explanation of Variances	15
	b.	Monthly Cost Report - June 2010	16
	c.	Project Funding Sources: June 2010	17
6.		Project Risks	18
7.		ACTION ITEMS.	
A		ENDICES	
		PPENDIX A – LIST OF ACRONYMS	
		PPENDIX B – PROJECT OVERVIEW AND MAP	
		PPENDIX C – SAFETY AND SECURITY CHECKLIST	
	Al	PPENDIX D – PMOC TEAM PERFORMING THIS REVIEW	28

1. Grantee's Capabilities and Approach

a. Technical Capacity and Capability

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

In September 2009, MWAA reorganized by implementing an integrated project management organization consisting of MWAA and PMSS staff. However, the personnel involved remained the same as was evaluated in the January 2008 Technical Capacity and Capability Report. It is the PMOC's opinion that the staffing levels and technical capabilities are still adequate.

• Project Staffing

All vacancies have been filled as of March 2010.

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 *August* 25, 2010 (not yet analyzed), reflects a -98 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 *March* 12, 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. MWAA and DTP met *weekly* during the month of *August* to review DTP's recovery schedule, which was finalized and submitted to MWAA on July 26, 2010 with a Request for Change RFC-112 Rev. 0 (*Rev.* 1 submitted August 12, 2010) entitled "Design-Build Acceleration for Delays through June 25, 2010." RFC-112 provides a recovery schedule intended to mitigate ninety-one (91) days of delay to the forecast Project Substantial Completion. The RFC included an acceleration cost of \$23.7M. *The RFC was rejected by MWAA in August.* The FFGA ROD is December 1, 2014.

MWAA continues to monitor expenditures to date and update the estimate at completion. *Through July 25, 2010*, MWAA has utilized \$71,239,302 of the Phase 1 and Phase 2 allotted contingency 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 reviewed the justification and reported at the June 3, 2010 update meeting that there was still disagreement since the justification addresses only schedule and not cost. MWAA revised the white paper to include a discussion of cost. As of the August monthly meeting, the revised white paper has not been submitted to the PMOC and the matter has not yet been resolved.

The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data. Through *August 2010*, of the cumulative total of 3,557,737 hours worked, there have been no lost time events. Revision 3 of the SCIL was issued by DTP on August 3, 2010. MWAA transmitted comments, including those from WMATA, to DTP on August 26, 2010 and the SCIL, Revision 3 was "Accepted as Noted." Only minor comments on the SCIL remain outstanding.

DTP submitted revisions to the System Safety/Security Management Plan and DTP Procedures PPQ 01.06.02, Development and Maintenance of the Safety/Security Certifiable Items List and PPQ 01.06.03, Design Conformance Certification on August 16, 2010. The Plan and Procedures are under review by the Airports Authority and WMATA, with comments due September 8, 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.

MWAA submitted the required Record of Decision Mitigation Report to the FTA on July 29, 2010 for the second quarter of CY 2010.

FTA and the PMOC continue to review the May 19, 2010 submittal on proposed changes to Record of Decision mitigation measures at the Wiehle Avenue Station, primarily due to the joint development project proposed for that location. FTA is awaiting a response to recent inquiries to MWAA and Fairfax County.

2. Project Scope

a. Design Status

Work continues on the completion of designs, with stations' designs and ATC design continuing to lag. The problems with regard to stations design are due to a combination of poor quality control of the documents and cumbersome review processes and the lack of resources by reviewing agencies. MWAA and DTP continue to meet with the various permitting agencies in an effort to improve the processes. MWAA continues to stress 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. MWAA reports that the quality of the DTP package submissions is improving, but some packages are still being returned for corrective action. Efforts are also continuing by VDOT and WMATA to

improve their design review cycle times. Overall, basic design for all five stations is reported as complete. However, preparation of the "Issued for Permit" (IFP) and subsequent "Issued for Construction" (IFC) drawings is proving to be a drawn out process. Anticipated issuance dates for IFC design packages continue to change from month to month. As of September 1, 2010, the completion dates for all station-related design packages are: November 2010 for Tysons East, and December 2010 for Tysons Central 123, Tysons Central 7, Tysons West and Wiehle Avenue Stations, a further delay from last month. According to DTP, issuance of completed IFC design packages has not impacted the project's critical path, due in part to DGS continuing to assist 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.

b. Bidding and Construction Status

Through *July 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 13 of 31 sub-contract packages awarded thus far for federally-funded allowance items.

Utility relocation is 97% complete and DB construction is approximately 19% complete. Three Utility companies continue their efforts. The utility relocation has been completed on the south side of Route 7 and continues on the north side. Overhead lines have been removed from both sides of Route 7. The utility relocation work remains critical to the project's plans for the remaining two Route 7 road shifts to support construction starts at Tysons Central 7 and Tysons West Station areas.

• The west-bound Route 7 road shift to accommodate the Tysons Central 7 Station construction was accomplished on July 23, 2010. Another road shift to accommodate construction of the Tysons West station was accomplished on Route 7 east-bound between the Best Buy store and the Sheraton Hotel on September 2, 2010. Two additional road shifts to accommodate the Tysons West Station construction are scheduled for mid-September and early October. The civil contractor and the utility contractors meet on a weekly basis to coordinate their efforts and the adjust priorities needed to support the remaining west-bound road shifts.

The following are the major accomplishments of the DB contractor during August 2010:

- Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1) Continued pile cap construction at abutment A-OB. Poured pile cap at pier 2-OB bringing the total to fifteen completed to date. Poured guideway pier columns at piers 2-OB and 6-IB bringing the total completed to thirty-seven to date. Poured guideway pier caps at piers 2-IB and 4-OB bringing the total completed to thirty-five to date. Set AASHTO box girders in place at span 17-IB and 18-IB. Completed the bridge deck placement at the Magarity Road Bridge. Completed setting bridge girders at the Pimmit Run Bridge and continued with decking and formwork. Continued storm drain installation west of Magarity Road and continued pouring retaining walls east of Pimmit Run.
- Operations Area OP-4 (Tysons East Guideway/Station) Completed caissons at piers 14-IB/OB, 15-IB and 32-IB bringing the total completed to date to seventy-six

completed to date. Completed pile caps at piers 26-IB/OB, 27-IB/OB, 28-IB/OB, 29-IB/OB, 35-IB, 45-IB/OB and 60-IB bringing the total to fifty-three completed to date. Poured pier columns at piers 26-IB, 34-IB, 34-OB, 44-IB/OB and 45-IB/OB bringing the total to forty-six completed to date. Poured pier caps at piers 20-IB/OB, 23-IB/OB, 25-IB/OB and 47-IB/OB bringing the total to thirty-four completed to date. Completed segmental box girder guideway erection of spans 3-OB, 4-IB, 4-OB, 5-IB, 5-OB and 6-OB. Continued with construction of straddle bent at pier 10. Continue assembly and setting of segmental erection truss #2 at piers 56-IB/OB and 57-IB/OB.

- Operations Area 5A (I-495 Crossing/Tysons Central 123 Station) Completed pile caps at piers 71-IB and 72-IB bringing the total to seventeen completed to date. Completed columns at piers 49-OB and 49-IB bringing the total to twenty completed to date. Completed pier caps at piers 49-OB, 49-IB and 52-IB/OB bringing the total to eight completed to date. Completed electrical ductbank and grounding grid installation at the Tysons Central 123 Station.
- Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure) DTP continued excavation of the OB tunnel completing 1,404 feet of 1,670 feet to date and the excavation of the IB tunnel completing 1,125 feet of 1,686 feet to date.
- Operations Area OP-6 (West Cut and Cover Tunnel) Completed the stage 1B OB removal of support of excavation and backfilling.
- Operations Area OP-7 (Tysons Central 7 Station) Installation of the support of excavation and excavation continues.
- Operations Area OP-8 (Tysons West Station/Guideway) Storm drain, grading and curb and gutter and paving work for the next eastbound road shift between Westwood Center Drive and the Best Buy store continued. Construction of retaining wall and storm drain installation continues between Westwood Center Drive and the Toll Road. Storm drain, grading and curb and gutter work on west bound Route 7 continues between Spring Hill Road and Tyco Road. Grading work continues on west bound Route 7 between Westpark Drive and SAIC. West bound Route 7 was shifted north between Frontage Road and SAIC. Completed caissons at piers 1-IB, 1-OB, 44-IB/OB, 45-IB/OB, 46-IB/OB, 50-OB, 52-IB/OB, 53-IB/OB and 54-IB/OB bringing the total completed to ten to date.
- Operations Area OP-9 (DIAAH) Completed setting bridge steel at the W&OD Bridge. Completed Abutment B at the west side of the Hunter Mill Road Bridge. Completed the H-pile pile cap installation for Abutment A on the east side of the Hunter Mill Road Bridge. Installation of piles and cofferdam at the intermediate piers at the Difficult Run Bridge continues. Continue with the retaining wall construction on the OB and IB sides between Hunter Mill Road and Difficult Run Bridge. Continue storm drain installation between Hunter Mill Road and east of Difficult Run.
- Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13) Continue forming and pouring platform walls and forming and placement of rebar for the

platform. Continue pile cap construction on the IB track side of the station. Continue pouring slab on grade under the station platform and completed installation of the underground sanitary sewer and water lines. Completed the second phase of the westbound DIAAH road shift to facilitate installation of waterlines and construction of the outside pile caps on the north side of the track way.

• Laydown Area #10 (Pre-cast Yard) - Continue casting of segmental box girders for a total of 1,079 to date. The substandard 28- day concrete strength is being investigated and its resolution is needed so as to not negatively impact the schedule.

c. Third Party Coordination & Agreement Status

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

d. Real Estate

Real Estate Acquisition continues to keep ahead of construction requirements, often resorting to ROE to gain access to required parcels. Through *August* 2010, 65 of the 99 parcels required for the Project have been acquired. The table below summarizes acquisition activities for the Project through *August* 2010.

PARCELS ACQUIRED¹ (Number of parcel packages)

	,	1	Period	<u>U</u> ,	To Date			
LOCATIONS	TOTAL	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	20	19	(1)	
Route 7	51	0	4	4	42	38	(4)	
DIAAH	24	2	0	(2)	11	7	(4)	
TOTAL	99	2	4	2	74	65	(9)	

Notes: 1. Parcels secured through recordation of deed/easement and filing of Certificates of Take. These values include rights obtained for another 28 parcels for which Certificates of Take have been filed.

2. Planned values are based on the March 31, 2010 Property Acquisition Status Update.

Condemnation Status

A total of twenty-eight parcel packages have been obtained with the filing of twenty-four Certificates of Take. In August, a trial for one Certificate of Take was scheduled for March 2011, one appeal was filed and one Agreement After Certificate moved closer to Finalization pending full execution by VDOT. A total of twenty-one Certificates of Take remain in process. Trials have been scheduled for Parcel 41 (Orvis) in October 2010, Parcels 11 and 14 (Lerner) in November, Parcel 30 (Best Buy) in March 2011 and Parcel 21 (Trulie/Marshalls Shopping Center) in April 2011.

e. Utility Coordination

The various utility companies continue to relocate their facilities for the project. Utility coordination meetings are held with the various utilities to schedule and coordinate work. Specific utility relocation work completed in *August* 2010 includes the following:

- Along Route 7 (123 Overpass to Marshall's) Dominion Virginia Power (DVP) completed cutovers and removals at Phase 5 on the north side of Route 7. DTP/Lane completed street restoration on the Frontage Road on the north side of Route 7.
- Along Route 7 (Marshall's to Gosnell/Westpark) MCI continues cutover of customers at SAIC. Dominion completed cutovers and removals at Phase 5 on the north side of Route 7.
- Along Route 7 (Gosnell/Westpark to Spring Hill Road) DVP completed splicing and cutovers and removal of overhead cables and poles at Phase 4 on the north side of Route 7.
- Along Route 7 (Spring Hill Road to Tyco/Westwood) MCI continues splicing and cutovers on the north side of Route 7. Verizon completed service cutovers and removal of overhead lines and poles on the north side if Route 7 in front of the Cherner Dealership. AboveNet completed splicing and cutover work on the south side of Route 7. Cox Communications completed lowering of existing lines at Westwood Center Drive in conflict with storm drain work. Waterline service at the Mercedes Dealership was lowered to resolve a conflict with the storm drain.
- Along Route 7 (Tyco/Westwood to Route 267/Toll Road) AboveNet continues with cable installations and splicing on the north side of Route 7. MCI continues with customer notifications and splicing work. Level 3 completed cutovers and removals at the north side of Route 7. Fiberlight completed cutovers and removals on the north side of Route 7. AboveNet lowered the existing hand hole in the road grade west of Westwood Center Drive for the planned eastbound road shift work. All overhead utility cables and poles have been removed on the north and south sides of Route 7.
- Along Route 123 (Route 7 to the Route 267 Connector Road) DTP/Lane continues with bypass 34.5kV manhole and ductbank installation near the Tysons Central 123 Station. AboveNet continues digging test pits at Route 123 and Scotts Crossing. DVP completed splicing work at Scotts Crossing/Colshire Drive. Qwest Government completed lowering ducts at the Tysons Central 123 Station slab area.
- The DIAAH/Dulles Toll Road (Route 7 to Route 267 DIAAH West) DTP/Lane completed the traction power ductbank installation at the median between the eastbound Toll Road and the DIAAH between Difficult Run and Hunter Mill Road. DTP/Lane continues with the restoration and installation of metal beam guardrail on the eastbound Toll Road/DIAAH. They also completed the jack and bore crossing #162 on the DCR at TPSS #2 and continue installation of traction power ductbanks on the DCR median west of Idylwood. DVP relocated the overhead pole at TPSS #2 on Olney Road.

f. Vehicle Procurement

WMATA is acquiring the additional 64 rail cars required for the project. WMATA is purchasing 300 additional cars under the same procurement. The WMATA Board approved the award of a contract and a sharing of development costs with the Airports Authority at its May 27, 2010 meeting. The Airports Authority Board agreed at its June 2, 2010 meeting to share the development costs associated with the railcar procurement equally with WMATA.

Rail car procurement moved forward with the July 27, 2010 contract award by WMATA to Kawasaki. The manufacturer's proposed schedule showed the 64th car would be delivered by September 12, 2014 based on a July 12, 2010 notice to proceed (NTP). WMATA issued Notice-To-Proceed (NTP) on August 16, 2010. The Project schedule requires the last (64th) car to be delivered by September 20, 2013 to support the Operational Readiness Date (ORD). A revised delivery schedule is not yet available. WMATA has stated that they will be able to support the Project's ORD needs with existing fleet rail cars if the Kawasaki is unable to improve the delivery schedule.

g. Safety and Quality Status

The Airports Authority participated in *five* safety walk downs with DTP during the month of *August*. One was related to utility relocation and *four* were related to Design-Build work. An audit of the DTP Construction Safety Program was conducted on August 4-5, 2010. Although the audit results were generally positive, two minor issues requiring response were identified along with four recommendations for safety program improvement. As of *August* 31, 2010, DTP had logged a total of 3.56 million project man-hours with 119 first aid cases and no lost time cases. There have been a total of 155 incident investigation reports, 72 utility hits and 15 vehicular accidents.

Revision 3 of the SCIL was issued by DTP on August 3, 2010. MWAA transmitted comments, including comments from WMATA, to DTP on August 26, 2010 and the SCIL, Revision 3 was "Accepted as Noted." Only minor comments on the SCIL remain outstanding.

On May 25, 2010, the Airports Authority and DTP management met to discuss unacceptable issues that had resulted in the rejection of the first two Design Conformance Checklist submittals. DTP presented a plan for addressing these issues and for proceeding in a timely manner with the sign-off of items in the Checklist. Beginning June 8, 2010, DTP and the Airports Authority meet every two weeks to review the status of issued for construction designs (including subcontractor designs) and determine the status of sign-offs of the design Conformance Checklist items related to all issued for construction designs. DTP engineering personnel responsible for Checklist sign-offs have been re-trained to ensure correction of previously identified problems. During the initial DTP/Airports Authority meetings, it was agreed that the next Design Conformance Checklist submittal would be scheduled for September 2, 2010. The Design Conformance Checklist will be submitted for MWAA's review every 90 days beginning with the September 2, 2010 submittal. The next Construction/Procurement/Installation Conformance Checklist will be submitted on October 4, 2010.

WMATA is implementing a procedure that involves potential selection of additional items from a checklist population for Airports Authority review in addition to those chosen randomly by the Project team for review. These items will be safety critical items selected on a "judgment" basis by WMATA Safety. That process will likely commence with DTP's September checklist submission. The Tri-State Oversight (TOC) and the FTA's on-site PMO representative continue to meet monthly with the Safety/Security Certification Working Group and continue 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 walkdowns with DTP.

During August 2010 MWAA performed the following QA audits/surveillances:

- DTP Welding: A survey of subject activities was conducted on August 3, 2010. There were three issues with a response requested by August 27, 2010. The audit status is still open.
- DTP Construction Safety: An audit was conducted on the subject program on August 4, 2010. There are two issues requiring response by September 3, 2010.
- DTP Subcontractor/Supplier Submittal Process: A survey of subject activities was conducted on August 4, 2010. There were no issues and the audit has been closed.
- Lane Construction (Early MEP): DTP led this audit on August 18, 2010. There were three observations and a report is being prepared.
- DTP Acquisitions: An audit was conducted on August 25, 2010. No issues were found and the audit is closed.

The MWAA QA Audit and Surveillance Schedule through December 2010

Tentative Date	Audit (A) Surveillance (S)	Organization/Activity	Joint Audit/ Surv.	Lead
9/8-9/10	A	DTP Environmental	N	MWAA
9/8-9/10	A	CTI QA Program	N	MWAA
9/14/10	A	J.P. Concepts/Progress Rail Services (Rail) (Steelton, PA)	Y	DTP
9/15/10	A	Progress Rail Services (Covington, KY)/KSA (Portsmouth, OH)	Y	DTP
9/15/10	S	DTP Subcontractor/Supplier Submittal Process: DTP/Subcontractors Nonconformance Control Systems	N	MWAA
9/15-16/10	A	DTP Design of Piers 1-IB, 2-IB, 3-IB, 4-IB, 5-IB, 6-IB, 7-IB, 2-OB, 3-OB, 5A-OB, and 5B-OB	N	MWAA/CTI

Tentative Date	Audit (A) Surveillance (S)	Organization/Activity	Joint Audit/ Surv.	Lead
9/22-23/10	A	DTP Construction and QC	N	MWAA
9/26-30/10	A	Brayman Construction	Y	DTP
10/06-7/10	A	DTP QA, Document Control, Training	N	MWAA
10/13-14/10	A	System Safety and Security	N	MWAA
10/20-21/10	A	DTP Engineering	Y	MWAA
11/03/10	S	DuBrook Concrete	Y	MWAA
11/17/10	S	DTP Sub/Supplier Submittal Process: DTP/Sub Nonconformance Control Systems	N	MWAA
12/08/10	S	DTP Subcontractor Safety Program	N	MWAA

3. 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 review of MWAA's compliance with the PMP and issued a Spot Report on December 8, 2009. MWAA updated its PMP based on the PMOC's observations and the recent MWAA reorganization to an integrated MWAA and PMSS organization. MWAA submitted its draft PMP update of Version 7.0 on September 3, 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 reported that three Project Management Procedures were updated in the period from March through May 2010.
- MWAA's Real Estate Acquisition Management Plan (RAMP), Revision 2, dated September 15, 2009, has been reviewed by the PMOC with a recommendation that the FTA concur, with comments, with the revised RAMP. On January 21, 2010, the FTA provided comments to MWAA, and MWAA staff has revised Procedure PM-3.01(Monitoring the Design-Build Contractor Property Acquisition Services) and has requested DTP to revise their Procedure PIQ-5.1.
- MWAA's Risk Management Plan (RMP) dated October 2008 has been reviewed and accepted by the FTA. The PMOC requested MWAA to begin the process to update the RMP by the end of the summer with a meeting to discuss the update to be scheduled after MWAA completes their risk plan update.

9

- 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. The PMOC issued its Spot Report on its review of the draft RFMP on March 11, 2010, finding the plan to be deficient in many areas. The FTA provided comments to WMATA on March 15, 2010 based on the PMOC's Spot Report. The PMOC met with WMATA on April 6, 2010 to review the comments on the draft RFMP. The PMOC again met with WMATA on June 2, 2010, at WMATA's request, to further discuss the comments. WMATA is in the process of updating the RFMP and anticipates submission of a revised draft in September.
- 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.
- FTA requested an update to the Appendices in the Permitting Plan on June 17, 2010. MWAA has not provided that information to date.

4. Project Schedule

The most recent MWAA analyzed project schedule update has a data date of *July* 25, 2010. The primary critical path identified by DTP reflects a -91 calendar day variance in the achievement of the SSCD from that reflected in the approved Baseline Schedule. This variance reflects a 1 calendar day *improvement* in the critical path since the *June* schedule update and yields a *March* 3, 2014 ROD.

DTP's August schedule update, which has not yet been analyzed, reflects a total -98 calendar days delay. 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 and DTP continue to meet regularly to review and discuss DTP's recovery schedule, which was finalized and submitted to MWAA on July 26, 2010 with a request for change RFC-112 Rev. 0 entitled "Design-Build Acceleration for Delays through June 25, 2010." RFC-112 provides a recovery schedule intended to mitigate ninety-one (91) days of delay to the forecast Project Substantial Completion. RFC-112 Rev. 1 was submitted on August 12, 2010. The RFC includes an acceleration cost of \$23.7M. MWAA rejected the RFC in August. However, delay culpability and associated costs are still in question.

The FFGA ROD is December 1, 2014.

During the month of *August* 2010, Construction *continued with the* Tysons West guideway; work continues at the O-1 Guideway and Tysons East corridor aerial substructure; at Magarity, Pimmit, Hunter Mill, Difficult Run and W&OD bridges; Tysons East, Tysons

Central 123, Tysons Central 7 and Wiehle Avenue Stations; detention ponds at the DIAAH and West Cut-Cover Tunnel; MOT, retaining walls and storm drainage along the DCR and DIAAH; NATM tunnel work continues to progress on schedule for the inbound and outbound tunnels; the WFCY Lead Tunnel continues; Early Roadway work continues at various locations; segmental erection by launch truss #1 continues and launch truss #2 assembly *continued* this month.

DTP's August schedule narrative notes that the primary driver behind the adverse impacts to the critical path schedule continues to be the forecast completion of UR Program work required to support interface work with its subcontractor, Facchina Construction Company (FCC), working along the Route 7 corridor in the vicinity of Tysons West Station. Although UR delays continued this month with the remaining utility agencies, DTP reports that it was able to mitigate some of the new UR delays confronted this month, i.e. DTP reported that its subcontractor FCC encountered a conflict with a 16 inch gas main while attempting to install storm drainage pipe. DTP developed a work-around to allow the traffic shift to occur on September 2. However, several utility companies continue with work that is impacting the upcoming road shifts of the westbound Route 7. The most significant concern involves DVP and the availability of slack in their cable to lower the existing lines, thus allowing the DTP also reports that FCC was impacted by detour storm drain work to progress. encountered petroleum-based contamination of soil while excavating for the new westbound Route 7 roadbed directly south of the Cherner property. DTP further reports that Verizon's incomplete work also continued to impact FCC's ability to perform certain excavation work needed for the upcoming road shifts. The next two Route 7 westbound lane shifts in the Tysons West Station area scheduled for September 15, 2010 and September 23, 2010 may be delayed as a result.

The WFC Yard upgrade work schedule continues to reflect a completion of the full facility in January 2014. DTP stated in its May schedule narrative that this date "incorporates a number of assumptions with regards to permitting and access to perform the work. DTP continues to finalize the WFCY schedule, which will be provided in a revised RFC-065 proposal." The WFCY work is still disconnected from the schedule's critical path. DTP's reason was stated in response to MWAA's review comment on the February schedule as follows: "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 continues to state its disagreement with DTP's completion date in light of the incomplete WFCY scope. DTP's June Schedule narrative states that "DTP resubmitted RFC-065 for the West Falls Church Yard schedule showing a completion in January 2014. DTP anticipates that a new and separate contractual completion date for the WFCY will be established independent of the Project SSCD." It is the PMOC's opinion that the 'independent contractual completion date' must still support the Project Operational Readiness Date". During the August monthly meeting, MWAA reported that the schedule and costs presented by DTP are still being reviewed.

A "West Falls Church Yard Tie-in Execution Plan Update Meeting" was conducted on July 29, 2010. This was an informative and productive meeting, with MWAA, DTP and WMATA represented. It was noted that the updated presentation had incorporated review comments from all stakeholders. The presentation was intended to gain WMATA's feedback on the

11

current execution plan to build the new storage tracks, the new S&I Shop, TPSS, sound cover box and the yard lead tunnel and tracks. The presentation covered the "Key Planning Parameters", "DTP's Current Approach", Existing Site Conditions" and "Next Steps: WMATA Input and Feedback." It was further noted during this meeting that efforts were underway to schedule the completion of this yard expansion in time to support the Project's Operational Readiness Date. A 2nd meeting was conducted as a follow-up on August 31, 2010 at which DTP again presented its general plan. It was attended by DTP, MWAA and WMATA, including the WFCY Superintendent for Operations. DTP provided a good overview of its plan and a tentative track outage schedule that will be officially submitted to MWAA in September. The plan begins with a three-day track outage in January 2011 to install four new loop track 3rd rail power disconnect switches in order to manage partial power outages needed to minimize the impacts to the daily operations of the yard during the sound box construction. DTP hopes to install work area fencing within the loop track and commence clearing and grubbing in December 2010 with only nightly track outages.

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 remains the PMOC's opinion that MWAA is maintaining control over the Project master schedule, with the exception of the WFCY schedule 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, VDOT's and DGS's abilities to provide timely design review comments and to issue timely permits. Improvement with VDOT's turnaround time continues to be observed. However, WMATA continues to lag with its submittal reviews and DGS continues to lag with its reviews and building permit issuance. repeatedly requested WMATA to improve its support to the Project and DTP has repeatedly requested MWAA and DGS to improve its support of the Project. Also, MWAA, WMATA and DGS continue to voice concern about the quality of the DTP design packages without substantial improvement by DTP. It is the PMOC's opinion that more could and should be done by MWAA, WMATA and DGS to overcome these potentially costly delays.

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

- Changes to segmental girder design *from concrete to AASHTO steel* for the I-495 crossing and schedule conflict with HOT Lanes Project.
- Utility companies meeting the project schedule.
- Utility redesign/relocation due to interferences.
- WFCY design, construction and commissioning.
- Weather Delays.
- Inability of DTP to achieve design finalizations.
- A potential systemwide upgrade program by WMATA could have numerous technical scope changes impacting Traction Power, Automatic Train Control and Communications.

a. Critical Path Evaluation

The PMOC agrees with MWAA's assessment regarding the critical path. The Project will need to continue its efforts to resolve disagreements relative to the WFC yard, critical path, logic and delay issues in order to minimize the risk of irretrievable schedule creep leading to

costly schedule compression or constructive acceleration. It is the PMOC's opinion that the majority of the UR work and design related permit issues will be resolved within the next several months and that schedule recovery will *begin* during the fourth quarter of 2010.

The schedule update with a data date of *July* 25, 2010 was again not agreed to by MWAA. MWAA has not agreed to the critical path in any schedule update submitted by DTP for more than a year.

The primary critical path identified by DTP reflects a -91 calendar day variance in the achievement of the SSCD from that reflected in the approved Baseline Schedule. This variance reflects the same number of calendar days in the critical path as the revised June 25, 2010 Schedule Update that was received by the Project team on July 25. The critical path as presented by DTP in July continues to show the origin being incomplete utility relocations (specifically, Level 3 Communications) which impacts the Route 7 traffic shift that creates the work zones necessary to construct the Tysons West Aerial Guideway and Tysons West Station. The Project team disagreed that this was the critical path, asserting that the path was unrealistic since Truss 2 would continue setting other spans after setting Span 22 and not wait for cure time on Pier 31 as currently shown in the schedule. This one 'correction' to the path resulted in a five work-day improvement to the path and resulted in the Critical Path shifting to Tysons Central 123 Station. This path was identified by DTP as path #002. The primary critical path of June, Verizon Telephone utility relocations, remained unchanged and was identified by DTP as path #001f in July. The Project team does not agree with the schedule for the WFC yard contained in DTP's July Update. As submitted, it reflects a completion date of January, 2014 and does not fully reflect the scope reflected in the 60% Design Submittal for the Service and Inspection (S&I) Annex Building. In June 2010, DTP resubmitted RFC-065 for the WFC yard which included a schedule showing completion of the full facility in January 2014, reflecting an improvement over the previously scheduled completion date of August 2014. This improved date incorporates a number of assumptions with regards to permitting, access to perform the work and was developed by DTP after the Project team rejected DTP's Execution Plan. DTP's schedule shows the WFC yard work as disconnected from the critical path and DTP has excluded the WFC Yard schedule from the Project SSCD due to what DTP claims were delays imposed on the start of WFC yard design. The Project team's position has been that the WFC yard work is the primary critical path and DTP's completion date is incorrect in light of the incomplete WFC yard scope. DTP anticipates that a new and separate contractual completion date for the WFC yard will be established independent of the Project SSCD. The Project team will provide DTP detailed review comments with its response to the revised submittal of RFC 065.

MWAA started a concerted effort during July to resolve the continuing disagreements with DTP over schedule updates. Although meetings have been held with the contractor, resolution of differences has not been reached. *However, MWAA reported during the August update meeting that progress is being made.*

The following table compares the milestone dates relative to the approved baseline schedule. The PMOC concurs with MWAA's assessment of the updated schedule and expects that discussions will continue with DTP to reach resolution on the schedule. However, the PMOC is not optimistic that DTP's goal is to reach resolution with regard to the schedule disagreement.

MILESTONE	June 2008 Baseline Schedule	June 2010 Schedule	July 2010 Schedule (NOT ACCEPTED)
Receipt of FFGA	03/03/091	03/10/09 ^A	03/10/09 ^A
Station Design Complete	10/21/09 ¹	11/10/10	12/1/10
Utility Relocation Complete	03/05/101	12/22/10	12/1/10
Aerial and Station Foundations Complete	03/04/11	07/14/11	07/5/11
NATM Tunnels Mined	01/29/11	01/6/11	01/4/11
K-Line Tie-In	12/23/11	03/23/12	05/12/12
Guideway Complete	02/12/12	09/28/12	10/9/12
Train Control Complete	10/26/12	02/1/13	01/22/13
Substantial Completion	07/31/13	10/31/13	10/30/13
Revenue Operations - Target	11/27/13	03/3/14	03/14/14
FFGA Revenue Operations	12/01/14	12/01/14	12/01/14

^A Actual 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 stations design with issuance of IFC Drawings.
- Completion of utility relocation.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).

¹ Date was not met.

5. Project Cost

The SCC Budget and Expenditures summary for the period ending *July* 25, 2010 is as follows. Overall, approximately 25% of the budget has been expended through *July* 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	\$ 636,027,269	\$ 129,074,843	\$ 636,027,269
20	Stations	\$ 317,023,979	\$ 315,699,620	\$ 24,605,014	\$ 315,699,620
30	West Falls Church Yard	\$ 51,789,539	\$ 51,484,608	\$ 2,986,789	\$ 51,846,378
40	Site Work & Utility Relocation	\$ 232,936,987	\$ 236,196,421	\$ 100,421,466	\$ 239,075,282
50	Systems	\$ 278,157,645	\$ 285,644,779	\$ 28,166,149	\$ 284,412,001
60	Right of Way Acquisition	\$ 45,953,303	\$ 45,953,303	\$ 48,586,242	\$ 70,207,408
70	Vehicles	\$ 211,629,775	\$ 211,629,775	\$ 6,892,360	\$ 210,926,012
80	Professional Service	\$ 698,471,472	\$ 715,643,449	\$ 436,867,615	\$ 726,750,479
90	Contingency Mgmt. Reserve	\$ 130,000,075	\$ 134,207,839	\$ -	\$ 97,542,615
100	Finance Charge	\$ 509,984,571	\$ 509,984,571	\$ 12,341,319	\$ 509,984,571
	TOTAL (Federal portion)	\$ 3,142,471,634	\$ 3,142,471,634	\$ <i>789,941,796</i>	\$ 3,142,471,634

Current budget equals FFGA amount plus approved Change Orders CO-001-053 except CO-0049, Directive Letters 001-011R-CO-001-024.

a. Explanation of Variances

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

- 1. SCC10 Guideway and Track Elements has been reduced approximately \$31 million due to the decision by the DB contractor to self perform the NATM tunnel work. Of this major reduction, \$18 million was transferred to SCC 80.
- 2. SCC40 Site work and Utility Relocation has been increased by approximately \$6 million as a result of utility relocation change orders.
- 3. SCC60 Right of Way Acquisition experienced 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.
- 4. SCC80 Professional Services increased approximately \$28 million due to the \$18 million for design, project management and construction management of the tunnel. \$1.3 million is associated with Final Design of the tunnel and \$17.5 million is associated with Project Management and Construction Management. The balance is primarily due to utility relocation design overruns and the design for TPSS #9 and #11 in the amount of \$1.2 million which was transferred to the non-federal portion of the project. SCC80 was increased by approximately \$4.4 million for 33 change orders and \$2.4 million for other budget transfers, as well as \$3.5 million increase for VDOT.

b. Monthly Cost Report - July 2010

DESCRIPTION		F	FGA AMOUNT	EX	PENDITURE TO		ESTIMATE TO		ESTIMATE AT
			(Original)	L	DATE ¹		COMPLETE	L	COMPLETION
	FEDERAL (FFGA	sco	PE)						
Design-Build									
Firm Fixed Price		\$	1,112,052,172	\$	396,341,922	\$	964,419,321	\$	1,360,761,243
Firm Fixed Price Insurance and Bonds		\$	65,109,408	\$	62,834,027	\$	2,654,358	\$	65,488,385
	Firm Fixed Price Subtotal	\$	1,177,161,580	\$	459,175,950	\$	967,073,678	\$	1,426,249,628
Subcontract Allowance		\$	430,199,817	\$	-	\$	234,080,872	\$	234,080,872
Indexed Commendity Foodballer	Design-Build Contract Prices	_	1,607,361,397	\$	459,175,950	\$	1,201,154,550	\$	1,660,330,500
Indexed Commodity Escalation	Design-Build Contract Total	\$	77,469,926 1,684,831,324	ć	459,175,950	\$	57,907,009 1,259,061,559	\$	57,907,009 1,718,237,509
Hillian Delegation	Design-Build Contract Total	Ş	1,084,831,324	Ş	459,175,950	Ş	1,259,061,559	Ş	1,/18,237,509
Utility Relocation Utility Work		\$	84,312,807	ć	69,568,434	\$	17,935,211	\$	87,503,645
Terf Tax		Ş	64,312,607	\$	09,308,434	\$	17,935,211	\$	67,303,043
Project Management and Final Design		\$	8,423,426	\$	14,399,098	\$	695,890	<u> </u>	15,094,988
Project Wallagement and Final Design	Utility Relocation Total		92,736,233	\$	83,967,532	\$	18,631,101		102,598,633
Right of Way	Cumy nerodution rotal	Y	32,730,233	Y	03,307,332	Ÿ	10,031,101	Y	102,550,055
Tagat or way	Right Of Way Total	¢	42,443,132	\$	48,586,242	Ś	21,621,165	Ś	70,207,408
WMATA Agreement	night Of way foldi	ب	42,443,132	۷	40,300,242	ڔ	21,021,103	۲	70,207,400
Vehicles		\$	195,138,329	¢	6,892,360	\$	187,542,207	\$	194,434,567
Construction and Procurement		\$	31,484,799	\$	1,162,751	\$	29,404,273	\$	30,567,024
WMATA Force Account Startup		\$	13,777,100	\$	1,055,706	\$	12,349,315	-	13,405,021
Project Management and Final Design		\$	31,235,400	Ś	7,623,779	Ś	25,605,239	\$	33,229,017
110)ccc management and 1 mar 2 cong.	WMATA Agreement Total	_	271,635,628	\$	16,734,595	\$	254,901,033	\$	271,635,628
Preliminary Engineering ^{2,3}	The state of the s	Ÿ	2,1,033,020	Ý	10,751,555	Y	25 1,501,055	Ť	2,1,033,020
Fremmary Engineering	Preliminary Engineering Total	ć	100,968,646	\$	100,730,999	\$		Ś	100,730,999
Airports Authority Services	Freimmary Engineering Total	Ş	100,908,040	Ş	100,730,999	Ş	-	Ş	100,730,999
			20.070.452	_ ^	4 422 046	,	22 446 660	<u> </u>	25.050.504
General Conditions 4		\$	28,879,153	\$	4,423,016	\$	22,446,669	\$	26,869,684
Airports Authority Project Management and Wiehle Ave		,	22 225 747	؍	12 400 007	,	0.000.000	٦	22 205 717
Garage Project Management Support		\$	23,225,717 90,004,649	\$	13,408,907 50,573,237	\$	9,886,809 43,004,347	\$	23,295,717 93,577,583
Project Management Support	Airports Authority Services Total	_	142,109,519	¢	68,405,160	¢	75,337,825	¢	143,742,984
Contingency ⁵	All ports Authority Services rotal	Ą	142,103,313	٧	08,403,100	ڔ	73,337,623	Ą	143,742,304
contingency	Contingency Total	\$	297,762,579	Ś		\$	225,333,901	Ś	225,333,901
Finance Costs	contingency rotal	Y	251,102,515	Y		7	223,333,301	7	223,333,301
Titulice costs	Finance Costs Total	\$	509,984,571	\$	12,341,319	\$	497,643,252	Ś	509,984,571
Total Federal (FFGA Scope)	1	Ś	3,142,471,634	_	789,941,797		2,352,529,837		3,142,471,634
Total rederal (FFGA Scope)	INTERRELATED HIGHWAY	•		٦	763,341,737	7	2,332,323,637	7	3,142,471,034
Design-Build	INTERREDATED HIGHWAT	HVIF	ROVEIVILIVIS						
Firm Fixed Price - Engineering		\$	5,929,082	\$	3,536,491	\$	24,060,740	ć	27,597,231
Firm Fixed Price Insurance and Bonds		\$	2,889,450	\$	2,832,430	\$	179,166	_	3,011,596
THITTIACUTTICC IIISUI UTICC UTU BOTUS	Firm Fixed Price Subtotal	\$	8,818,532	\$	6,368,921	\$	24,239,906	\$	30,608,827
Subcontract Allowance	Tim Timed Thee Subtotul	\$	18,854,682	\$	-	\$	18,854,682	\$	18,854,682
	Design-Build Contract Total	_	27,673,214	\$	6,368,921	Ś	43,094,588	Ś	49,463,509
Utility Relocation			, , ,		-,,-	_	.,,		-,,
Utility Work		\$	31,552,369	\$	36,687,495	\$	7,859,752	\$	44,547,247
Terf Tax				\$	-		, ,	Ė	
Project Management and Final Design		\$	4,727,549	\$	6,478,967	\$	1,168,222	\$	7,647,189
	Utility Relocation Total	\$	36,279,918	\$	43,166,462	\$	9,027,974	\$	52,194,436
Right of Way									
	Right Of Way Total	\$	44,772,663	\$	14,240,060	\$	3,247,674	\$	17,487,733
Airports Authority Services									
General Conditions ⁴				\$	1,289,148	\$	126,108	\$	1,415,256
	Airports Authority Services Total	\$	-	\$	1,289,148	\$	126,108		1,415,256
Contingency	,,				,222,210				
	Contingency Total	\$	14,482,435	\$	-	\$	2,647,295	\$	2,647,295
Total Interrelated Highway Improvements		\$	123,208,229	\$	65,064,591	\$	58,143,639	\$	123,208,229
	TOTAL PROJECT COST	\$	3,265,679,863	\$	855,006,387	\$	2,410,673,475	\$	3,265,679,863
	10171211103201 0031	Υ	3,203,073,003	,	033,000,307	Y	2,710,073,773	7	3,203,073,803

¹ Reflects Paid costs through July 25, 2010

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

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

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

⁵ Estimate At Completion for federal contingency does not recognize any obligated contingency. See Federal Contingency Utilization Summary for details.

c. Project Funding Sources: July 2010

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO DATE ¹	PERCENT FUND SOURCE EXPENDED TO DATE	REMAINING
Sec 5309 New Starts Federal Funds						
Preliminary Engineering Grants			\$ 54,412,526	\$ 54,412,526		\$ -
Final Design Grant	VA-03-0113-01		\$ 159,001,838	\$ 159,001,838		\$ -
ARRA Construction Grant	VA-36-0001-00		\$ 77,260,000	\$ 77,260,000		\$ -
FFGA Construction Grant ²	VA-03-0113-02		\$ 28,809,000			\$ 28,809,000
FFGA Construction Grant (Application						
Pending)	VA-03-0113-03		\$ 85,000,000			\$ 85,000,000
FFGA Balance	Planned		\$ 495,516,636	\$ -		\$ 495,516,636
Subtotal - New Starts		28.64%	\$ 900,000,000	\$ 290,674,364	32.30%	\$ 609,325,636
Other Federal Funds						
Sec 5307 Surface Transportation Program						
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 29,269,033		\$ 17,949,076
Construction Grant (Application Pending)	VA-95-X056-02		\$ 21,281,890	\$ -		\$ 21,281,890
STP Balance	Planned		\$ 6,500,001	\$ -		\$ 6,500,001
STP/Sec. 5307		2.39%	\$ 75,000,000	\$ 29,269,033	39%	\$ 45,730,967
Local Funds						
VTA 2000			\$ 51,700,000	\$ 51,700,000		\$ -
Commonwealth Transportation Bonds ²			\$ 125,000,000	\$ 72,226,058		\$ 52,773,942
Fairfax County Funds ³			\$ 523,750,000	\$ 47,000,000		\$ 476,750,000
Dulles Toll Road Revenues ^{2,4}			\$1,467,021,634	\$ 299,072,341		\$ 1,167,949,293
Subtotal - Local Funds		68.97%	\$2,167,471,634	\$ 469,998,399	21.68%	\$ 1,697,473,235
Total Project Budget		100%	\$3,142,471,634	\$ 789,941,796		\$ 2,352,529,838
Interrelated Highway Activities			\$ 123,208,229	\$ 65,064,591		\$ 58,143,638
DTR Revenues/Commonwealth Funds ³			\$ 123,208,229	\$ 65,064,591	52.81%	\$ 58,143,638
		Total	\$3,265,679,863	\$ 855,006,387		\$ 2,410,673,476

Reflects costs through July 2010
In January 2010, \$23 6M previously identified as pay-go Dulles Toll Road (DTR) Revenues were reclassified as Commonwealth Transportation Board (CTB) funds, reducing the contribution from DTR revenues and increasing the contribution from CTB funds

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

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

6. 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 July 25, 2010, MWAA reports that it has utilized \$71,239,302 of the available authorized federal 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 fourth quarter of 2010. Phase 3 would complete the Utility Relocation Program now anticipated to complete in late September 2010. MWAA now reports that it has \$28,219,660 obligated from Phase 4 through 10 monies. Of the total project contingency of \$297,762,579, the project has \$198,303,617 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 noted during the June 3rd meeting that the white paper only addresses schedule contingency and not cost contingency. MWAA revised the white paper to include a discussion of cost contingency. To date, the PMOC has not agreed that the Project has advanced to Contingency Phase 3 without MWAA's satisfactory documentation. The PMOC also requested that MWAA update the Risk Management Plan.

With regard to Schedule Contingency, the Project has utilized 91 calendar days of the total of 510 calendar days. The balance in schedule contingency is 418 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	Risk Description	SCC	Risk C	Category	Status
No.	•	Reference	Cost	Sched	(Change from Previous
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	Month) Unchanged. Thirteen of thirtyone sub-contract packages have been awarded to date. 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 1,404-feet of excavation complete on the outbound tunnel and 1,125-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.
D-29	WFCY maintenance annex – Design constraints and WMATA requirements may erode the cost reductions anticipated.	30	X		Unchanged.
C-34	Utility companies performing utility relocation are not performing in accordance with the durations incorporated in the project schedule.	40.02	X	X	Increased. (Replaced risk C-14.) Utility contractors faced heavy spring rains and unforeseen obstacles. Mitigation efforts continue and progress is being made. However, the cost and schedule impacts are not yet known and forecast completion dates continue to slip.

Risk	Risk Description	SCC	Rick C	ategory	Status
No.	Misk Description	Reference	Cost	Sched	(Change from Previous
2100			0000	201100	Month)
M-16	Cost risk for vehicle procurement	20.01	X	X	Unchanged. Bids were
	 size and timing of base order 	20.02			received on June 19, 2009. The
	and options could change the car				WMATA Board approved an
	manufacturer's interest in project				award recommendation to
	and proposal pricing; vehicles				Kawasaki on May 27, 2010.
	may not be available in time for				However, the delivery of the
	revenue operations.				last car is not scheduled to occur until September 12, 2014
					which does not support Project
					needs. The WMATA Board
					awarded the contract to
					Kawasaki on July 27, 2010.
					NTP was issued on August 16,
					2010. A revised delivery date
					schedule has not been
					submitted.
M-12	Unpredictability of ROW	10.04	X		Unchanged. Use of
	settlement costs.				condemnation has increased the ROW costs.
C-20	WMATA scope of work,	10.00	X	X	Unchanged. Technical support
C-20	including site access support,	20.00	Λ	A	for design has been generally
	technical support and WMATA	50.00			provided in a timely manner,
	construction elements may exceed				although the backlog of design
	the budget and schedule. In				reviews continues to increase.
	addition, there is the risk that				SSWPs required to access
	WMATA will have difficulty				WMATA property are lengthy.
	supporting the DB contractor's				There is potential risk with
	requirements.				WMATA directing systems
					design upgrades for ATC, Traction Power and
					Traction Power and Communications systems.
D-19	Cost of Dominion Virginia Power	50.04	X		Unchanged. Design of
	(DVP) 34.5 kV distribution –	50.07	1		ductbank that will contain 34.5
	Level of design is not typical of				kV power the length of project
	100% PE design.				has been completed and the
	_				ductbank construction
					continues. Design by DVP to
					bring power to project has not
					been completed.

Risk	Risk Description	SCC	Risk C	ategory	Status
No.	_	Reference	Cost	Sched	(Change from Previous
					Month)
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	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 turnaround time with VDOT. The
	Services (DGS) making design- related comments rather than strictly permit/code comments.				VDOT requirement for final design plans prior to IFP submittals may increase the risk. In addition, DGS is making design-related comments rather than strictly code/permit evaluations.

7. Action Items

MWAA - DULLES CORRIDOR METRORAIL PROJECT - Items for Grantee Action

PR	ITEM	IDENTIFICATION	NATURE of PROBLEM	D	A	I	COMMENTS	STATUS
1	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 submitted a draft PMP Version 7.0 to the PMOC on September 3, 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	DTP submitted its comprehensive report to MWAA on July 20, 2010. CTI submitted its independent report to MWAA on August 16. MWAA and CTI will be conducting an audit of DTP's design calculations and related test data on September 15, 2010 to ensure that the test data supports the design requirements. Once the audit is complete, MWAA will submit an all inclusive comprehensive report to the FTA and PMOC.	R
3	2A.02	Update Permitting Plan Appendices (June 2010)	Appendices need to reflect actual permitting agencies roles and responsibilities	N	N	N	MWAA was requested to update the Permitting Plan Appendices at the June 2010 meeting.	R

KEY ITEM

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

LEGEND

PRIORITY (PR) GRANTEE ACTION PMO CONTRACTOR STATUS

1- Most Critical D - Remedial Action Developed R - Review On-going

2- Critical A – Remedial Action Approved C – Completed – No further review required

3- Least Critical I – Action Implemented

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

ASSHTO American Association of State Highway and Transportation Officials

BFMP Bus Fleet Management Plan

CD Calendar Days

CPM Critical Path Method CTI Consultants, Inc.

DB Design-Build

DGS (Virginia) Department of General Services
DIAAH Dulles International Airport Access Highway

DTP Dulles Transit Partners, LLC

DTR Dulles Toll Road

DVP Dominion Virginia Power
FFGA Full Funding Grant Agreement
FTA Federal Transit Administration

FTE Full Time Equivalent

FY Fiscal Year

HOT High Occupancy Toll
IFC Issued For Construction
IFP Issued for Proposal

KSA, INC – Producer of Concrete Crossties

MH Manhole

MCI A communication company now owned by Verizon

MEP Mechanical, Electrical and Plumbing

MOT Maintenance of Traffic

MWAA Metropolitan Washington Airports Authority

NATM New Austrian Tunneling Method ORD Operational Readiness Date

PDA Pile Driving Analysis 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

SAIC Scientific Applications International Corporation

SCC Standard Cost Category

SCIL Safety and Security Certifiable Items List

SOE Support of Excavation

SSCD Scheduled Substantial Completion Date SSMP Safety and Security Management Plan

SSWP Site Specific Work Plan

STP Surface Transportation Program

TBD To Be Determined

TOC Tri-state Oversight Committee TPSS Traction Power Substation

UR Utility Relocation

VDOT Virginia Department of Transportation

W&OD Washington and Old Dominion

WFC West Falls Church

WMATA Washington Metropolitan Area Transit Authority

XO Executive Officer

Appendix B - Project Overview and Map

Date: September 24, 2010 (reporting current through *August*, 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		
03/5/14	Revenue Operations Date (ROD) as of July 25, 2010				
19.0%	Percent Complete Construction as of August 31, 2010.				
26.05%	Percent Complete Time based on ROD of December 1, 2014 (based on FFGA)				
38.53%	MWAA's Estimate of Project Earned Value through July 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 \$789.94 million Expenditures *through July 2010* from total project budget of \$3.142 billion

25% Percent complete based on *federal* expenditures *through July 2010*.

\$198.3 million Total project contingency remaining (allocated and unallocated) through July

2010.

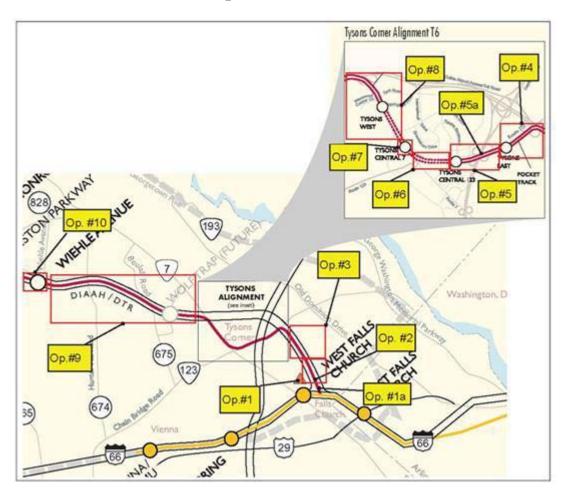
Project Map

APPENDIX B - METRORAIL EXTENSION TO WIEHLE AVENUE Virginia WIEHLE AVENUE TYSONS CORNER Maryland Washington DC DUNNLORING VIRGINIA SQ CHIU [10] **DULLES CORRIDOR** METRORAIL PROJECT 3 MILES **LEGEND** Existing Orange Line Track and Station New Station Surface Track Partially Below Surface Station Elevated Track Transfer Station **Underground Station**

Parking

······ Underground Track

Operational Areas



$APPENDIX\ C-\underline{MWAA\ SAFETY\ AND\ SECURITY\ CHECKLIST}$

Project Overview				
Project mode (Rail, Bus, BRT, multimode)		Rail		
Project phase (Preliminary Engineering, Design,	Design a	Design and Construction		
Construction, or Start-up)	Dasies /D)11.d		
Project Delivery Method (Design/Build, Design/Build/Operate/Maintain, CMGG, etc)	Design/Build			
Design Burier operate (Manitani, Civios, etc)				
Project Plans	Version	Review By FTA	Status	
Safety and Security Management Plan			Accepted	
Safety and Security Certification Plan			Under development; 98% complete	
System Safety Program Plan			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 submitted a revised SEPP to TOC in March 2010. TOC approved the SEPP on August 2, 2010.	
Construction Safety and Security Plan			Addressed in PMP which is under revision.	
Safety and Security Authority	Y/N		Notes/Status	
Is the grantee subject to 49 CFR Part 659 state safety oversight requirements?		Y	Tri-State Oversight Committee (TOC)	
Has the State designated an oversight agency as per Part 659.9		Y	Tri-State Oversight Committee (TOC)	
Has the oversight agency reviewed and approved the grantee's SSPP as per 659.17?		N	WMATA's SSMP will be used. Revised SSPP dated March 2010 is under review by TOC.	
Has the oversight agency reviewed and approved the grantee's Security Plan or SEPP as per Part 659.21?		Y	Approved on August 2, 2010	

Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	TOC had two representatives at the June 30, 2010 QPRM.
Has the grantee submitted its safety certification plan to the oversight agency?	N	Plan in progress. TOC participates in monthly meetings.
Has the grantee implemented security directives issues by the Department Homeland Security, Transportation Security Administration?	N	WMATA will be operator.
SSMP Monitoring		
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.		

Here the cuentee angued the development of sofety	V	
Has the grantee ensured the development of safety	Y	
design criteria?	*7	
Has the grantee ensured the development of security	Y	
design criteria?		
Has the grantee ensured conformance with safety	Y	
and security requirements in design?		
Has the grantee verified conformance with safety	Y	
and security requirements in equipment and		
materials procurement?		
Has the grantee verified construction specification	Y	
conformance?		
Has the grantee identified safety and security critical	Y	In progress, 98%
tests to be performed prior to passenger operations?	•	complete.
Has the grantee verified conformance with safety	N	After SSCD
and security requirements during testing, inspection	14	Anter SSCB
and start-up phases?	37	
Does the grantee evaluated change orders, design	Y	
waivers, or test variances for potential hazards and		
/or vulnerabilities?		
Has the grantee ensured the performance of safety	Y	
and security analyses for proposed work-arounds?		
Has the grantee demonstrated through meetings or	Y	
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		
Has the grantee issued final safety and security	N	
certification?	_ ,	
Has the grantee issued the final safety and security	N	
verification report?	11	
1		
Construction Safety	V	
Does the grantee have a documented/implemented	Y	
Contractor Safety Program with which it expects		
contractors to comply?		
	Y	DTP's Construction
Does the grantee's contractor(s) have a documented		Safety, Health and
company-wide safety and security program plan?		Security Plan
company wide safety and security program plan.		accepted on January
		6, 2009.
Does the grantee's contractor(s) have a site-specific	Y	
safety and security program plan?		
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?		
TOCOTA;		

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

APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW



