## COMPREHENSIVE MONTHLY REPORT

## October 2010

## Dulles Corridor Metrorail Project Extension to Wiehle Avenue

Metropolitan Washington Airports Authority Washington, DC

November 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 15<sup>th</sup> Street Philadelphia, PA 19102

**PMOC Lead:** 

**Length of Time PMOC Assigned to Project:** 10.0 years **Length of Time PMOC Lead Assigned to Project:** 3.0 years

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### **EXECUTIVE SUMMARY**

The Project Management Oversight Contractor (PMOC) met with Metropolitan Washington Airports Authority (MWAA) on October 27, 2010 to conduct a monthly progress meeting (in conjunction with the FTA Quarterly Progress Meeting for the period June 2010 through September 2010) for work performed in October 2010. The full time on-site PMOC attended various project meetings and site tours throughout this reporting period and participated with MWAA and FTA representatives in a complete field tour of the Project on the morning of October 27, 2010. Additional information for this report was obtained from MWAA during the second week of November. 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) 2010, Congress has appropriated \$364 million in Section 5309 New Starts funds and \$77.3 million in American Reinvestment and Recovery Act (ARRA) Capital Investment funds. (The FTA awarded \$21,281,890 in STP funds for VA-95-X056 on September 2, 2010 and \$85,000,000 in New Starts Funds for VA-03-113 on September 23, 2010.)

The Project Map is located in Appendix B.

### 2. Project Status Summary

The PMOC met with MWAA on October 27, 2010 to conduct a monthly progress review meeting. The status information is as of October 25, 2010, unless otherwise noted.

- **Real estate acquisition** continues to keep ahead of construction requirements, often resorting to rights-of-entry (ROE) to gain access to required parcels.
- **Rail car Procurement** moved forward with the July 27, 2010 contract award by WMATA to Kawasaki. The manufacturer's proposed schedule showed the 64<sup>th</sup> car would be delivered by September 12, 2014 based on a July 12, 2010 notice to proceed (NTP). 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. A kick-off meeting between WMATA, MWAA and the PMOC relative to the 7K Series Program was conducted on October 28, 2010 to track the procurement progress schedule.

• 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 designs for all station structures have been completed and submitted for permitting by VDOT and DGS. Anticipated overall design completion of the five stations through "Issued for Construction" (IFC) drawings continues to be the fourth quarter of 2010. However, the associated pavilions and pedestrian bridge alignments are subject to coordination with adjacent developers who have requested design changes to accommodate their development plans. As a result, completion of the pavilions and pedestrian bridge alignment IFC drawings are now forecast for the first quarter of 2011. The PMOC anticipates that MWAA will execute agreements with the developers to reimburse the Project for these additional costs. Overall project design is at 96% complete as of the end of October 2010. The delay in project design does not appear to have adversely impacted the schedule's critical path at this point in time since DTP is submitting permit packages in the order dictated by construction sequencing.

On September 13, 2010, Mr. Nowakowski of the Airports Authority and Mr. Kubicek of WMATA met to discuss the status of WMATA's reviews of ATC design documents. During this meeting, WMATA agreed to re-engage in the ATC design review process provided that MWAA would direct DTP to hire an independent third party consultant to review Alstom's safety analysis of the Generation 4 track circuit modules proposed for use on the Dulles Extension. MWAA agreed and provided a scope for this independent review and analysis which WMATA has approved. Impact on the project schedule is not yet known. However, MWAA reported that DTP/Alstom had previously been directed to continue with the ATC design effort despite WMATA's failure to review and comment on the design submittals. Therefore, there should be no impact on the schedule as long as this independent analysis does not lead to a redesign effort. MWAA expects to bring this independent reviewer on board in November 2010. WMATA re-engaged in the ATC submittal review process in mid October 2010.

• Construction progress is broken into two components: utility relocation (UR), which is 99% complete and design-build (DB) construction, which is approximately 23% complete. A significant accomplishment was realized this month with the completion of the UR work within Operations Area 8 on October 2, 2010. As a result, the Route 7 westbound road shift at Tysons West Station was completed on October 12, 2010 and good progress on critical caissons was also made. Another significant accomplishment was realized this month with the completion of the road shift along the Route 7 westbound corridor in the vicinity of West Park Drive on October 15, 2010, which opened-up more work area for the Tysons West Guideway caisson operations. Also significant for this month's progress was the completion of the OB mining work on the NATM tunnel on October 20, 2010.

Several more Route 7 road shifts are expected during *November* and *December* to permit *complete* station and *guideway* construction in the median.

The O-1 Guideway is approximately 79% complete. The Tysons East Guideway/Station is approximately 62% complete and the NATM Tunnel is approximately 52% complete with the contractor completing 1,670 of 1,670 feet for the Outbound (OB) track and 1,503 of 1,686 feet for the Inbound (IB) track. OB Breakthrough occurred on October 21, 2010. Tysons East Station is approximately 16% complete and Tysons Central 123 Station is approximately 14% complete. The Wiehle Avenue Station is approximately 19% complete. The pre-cast yard has cast 1,441 of 2,600 concrete box girder segments and station girders to date. The substandard 28-day concrete strength issue investigation has been completed. DTP/Rizzanni's root cause report indicates it was a cylinder curing issue causing false reports. MWAA reported that cored cylinder breaks and Schmidt Hammer tests have demonstrated to MWAA/QA's satisfaction that the concrete in the segments in question have met or exceeded the prescribed design strengths and that the issue is essentially resolved. The curing procedure for test cylinders has been adjusted and subsequent test cylinder break tests continue to yield positive results.

• The Schedule showed no losses or gains with the most current analyzed update schedule (data date of September 25, 2010) showing a total -98 calendar days (-98 in the August update) variance from the approved baseline schedule. This results in a projected ROD of March 12, 2014. DTP's October schedule update, which has not yet been analyzed, reflects a gain of one day for a -97 calendar day 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 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. However, MWAA continues to negotiate with the goal of reaching a mutually agreed recovery plan within the next thirty days.

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. *UR work is nearly complete and is no longer on the critical path.* It is the PMOC's opinion that design related permit issues will be resolved within the next several months and that schedule recovery will progress during the fourth quarter of 2010 and the first quarter of 2011.

• **Budget** status as of September 25, 2010 indicates that \$876,825,265 (28%) has been expended of the \$3,142,471,634 budget total. MWAA reports \$91,964,707 of the available contingency for the first three contingency milestones has been utilized with a remaining balance of \$47,035,293 available through the completion of stations design and utility

relocation work, which are expected to be completed by *February 2011* and *November* 2010, respectively.

The PMOC does not agree that the Phase 2 contingency milestone has been achieved. MWAA provided the PMOC with the information on cost contingency and MWAA agreed during the post-meeting discussions on October 5, 2010 to amend the white paper to include a discussion of MWAA's independent cost estimate for the Wiehle Avenue Station and impact to the MEP estimates. MWAA's estimate of the earned value for the Project through *October* 2010 is 39.09%.

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

All utility relocation efforts relating to the upcoming Route 7 road shifts in the Tysons West Station area have been completed. The remaining utility companies are expected to complete their work in *early November 2010*.

The Full Time Equivalent (FTE) total for *September* is 1,749, which is an increase from *August* of 20 and appears to provide suitable support to the scheduled activities. The pre-casting facility continues to produce pre-cast concrete girder segments and long line station segments in advance of their erection schedule.

Piers Re-Use Testing Reports and Program Status: The DTP Inspection and Test Program Final Report for the existing pile foundations in the K-Line Tie-in area has been completed by DTP and reviewed and accepted by the Project Team. The CTI report of the monitoring of the DTP inspection and test program has also been completed. In addition, MWAA/QA conducted an audit of the associated pier design and the test findings to verify incorporation of the existing pier inspection and test program results into the final pier designs. Both final reports and the accepted audit report were submitted to the FTA, PMOC and WMATA for review on October 19, 2010. The approved continuity test data for piles and rebar for the three pier foundations (5-IB, 7-IB and 2-OB) that were expanded following the existing foundation test program will be provided.

MWAA submitted its draft PMP, Version No. 7, to the PMOC on September 3, 2010. The PMOC is currently reviewing the updated plan. The PMOC's review report was submitted to the FTA on November 4, 2010, and the review resulted in six recommendations for revisions to the PMP.

### MAIN REPORT

## 1. Grantee's Capabilities and Approach

## a. Technical Capacity and Capability

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

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

Upon completion of the project, WMATA will become the operator of this extension to their system. WMATA personnel have been active participants in the project.

### **b.** Project Controls

MWAA has procedures in place with regard to monitoring and controlling project scope, quality, schedule, cost, risk and safety. It is the PMOC's observation that MWAA continues to monitor and control the project in accordance with their procedures.

The updated project schedule, with a data date of October 25, 2010 (not yet analyzed), reflects a -97 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 11, 2014. This is a one day improvement from the -98 calendar day delay reflected in the schedule with a data date of September 25, 2010. 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 October to review DTP's recovery schedule, which was 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. Discussions between MWAA and DTP continue at the executive level with regard to a recovery schedule. MWAA's goal is to arrive at a mutually agreed recovery schedule within the next thirty days. The FFGA ROD is December 1, 2014.

MWAA continues to monitor expenditures to date and update the estimate at completion. Through *September 25, 2010*, MWAA has utilized \$91,964,707 of the Phase 1, Phase 2 and Phase 3 allotted contingency of \$139, 000,000. Although MWAA has indicated that the project has progressed to the Phase 3 level of contingency, the PMOC does not agree. During the post meeting discussions on October 5, 2010, the PMOC requested that MWAA include a discussion of their independent cost estimate for the Wiehle Avenue Station and the implications on the MEP allowance costs. *MWAA agreed to revise the white paper accordingly*.

The Quality Assurance (QA)/Safety group maintains an active schedule of audits and surveillances and accident data. Through *October 2010*, of the cumulative total of *4,170,596* hours worked, there *has* been *one* lost time *accident*. 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 is addressing the remaining comments and Revision 4 to the SCIL will be submitted to the Airports Authority in November 2010.* 

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. Comments have been received from WMATA and actions have been taken to address and resolve these comments by both the Airports Authority and DTP. A meeting with MWAA, DTP and WMATA was conducted on November 3, 2010 and necessary changes to the document were agreed upon. The revised plan and procedures will be resubmitted on November 24, 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 *November* 2, 2010 for the *third 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 submitted additional questions in September and is awaiting a response from MWAA and Fairfax County. MWAA expects comments from Fairfax County during the week of November 22, 2010.

## 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. However, the quality of the submittals continues to be troublesome with the exception of improved cover letter narrative explanations to the reviewing official of what is and is not included in the design package submissions.

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 protracted process. Anticipated issuance dates for IFC design packages continue to change from month to month. As of *October 25, 2010*, the completion dates for all *five* station design packages with issuance of "Issued for Construction" (IFC) drawings have been further delayed to late November 2010 The associated station pavilion and pedestrian bridge designs are now anticipated in early February 2011. 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 September 2010, \$231,673,252 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 99% complete and DB construction is approximately 23% complete. All utility relocation efforts relating to the remaining Route 7 road shifts in the Tysons West Station area have been completed. The remaining utility companies are expected to complete their last bit of work in *November* 2010. Facchina is now preparing the new roadway for the remaining Route 7 road shifts scheduled to occur in November and December 2010.

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

- Operations Areas OP-1, OP-2 and OP-3 (I-66/DCR/Laydown Area 1) Continue with abutment wing walls at Abutment A-IB. Completed Bent 5 construction over I-66. Set steel guideway girders at spans 8-IB and 19-IB. All AASHTO girders have now been set in place. DTP set spans 1-IB, 8-IB, 9-IB, 10-IB, 1A-OB, 1-OB and 2-OB for a total of twenty-five completed to date. Continue forming and pouring track decks. Poured track way decking at spans 12-OB, 13-OB, 14-OB, 15-OB, 16-OB, 17-OB, 21-IB and 22-IB, total eight completed to date. Completed pouring bridge deck at Pimmit Run Bridge. Continued storm drain installation west of Magarity Road. Continue pouring retaining walls east of Pimmit Run. Started mud slab installation at the first phase of the WFCY Cut and Cover tunnel. Commenced clearing and grading work at TPSS # 2.
- Operations Area OP-4 (Tysons East Guideway/Station) Completed Tysons East Guideway/Station pile caps at piers 38, 39-IB and 61-OB, for a total of sixty-two

completed to date. Poured Tysons East Guideway/Station pier columns at piers 39-IB, 40-OB, 41-OB, 61-IB and 61-OB, for a total of sixty-nine completed to date. Poured Tysons East Guideway/Station pier caps at piers 14-IB/OB, 26-IB, 26-OB, 31-OB, 31-IB and 48-IB/OB, for a total of forty-seven completed to date. Completed mezzanine beam at pier 34, for a total of four completed to date. Completed platform beam at pier 30, for a total of one completed to date. Continued segmental box girder guideway erection with Truss #1 completing spans 9-IB, 9-OB, 10-IB and 10-OB, for a total of twenty completed to date. Continued erection of span 11. Completed construction of bent at pier 10. Continue with construction of Bent 15. Continued segmental box girder erection with Truss 2, completing spans 56-IB, 56-OB, 57-IB and 57-OB, for a total of four completed to date. Continue with span 55-OB.

- Operations Area 5A/OP-5 (I-495 Crossing/Tysons Central 123 Station) Completed pier caps at piers 65-IB, 65-OB, 66-IB and 66-OB, total of five completed to date. Shifted Tysons Blvd to allow for construction of piers 67 and 70. Mobilized and started caissons at Piers 67 and 70. Continue pouring structural foundation slab at Tysons Central 123 Station. Poured abutment wall at the west end of span 75 at the Tysons Central 123 Station.
- Operations Area OP-6 (Laydown Area #6/NATM Tunnel/East Cut & Cover and Ventilation Structure) Completed excavation of OB tunnel, total 1670 feet to date. Continued excavation of IB tunnel, completed total 1503 feet out of 1686 feet to date.
- Operations Area OP-6 (West Cut and Cover Tunnel) Closed Ramp B and detoured Ramp A from Route 7 east-bound and Route 123 south-bound. Commenced stage 2A soldier pile installation.
- Operations Area OP-7 (Tysons Central 7 Station) Excavation continues for the Tysons Central 7 Station. Continue driving H piles for station foundation.
- Operations Area OP-8 (Tysons West Station/Guideway) Construction of retaining wall and storm drain installation and grading work continues between Westwood Center Drive and Toll Road. WB Route 7 road shifted between Spring Hill Road and Tyco Road. WB Route 7 shifted between Westpark Drive and SAIC. Continue grading and paving work on WB Route 7 between Westpark and Spring Hill Road for shifting WB Route 7 in November. Completed Tysons West Guideway/Station caissons at Piers 3-OB, 26-OB, 27-OB, 30-OB, 31, 47, 48-OB, 48-IB and 49, total twenty-five completed to date. Completed Tysons West Guideway/Station pile caps at piers 52, 53 and 54, total three completed to date.

**Operations Area OP-9 (DIAAH)** – Completed bridge deck pours at W&OD Bridge deck. Completed setting steel girders at Hunter Mill Road Bridge. Continue forming of bridge deck. Installation of piles and construction of pile caps at the intermediate piers at Difficult Run Bridge continues. Continue with retaining walls on OB and IB sides between Hunter Mill Road and east of Difficult Run. Storm drain installation between Hunter Mill Road and east of Difficult Run continues in median. Placing track sub grade continues between Wiehle Avenue and Hunter Mill Road.

- Operations Area OP-10 (Wiehle Avenue Station/Laydown Area 13) Forming and pouring platform deck slab continues. Pile cap construction continues on OB track side of station. Pouring of slab on grade under platform is completed. Forming and pouring columns on IB and OB side of station continues.
- Laydown Area #10 (Pre-cast Yard) Continued casting of segmental box girders, completed 1441 to date.

## c. Third Party Coordination & Agreement Status

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

#### d. Real Estate

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

# PARCELS ACQUIRED<sup>1</sup>

(Number of parcel packages)

			Period	To Date			
LOCATIONS	TOTAL	Planned <sup>2</sup>	Actual	Var	Planned <sup>2</sup>	Actual	Var
Route 66 / Dulles Connector	1	0	0	0	1	1	0
Route 123	23	0	0	0	20	19	(1)
Route 7	51	0	0	0	42	38	(4)
DIAAH	24	0	0	0	11	7	(4)
TOTAL	99	0	0	0	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 October, the case scheduled for trial in October (Parcel 41 – Orvis) went to settlement and into finalization; One Agreement after Certificate continued in the signature process; and one Final Order was reported (from an August Recordation). In addition, one new trial was scheduled, bringing the current total to five potential trials covering six Certificates. A total of 19 Certificates of Take remain in process. The finalization timeframes are estimates as the length of a condemnation process for different cases varies

substantially and is difficult to predict with accuracy. Trials scheduled as of September 30, 2010 are:

Parcel 41, Orvis – October 18, 2010. Settlement reached before trial.

Parcels 11 and 14, Lerner Properties – November 1, 2010. Jury determination on November 4 favored MWAA.

Parcel 30, Whisper Capital (Best Buy) – March 14, 2011,

Parcel 32, CDC, LP (8500, Clemente) – April 4, 2011,

Parcel 33, Office Depot – April 18, 2011, and

Parcel 21, Trulies/Marshalls – April 18, 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 *October* 2010 includes the following:

- Along Route 7 (123 Overpass to Marshall's) All work completed.
- Along Route 7 (Marshall's to Gosnell/Westpark) MCI continues splicing/cutover.
- Along Route 7 (Gosnell/Westpark to Spring Hill Road) No remaining conflicts.
- Along Route 7 (Spring Hill Road to Tyco/Westwood) MCI continues splicing and cutovers on the north side of Route 7. AboveNet continues splicing and cutover work on the north side of Route 7.
- Along Route 7 (Tyco/Westwood to Route 267/Toll Road) AboveNet continues with cable installations and splicing on the north side of Route 7 at Koons Toyota. MCI continues with splicing and cutover work. Washington Gas completed relocation of its gas flow meter. Fairfax Water Main relocated in right hand lane of Route 7 WB, due to conflict with storm drain.
- 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 *relocation work at Route 123 and Scotts Crossing*.
- The DIAAH/Dulles Toll Road/Dulles Connector Road (Route 7 to Route 267 DIAAH West) DTP/Lane continues the installation of the traction power ductbanks on the Dulles Connector Road median and Washington Gas continues with split sleeve installation on existing gas lines near the K-Line.

### 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 64<sup>th</sup> 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. A kick-off *progress status* meeting between WMATA, MWAA and the PMOC was conducted on October 28, 2010. These meetings are a concerted effort to ensure that either the new railcar procurement schedule is improved or that arrangements are made in advance to support the Project's Operational Readiness Date with existing fleet cars. The Project schedule requires the last (64<sup>th</sup>) car to be delivered by September 20, 2013 to support the Project's ROD. A revised delivery schedule is not yet available. WMATA has stated that they will be able to support the Project's ROD needs with existing fleet rail cars if Kawasaki is unable to improve the delivery schedule. However, it is the PMOC's opinion that this back-up plan, which has not been presented in detail, may not be realistic. The PMOC will monitor this closely as the ROD approaches.

## g. Safety and Quality Status

The Airports Authority participated in *four* safety walk downs with DTP during the month of *October*. All were related to Design-Build work. As of *October 31*, 2010, DTP had logged a total of 4.17 million project man-hours with 135 first aid cases and one lost time case. There have been a total of 206 incident investigation reports, 74 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. DTP is addressing the remaining comments and Revision 4 to the SCIL will be submitted to the Airports Authority in November 2010.

DTP and the Airports Authority *continue to* meet every two weeks to review the status of issued for construction designs (including subcontractor designs) and to determine the status of sign-offs of the design Conformance Checklist items related to all issued for construction designs. A Design Conformance Checklist was submitted for MWAA's review on September 2, 2010 with sixty-five items signed off. *Additional information was requested by MWAA and its review* is expected to be completed in early *November*. A Construction/Procurement/Installation Conformance Checklist was received on October 4, 2010 with six items signed off and is currently being reviewed. *MWAA will transmit final comments on both checklists to DTP in November 2010*. Regular weekly visits to work sites by safety representatives from DTP, the Airports Authority and WMATA have begun.

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 *once MWAA has finalized its comments relative to* 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.

DTP submitted revisions to the System Safety/Security Certification 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. Comments have been received from WMATA and actions have been taken to address and resolve these comments by both the Airports Authority and DTP. A meeting with MWAA, DTP and WMATA was conducted on November 3, 2010, and necessary changes to the document were agreed upon. The revised plan and procedures will be resubmitted on November 24, 2010.

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 October 2010 MWAA performed the following QA audits/surveillances:

- DTP QA, Document Control, Training: An audit was conducted on the subject program on October 6-8, 2010. One minor issue not requiring a response was documented. The audit is closed.
- DTP System Safety and Security: An audit was conducted on the subject program on October 13, 2010. One issue was documented and a response is due in early November.
- DTP Engineering: An audit was conducted on the subject program on October 21-22, 2010. There was one minor issue not requiring a response 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
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

MWAA QA is in the process of developing their audit and surveillance schedule for the first half of 2011.

## 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. This plan was reviewed by the PMOC and six recommendations were made for inclusion in the PMP. FTA forwarded the PMOC's comments to MWAA for them to address in Version 7.0 Final. 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. MWAA is in the process of revising the RMP and submission to the PMOC is anticipated for late November with a meeting anticipated in December to discuss the revised RMP.
- 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 submitted the

revised draft RFMP on September 17, 2010 and a draft Spot Report summarizing the PMOC's review findings was issued to the FTA on November 8, 2010. The PMOC held a meeting with WMATA on November 15, 2010 to review the findings.

- 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 *September* 25, 2010. The primary critical path identified by DTP reflects a -98 calendar day variance in the achievement of the SSCD from that reflected in the approved Baseline Schedule. This variance remained the same as that reflected in the critical path of the *August* schedule update and yields a March 12, 2014 ROD. The FFGA ROD is December 1, 2014.

During the month of *October* 2010, construction continued with the Tysons West guideway; 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 and launch truss #2 continues and launch truss #3 is currently being assembled.

DTP's October schedule narrative noted that the Project Critical Path involves Design-Build construction of the Tysons West Station. A significant accomplishment was realized this month with the completion of the UR work within Operations Area 8 on October 2, 2010. DTP states that this was a critical interface with the Design-Build's C6 Early Roadway subcontractor, Facchina Construction Company (FCC), working the Route 7 westbound corridor road shift in the vicinity of Tysons West Station. As a result, the Route 7 westbound road shift at Tysons West Station was completed on October 12, 2010 and good progress on critical caissons was also made. DTP also noted that another significant accomplishment was realized this month with FCC's completion of the road shift along the Route 7 westbound corridor in the vicinity of West Park Drive on October 15, 2010, which opened-up more work area for the Tysons West Guideway caisson operations. Also significant for this month's progress was the completion of the OB mining work on the NATM tunnel on October 20, 2010.

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." 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 October monthly meeting, MWAA reported that the schedule and costs presented by DTP are still being reviewed and that they are confident that the schedule can be adjusted to support the Project's Operational Readiness Date.

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 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 2<sup>nd</sup> 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 was officially submitted to MWAA in October. The plan begins with a three-day track outage in January 2011 to install four new loop track 3<sup>rd</sup> 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.

The WFCY Civil/Sitework final design was completed and issued for permit in October 2010. The S&I Building and Sound Cover Box final design is progressing. DTP has obtained the federal permit for the necessary stream restoration. DTP also submitted its 30% Tie-in Plan to MWAA in October 2010 to include its proposed track outage plan. Five bids have been received for the early civil/sitework subcontract and bid evaluation is ongoing. DTP forecasts award by mid-December 2010.

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 work shifts, particularly with regard *catch-up work related* 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, 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' abilities to provide timely design review comments and to issue timely permits. Improvement with VDOT's turnaround time continues to be observed. WMATA continues to lag with its submittal reviews and DGS continues to lag with its reviews and building permit issuance. MWAA has 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, DTP, WMATA and DGS to overcome these potentially costly delays. In October 2010, WMATA dedicated an ATC Engineer and a Communications Engineer to the DCMP Phase 1 and an Assistant Project Manager to handle DCMP Phase 2 issues. The additional staff is beginning to be an asset to the Project. Improvement with the backlog of WMATA submittal reviews is expected to continue during the months to come.

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.
- 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. All critical UR work related to necessary road shifts have been accomplished. DTP's early roadwork subcontractor, Facchina, Inc. continues to pursue the remaining Route 7 road shifts. It is the PMOC's opinion that the design related permit issues will be resolved within the next few months and that schedule recovery will continue during the fourth quarter of 2010 and into the first quarter of 2011.

The schedule update with a data date of *September* 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 *again* reflects a -98 calendar day variance in the achievement of the SSCD from that reflected in the approved Baseline Schedule. The critical path as presented by DTP in *September* continues to show the origin being incomplete utility relocations which *has* impacted the Route 7 traffic *shifts* that creates the work zones necessary to

construct the Tysons West Aerial Guideway and Tysons West Station. The Project team *again* 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 fifteen work-day improvement to the critical path. *The Airports Authority states that "for this reason and others (inaccurate progress reporting, inappropriate ties and the need for supportable durations on a number of "downstream" activities) the critical path(s) presented by DTP are unacceptable to the Airports Authority." In addition, the Project team does not agree with the schedule for the WFC yard contained in DTP's August 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.* 

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 October update meetings that progress is being made. MWAA reported during the October 27 Quarterly Progress Review Meeting that their goal is to arrive at a mutually agreed upon schedule and constructive acceleration plan to regain the schedule's losses.

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.

	June 2008	August 2010	September 2010
MILESTONE	Baseline	Schedule	Schedule
	Schedule		
Receipt of FFGA	$03/03/09^1$	03/10/09 <sup>A</sup>	03/10/09 <sup>A</sup>
Station Design Complete	10/21/09 <sup>1</sup>	12/29/10	01/25/11
Utility Relocation Complete	$03/05/10^1$	01/13/11	02/14/11
Aerial and Station Foundations Complete	03/04/11	07/12/11	07/06/11
NATM Tunnels Mined	01/29/11	12/29/10	12/28/10
K-Line Tie-In	12/23/11	03/29/12	04/06/12
Guideway Complete	02/12/12	09/26/12	10/02/12
Train Control Complete	10/26/12	01/08/13	01/16/13
Substantial Completion	07/31/13	11/06/13	11/06/13
Revenue Operations - Target	11/27/13	03/20/14	03/20/14
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.

<sup>&</sup>lt;sup>1</sup> Date was not met. See narrative in section D.1.3

- Completion of utility relocation.
- Property acquisitions for the Tysons West Aerial Guideway (OP-8).

## 5. Project Cost

The SCC Budget and Expenditures summary for the period ending *September* 25, 2010 is as follows. Overall, approximately 27.9 % of the budget has been expended through *September* 25, 2010.

FTA SCC CODE	DESCRIPTION	BASELINE BUDGET	CURRENT BUDGET <sup>1</sup>	EXPENDED TO DATE	ESTIMATE AT COMPLETION
10	Guideway and Track Elements	\$ 666,500,284	\$ 634,200,682	\$ 161,334,241	\$ 634,200,682
20	Stations	\$ 317,023,979	\$ 315,699,620	\$ 29,642,356	\$ 315,699,620
30	West Falls Church Yard	\$ 51,789,539	\$ 51,484,608	\$ 3,118,163	\$ 51,846,378
40	Site Work & Utility Relocation	\$ 232,936,987	\$ 239,391,784	\$ 115,953,225	\$ 251,745,497
50	Systems	\$ 278,157,645	\$ 285,644,779	\$ 35,871,582	\$ 284,412,001
60	Right of Way Acquisition	\$ 45,953,303	\$ 45,953,303	\$ 49,567,007	\$ 70,207,408
70	Vehicles	\$ 211,629,775	\$ 211,629,775	\$ 9,557,938	\$ 210,926,012
80	Professional Service	\$ 698,471,472	\$ 721,577,365	\$ 459,439,435	\$ 733,630,881
90	Contingency Mgmt. Reserve	\$ 130,000,075	\$ 126,905,147	\$ -	\$ 79,818,584
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	\$ 876,825,265	\$ 3,142,471,634

Current budget equals FFGA amount plus approved Change Orders CO-001-054 except CO-0049, Directive Letters 001-016, and UR-CO-001-033.

## 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, September 2010

DESCRIPTION		FFGA AMOUNT	E	EXPENDITURE TO	ESTIMATE TO		ESTIMATE AT
		(Original)	Щ	DATE <sup>1</sup>	COMPLETE	L	COMPLETION
	FEDERAL (FFGA S	SCOPE)					
Design-Build						<del>_</del>	
Firm Fixed Price		\$ 1,112,052,17			\$ 932,143,655	_	1,393,927,316
Firm Fixed Price Insurance and Bonds		\$ 65,109,40					67,331,495
	Firm Fixed Price Subtotal	\$ 1,177,161,58		524,675,920	\$ 936,582,891	_	1,461,258,811
Subcontract Allowance		\$ 430,199,81			\$ 230,549,846		230,549,846
	Design-Build Contract Prices	\$ 1,607,361,39		, ,	\$ 1,167,132,737	_	1,691,808,657
Indexed Commodity Escalation	2 : 2 : 12 : 1	\$ 77,469,92			\$ 57,907,009		57,907,009
Heller Balancelon	Design-Build Contract Total	\$ 1,684,831,32	24 \$	524,675,920	\$ 1,225,039,746	5 \$	1,749,715,666
Utility Relocation		Å 04.242.00	27 6	74.500.450	á 27.722.00v	Já	102 225 05
Utility Work		\$ 84,312,80	_		\$ 27,733,808	_	102,236,96
Terf Tax		Å 0.422.42	\$			\$	15 105 22
Project Management and Final Design	Hallian Bulancaina Total	\$ 8,423,42	_		\$ 1,131,064	<u> </u>	16,196,323
Dight of Mo	Utility Relocation Total	\$ 92,736,23	33 \$	89,568,417	\$ 28,864,872	2 \$	118,433,289
Right of Way		4			4 00 010 10		
MINAATA A	Right Of Way Total	\$ 42,443,13	12 5	49,567,007	\$ 20,640,401	1 \$	70,207,408
WMATA Agreement	1	A	20 1 2	0 05-	A 4010m0 :	1	40
Vehicles		\$ 195,138,32				_	194,434,56
Construction and Procurement		\$ 31,484,79			\$ 29,386,980	_	30,567,024
WMATA Force Account Startup		\$ 13,777,10	_		\$ 12,217,452	_	13,405,021
Project Management and Final Design		\$ 31,235,40			\$ 23,302,914		33,229,017
	WMATA Agreement Total	\$ 271,635,62	28 \$	21,851,655	\$ 249,783,973	3 \$	271,635,628
Preliminary Engineering <sup>2,3</sup>							
	Preliminary Engineering Total	\$ 100,968,64	46 \$	100,730,999	\$ -	\$	100,730,999
Airports Authority Services							
General Conditions <sup>4</sup>		\$ 28,879,15	53 \$	4,872,515	\$ 22,035,045	; \$	26,907,559
Airports Authority Project Management and Wiehle Ave						Ť	
Garage		\$ 23,225,71	17   \$	15,205,743	\$ 8,494,974	\$	23,700,717
Project Management Support		\$ 90,004,64	19 \$	58,011,689	\$ 35,565,894	\$ \$	93,577,583
, , ,	Airports Authority Services Total	\$ 142,109,51	19 \$	78,089,948	\$ 66,095,912	\$	144,185,859
Contingency							
	Contingency Total	\$ 297,762,57	79 \$	-	\$ 177,578,213	\$ \$	177,578,213
Finance Costs							
	Finance Costs Total	\$ 509,984,57	71 \$	12,341,319	\$ 497,643,252	\$	509,984,571
Total Federal (FFGA Scope)		\$ 3,142,471,63				_	3,142,471,634
	INTERRELATED HIGHWAY		÷	1 1/1 1/11	, , , , , , , , , , , , , , , , , , , ,		27 7 722
Design-Build							
Firm Fixed Price - Engineering		\$ 5,929,08	22 5	3,742,783	\$ 23,889,651	Τ¢	27,632,434
Firm Fixed Price Insurance and Bonds		\$ 2,889,45	_				3,012,486
Tim Tixed Thee insurance and Bonds		\$ 8,818,53	_			_	30,644,920
Subcontract Allowance	Tilli Tixed Trice Subtotal	\$ 18,854,68			\$ 18,854,682		18,854,682
Subcontract Allowance	Design-Build Contract Total				\$ 42,923,097		49,499,602
Utility Relocation	Design Dana Contract Total	27,073,21	. <del>-</del>   <i>-</i>	0,370,303	7 42,323,037	7	43,433,002
Utility Work		\$ 31,552,36	69 \$	36,944,293	\$ 3,929,185	5 \$	40,873,477
Terf Tax		7 31,332,30	\$		9 3,323,103	+	40,073,477
Project Management and Final Design		\$ 4,727,54			\$ 598,988	2 ¢	7,374,502
Project Management and Final Design	Utility Relocation Total	\$ 36,279,91			\$ 4,528,173		48,247,980
Right of Way	othicy Relocation Total	30,273,31	ر ا ٥	45,719,607	7 4,320,173	٦	40,247,300
ingit of truy	Right Of Way Total	\$ 44,772,66	53 6	14,729,101	\$ 2,758,632	) c	17,487,733
Airports Authority Sorvices	Right Of Way Total	44,772,00	د در	14,723,101	7 2,730,032	Þ	17,407,733
Airports Authority Services			<b>—</b>		4 :==	7	
General Conditions <sup>4</sup>			\$			_	1,415,256
	Airports Authority Services Total	\$ -	\$	1,306,585	\$ 108,672	\$	1,415,256
Contingency							
	Courting on the Total	\$ 14,482,43	DE C		\$ 6,557,658	2 5	6,557,658
	Contingency Total	. , ,					
Total Interrelated Highway Improvements		\$ 123,208,22			\$ 56,876,231		123,208,229

<sup>1</sup> Reflects Paid costs through September 25, 2010

<sup>2</sup> Preliminary Engineering Period (PE) - Prior to August 1, 2007

<sup>3</sup> 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.

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

## c. Project Funding Sources: September 2010

SOURCES OF CAPITAL FUNDING	GRANT ID	PERCENT AT COMPLETE	TOTAL	EXPENDED TO  DATE <sup>1</sup>	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-03-0113-00		\$ 159,001,838	\$ 159,001,838		\$ -
ARRA Construction Grant	VA-36-0001-00		\$ 77,260,000	\$ 77,260,000		\$ -
FFGA Construction Grant	VA-03-0113-02		\$ 28,809,000	\$ 28,809,000		\$ -
FFGA Construction Grant	VA-03-0113-03		\$ 85,000,000	\$ 3,702,915		\$ 81,297,085
FFGA Balance	Planned		\$ 495,516,636	\$ -		\$ 495,516,636
Subtotal - New Starts		28.64%	\$ 900,000,000	\$ 323,186,279	35.91%	\$ 576,813,721
Other Federal Funds						
Sec 5307 Surface Transportation Program						
Construction Grant	VA-95-X056-01		\$ 47,218,109	\$ 47,218,109		\$ -
Construction Grant	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	\$ 47,218,109	63%	\$ 27,781,891
Local Funds						
VTA 2000			\$ 51,700,000	\$ 51,700,000		\$ -
Commonwealth Transportation Bonds <sup>2</sup>			\$ 125,000,000	\$ 72,647,705		\$ 52,352,295
Fairfax County Funds <sup>3</sup>			\$ 523,750,000	\$ 47,000,000		\$ 476,750,000
Dulles Toll Road Revenues <sup>2,4</sup>			\$1,467,021,634	\$ 335,073,172		\$ 1,131,948,462
Subtotal - Local Funds		68.97%	\$2,167,471,634	\$ 506,420,877	23.36%	\$ 1,661,050,757
Total Project Budget		100%	\$3,142,471,634	\$ 876,825,265		\$ 2,265,646,369
Interrelated Highway Activities			\$ 123,208,229	\$ 66,331,998		\$ 56,876,231
DTR Revenues/Commonwealth Funds <sup>3</sup>			\$ 123,208,229	\$ 66,331,998	53.84%	\$ 56,876,231
		Total	\$3,265,679,863	\$ 943,157,263		\$ 2,322,522,600

Reflects costs through September 2010

### 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.

<sup>&</sup>lt;sup>2</sup> 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.

<sup>&</sup>lt;sup>3</sup> Includes Tax District Revenues (\$400M) plus debt service costs allocated to Project Budget

<sup>&</sup>lt;sup>4</sup> Includes pay-as-you-go revenues and bond proceeds

Through September 25, 2010, MWAA reports that it has utilized \$91,964,707 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 first quarter of 2011. Phase 3 would complete the Utility Relocation Program now anticipated to complete in late November 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 \$177,578,212 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 3<sup>rd</sup> 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. During the post meeting discussions on October 5, 2010, the PMOC suggested that MWAA include a discussion of their independent cost estimate for the Wiehle Avenue Station and its potential impact on MEP cost allocations. The PMOC also requested that MWAA update the Risk Management Plan. The Project Team has engaged the Risk Consultant used to prepare the original Risk Analysis to prepare the update to the Risk and Contingency Management Plan. During the quarter there were two two-day sessions held for the purpose of updating the data inputs to the revised analysis. It is expected that the results will be reported in the next quarterly report.

With regard to Schedule Contingency, the Project has utilized 98 calendar days of the total of 510 calendar days. The balance in schedule contingency is 412 calendar days.

MWAA has been following their Risk Management Plan dated October 2008. It is now reevaluating the risks and plans to have a draft re-assessment ready to meet and discuss sometime in November 2010. The following are the Project's current top 10 cost and schedule risks, along with their current status.

**Top 10 Project Risks** 

Risk	Risk Description	SCC	Risk Category		Status
No.		Reference	Cost	Sched	(Change from Previous
					Month)
M-21	Allowance items- a substantial	10, 20,	X	X	Unchanged. Thirteen of thirty-
	part of the contract price is tied to	30, 40, 50			one sub-contract packages
	"Allowance Subcontracts." There				have been awarded to date.
	is potential risk for increased				The variance of the awarded
	project cost and schedule if the				cost versus allowance budget is
	actual subcontracts exceed the				\$11.87 million.
	allocated cost and schedule				
	components in the contract.				

Risk	Risk Description	SCC	Dick C	ategory	Status
No.	Risk Description	Reference	Cost	Sched	(Change from Previous
2100				201100	Month)
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 was completed with 1,670-feet of excavation complete on the outbound tunnel and <i>continues</i> with 1,503-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	Unchanged. (Replaced risk C-14.) Utility contractors have completed all critical relocation work in October 2010. However, the cost and schedule impacts are not yet known and forecast completion dates remain behind schedule as the road work contractor works toward regaining schedule losses.

Risk	Risk Description	SCC	Rick C	Category	Status
No.	Kisk Description	Reference	Cost	Sched	(Change from Previous
2,00		110101 01100	0000	201100	Month)
M-16	Cost risk for vehicle procurement	20.01	X	X	Unchanged. Bids were
	<ul> <li>size and timing of base order</li> </ul>	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, as contained in the bid,
					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
	including site access support,	20.00			for design has been generally
	technical support and WMATA	50.00			provided in a timely manner,
	construction elements may exceed the budget and schedule. In				although the backlog of design 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
					Communications systems.
D-19	Cost of Dominion Virginia Power	50.04	X		Unchanged. Design of
	(DVP) 34.5 kV distribution –				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.
L			l		occii compicted.

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	10.00 20.00	X	X	Unchanged. The issuance of construction permits is taking
	Department of Transportation (VDOT) requiring their review/approval of final design plans prior to Issued for Proposal (IFP) submittals. Potential delays	40.00			longer than anticipated and the contractor is claiming that its costs are increasing. The Six Sigma process improved turnaround time with VDOT. The
	due to the Department of General 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. PMOC review comments were submitted to the FTA on November 4, 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 and CTI Final Reports and MWAA's audit of the findings and pier designs were submitted to the FTA, PMOC and WMATA on October 19, 2010 for review. The PMOC recommended that continuity testing data on three additional piers be submitted.	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
4	2A.03	Update Risk and Contingency Management Plan (RCMP) (October 2010)	The original Risk Management Plan was prepared in October 2008 and needs to be updated to reflect the current Project Status.	N	N	N	MWAA has engaged their Risk Management Consultant and is preparing a draft RCMP that is expected to be ready at the end of November.	R

#### KEY ITEM

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

### **LEGEND**

PRIORITY (PR) PMO CONTRACTOR STATUS

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

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

I – Action Implemented 3- Least Critical

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 CTI Consultants, Inc.
CY Calendar Year
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

RCMP Risk and Contingency Management Plan

RFMP Rail Fleet Management Plan RMP Risk Management Plan ROD Revenue Operations Date

ROE Right-of-Entry ROW Right-of-Way

SAIC Scientific Applications International Corporation

SCC Standard Cost Category

SCIL Safety and Security Certifiable Items List

SOE Support of Excavation

SSCD Scheduled Substantial Completion Date
SSMP Safety and Security Management Plan

SSWP Site Specific Work Plan

STP Surface Transportation Program

TBD To Be Determined

TOC Tri-state Oversight Committee TPSS Traction Power Substation

UR Utility Relocation

VDOT Virginia Department of Transportation

W&OD Washington and Old Dominion

WFC West Falls Church
WFCY West Falls Church Yard

WMATA Washington Metropolitan Area Transit Authority

XO Executive Officer

## APPENDIX B -- PROJECT OVERVIEW AND MAP

### **Project Overview**

**Date:** November 24, 2010 (reporting current through October 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 2,300-car parking facility (provided through a joint development agreement at Wiehle Avenue Station), improvements to the existing WFC Service and Inspection Yard, tail tracks outbound of the interim terminus station at Wiehle Avenue, and the procurement of 64 rail cars.
- **Guideway:** Phase 1 is approximately 11.7 miles in length consisting of two tracks.
- **Stations:** There are five stations in Phase 1. Each station will include a kiss-n-ride area; bus drop-off facilities; station platforms with benches, canopies, ticket vending machines; and other amenities.
- **Support Facilities:** There will be a modification to the West Falls Church Yard and service building. A tail track will be constructed beyond the Wiehle Avenue Station.
- **Vehicles:** The Project will include the purchase of sixty-four vehicles for Phase 1 that will be procured by WMATA.

#### **Ridership**

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

### **Schedule**

06/10/04	Approval to Enter PE	2011	Estimated Rev Ops at Entry to PE	
05/12/08	Approval to Enter FD	12/04/13	Estimated Rev Ops at Entry to FD	
03/10/09	FFGA signed	12/01/14	Estimated Rev Ops at FFGA	
03/12/14	Revenue Operations Date (ROD) as of September 25, 2010			
23.0%	Percent Complete Construction as of October 31, 2010.			
28.95%	Percent Complete Time based on ROD of December 1, 2014 (based on FFGA)			
39.09%	MWAA's Estimate of Project Earned Value through September 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

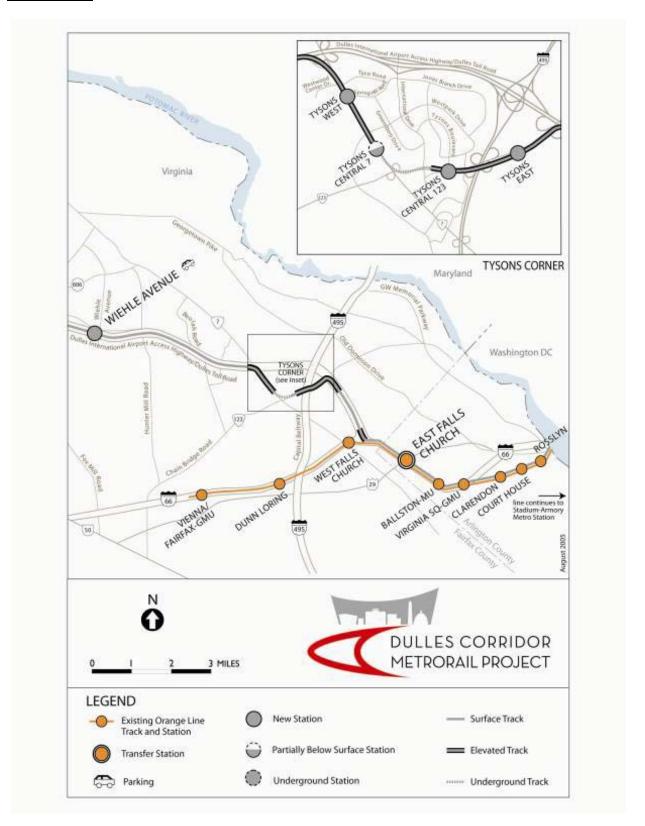
\$876.82 million Expenditures through September 2010 from total project budget of \$3.142

billion

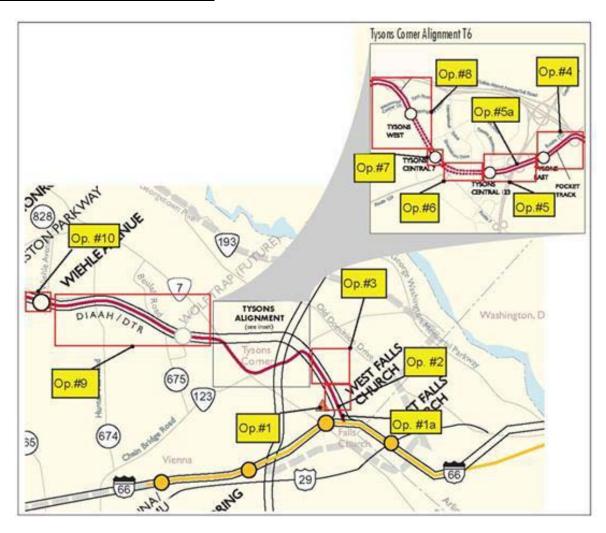
28% Percent complete based on *federal* expenditures through *September 2010*. \$177.57 million Total project contingency remaining (allocated and unallocated) through

September 2010.

## **Project Map**



# **Construction Operational Areas**



# APPENDIX C - MWAA SAFETY AND SECURITY CHECKLIST

Project Overview	<b>Dulles Corridor Metrorail Project</b>		
Project Mode (Rail, Bus, BRT, multimode)	Rail		
Project Phase (Preliminary Engineering, Design,	Design and Construction		
Construction, or Start-up)			
Project Delivery Method (Design/Build,	Design/Bu	uild	
Design/Build/Operate/Maintain, CMGG, etc)		Ī	
Project Plans	Version	Review By FTA	Status
Safety and Security Management Plan	9/2009		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 October 27, 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.		

Has the grantee ensured the development of	Y	
safety design criteria?	*7	
Has the grantee ensured the development of	Y	
security 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	Y	In progress, 98%
critical tests to be performed prior to passenger		complete.
operations?		1
Has the grantee verified conformance with safety	N	After SSCD
and security requirements during testing,	11	
inspection and start-up phases?		
Does the grantee evaluated change orders, design	Y	
waivers, or test variances for potential hazards	1	
and /or vulnerabilities?		
	Y	
Has the grantee ensured the performance of safety	ĭ	
and security analyses for proposed work-arounds?	<b>3</b> 7	
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	N	
security verification report?		
<b>Construction Safety</b>		
Does the grantee have a documented/implemented	Y	
Contractor Safety Program with which it expects		
contractors to comply?		
1 3	Y	DTP's Construction
		Safety, Health and
Does the grantee's contractor(s) have a documented		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	0, 2007.
<u> </u>	1	
safety and security program plan?	NT	
Provide the grantee's OSHA statistics compared to	N	
the national average for the same type of work?		

If the comparison is not favorable, what actions are being taken by the grantee to improve its safety record?		
Does the grantee conduct site audits of the contractor's performance versus required safety/security procedures?	Y	
Federal Railroad Administration		
If shared track: has grantee submitted its waiver request application to FRA? (Please identify specific regulations for which waivers are being requested)	N/A	Heavy Rail Transit Project. No FRA involvement.
If shared corridor: has grantee specified specific measures to address shared corridor safety concerns?	N/A	
Is the Collision Hazard Analysis underway?	N/A	
Other FRA required Hazard Analysis – Fencing, etc.?	N/A	
Does the project have Quiet Zones?	N/A	
Does FRA attend the Quarterly Review Meetings?	N/A	

# APPENDIX D – PMOC TEAM PERFORMING THIS REVIEW

