DULLES CORRIDOR METRORAIL PROJECT –

Extension to Wiehle Avenue

Project Management Plan

Submitted to the

Federal Transit Administration

For

Final Design

Submitted by

Metropolitan Washington Airports Authority

In cooperation with

Washington Metropolitan Area Transit Authority

And

Virginia Department of Transportation

Virginia Department of Rail and Public Transportation

County of Fairfax

and

County of Loudoun

Version 5.0 Final; Re-Revised
January 2008

Approved by:

Charles S. Carnaggio, PE
Project Director
Metropolitan Washington Airports Authority
## Revision Record

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Dulles Corridor Metrorail Project  
Extension to Wiehle Avenue  
Project Management Plan  
v. 5.0 Final; re-revised  
January 2008
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1.0 EXECUTIVE SUMMARY

The development and implementation of an effective Project Management Plan (PMP) is essential to the success of any large capital project. This is particularly true of a highly complex undertaking such as the Locally Preferred Alternative (LPA) referred to as the Dulles Corridor Metrorail Project. The complexity results not only from the inherent technical issues, but also from the sequential Project sponsorship; first by Virginia Department of Rail and Public Transit (DRPT) during Preliminary Engineering followed by the Metropolitan Washington Airports Authority (Airports Authority) during Final Design and Construction with the final hand-off to the Washington Metropolitan Area Transit Authority (WMATA) for operations and maintenance.

Prior revisions of the PMP have addressed management of the Project during Preliminary Engineering (version 2.0) and the transition from DRPT to the Airports Authority sponsorship (version 4.0). This 5th version of the PMP documents that the Airports Authority, rather than the Commonwealth of Virginia (Commonwealth), will manage the Final Design and Construction of the LPA as the Project Sponsor and is focused on activities following the Federal Transit Administration's (FTA) approval to enter Final Design. The PMP will be implemented by the Airports Authority Project staff, utilizing its extensive experience with transit and Design-Build projects to coordinate the efforts of Dulles Transit Partners (DTP), WMATA, and other agencies and stakeholders to effectively implement the Project.

Inherent in this PMP and essential to any transit related project of this magnitude are the following guiding principles:

- Establishment and maintenance of a single authority with overall responsibility for the completion of design, coordination with other agencies and control of DTP to ensure a quality product is provided in as safe a manner as possible.
- Locking down of the Project technical scope to avoid growth and unnecessary changes.
- Thorough review and constant updating of risk to the program for scope creep, schedule slippage and cost increases. Aggressive risk assessment and change management is paramount to success.
- Effective communication with impacted communities and agencies to ensure minimal impact to local transportation network, economy and social fabric.

Transparency regarding the process whereby DTP prosecutes the work and accounts for progression through the life of the contract.

BACKGROUND

The Airports Authority, as grantee, in cooperation with WMATA, proposes to implement a 23.1-mile Metrorail extension in the Dulles Corridor of Northern Virginia. Due to the length of the proposed route, the Dulles Corridor Metrorail Project was divided into two phases. The first phase, known as the Extension to Wiehle Avenue, is 11.6 miles from the existing WMATA Metrorail Orange Line, just east of West Falls Church Station, to a station to be constructed in the Dulles International Airport Access Highway (DIAAH) at Wiehle Avenue. Throughout this PMP, the Extension to Wiehle Avenue will be referred to as “the Project”.

Following is summarized chronology for the Project:

- June 11, 2004 - Pursuant to the Public Private Transportation Act of 1995, DRPT and DTP enter into the Comprehensive Agreement to Develop the Dulles Corridor Rapid Transit Project (the Comprehensive Agreement). In accordance with that agreement, DTP performs certain Development Work and Preliminary Engineering Work related to the Project.
- March 24, 2006 - The Airports Authority and the Commonwealth sign a Memorandum of Understanding setting forth the parties’ mutual desire to execute an agreement transferring
management and control of both the Metrorail Project and the Dulles Toll Road (Toll Road) to the Airports Authority, and for it to assume the Commonwealth’s role in financing and accomplishing the design and construction of both phases of the LPA - the Extension to Wiehle Avenue (Project) and the Extension to Dulles Airport/Route 772 (Phase 2).

- November 30, 2006 - The FTA certifies the Airports Authority as being eligible to receive FTA funds for the implementation of a public transportation project.
- December 29, 2006 - Virginia Department of Transportation (VDOT) and the Airports Authority enter into a Master Transfer Agreement and the Dulles Toll Road Permit and Operating Agreement (the Permit Agreement) pursuant to which VDOT agreed to provide the Airports Authority a permit to operate the Dulles Toll Road and collect Toll revenues in consideration for the Airports Authority's obligation to fund and cause to be constructed the Project,
- March 28, 2007 – DRPT, the Airports Authority and DTP enter into a Memorandum of Understanding memorializing their agreement regarding the substantive terms of a Design-Build Contract to be entered into by DTP.
- June 19, 2007 - The Airports Authority signs a Design-Build Contract with DTP.
- June 28, 2007 - DRPT and the Airports Authority sign the Assignment and Assumption Agreement (Assignment Agreement) that transfers and assigns from DRPT to the Airports Authority, all of DRPT’s right, title and interest in the Comprehensive Agreement, including entering into the Design-Build Contract with DTP. At the same time, DTP consents to the assignment of the Comprehensive Agreement.

The Airports Authority will be the Final Design grant recipient and will assume operational and management control of the Toll Road. With control of both the Toll Road and the Metrorail Project, the Airports Authority intends to fund, design, and construct both phases of the LPA.

APPRAOCH

The Airports Authority has developed this PMP drawing on its own experience managing large capital projects. This experience includes both airport and transit projects and enables the Airports Authority to effectively manage the Project without impeding the ability of DTP to complete the Project on time and within budget. The Airports Authority recognizes the need to implement the Metrorail extension in accordance with the Design-Build Contract, and also to comply with WMATA requirements for integration into its existing regional transit system and with FTA reporting requirements.

Supplementing this PMP are the Airports Authority Quality Program Plan and the Airports Authority Safety and Security Management Plan. These Plans, described in further detail in Sections 5.2 and 16.0 of this PMP, provide additional guidance and requirements related to quality assurance/quality control (QA/QC) and safety and security that are to be applied during the course of the Project to ensure that quality, safety, and security objectives are achieved and related requirements met.

The Airports Authority recognizes that one of the key elements to effective program management is the early establishment of technical scope coupled with an aggressive approach towards change management. Scope growth and changes to scope during construction on major public transportation projects is the primary risk to schedule and budget. Setting a firm scope and aggressively resisting scope creep are essential elements to controlling cost and schedule especially in a Design-Build environment. To achieve success on this Project, the Airports Authority and its Project team have adopted an overarching mentality of Design to Budget, No-change and Schedule Adherence.

To achieve these goals, the PMP is focused on identifying and managing this Project’s challenges and opportunities, including the following:
• The Airports Authority has a comprehensive understanding of the Project requirements. This includes issues ranging from compliance with environmental and code requirements to WMATA design criteria to the Virginia Public Private Transportation Act guidelines.

• The Airports Authority has negotiated a Design-Build Contract with DTP and Inter-Governmental Agreements (IGAs) with WMATA, DRPT, VDOT, Fairfax County and Loudoun County are in place so that all Project roles and responsibilities are appropriately assigned and managed.

• The Airports Authority has worked with FTA, DTP, and the Project partners to define scope, processes, and division of responsibilities in supporting documents such as the Right-of-Way Acquisition Management Plan (RAMP), Permitting Plan, and Utilities Report.

• The contract provisions and agreements the Airports Authority have with DTP and the project partners emphasize a burden of proof that will be enforced regarding severely limiting the types of events or conditions eligible for a change. This applies to the Design-Build contract as well as the enforcement of betterments with project partners and third parties such as utilities.

• The Airports Authority has assembled a Project staff including key personnel having extensive experience in large transit projects and has established a set of Airports Authority Project Management Procedures for managing the Project.

• The Airports Authority has organized this staff and provided the necessary tools in the Design-Build Contract and IGAs to enable it to effectively manage all aspects of the Project.

• The Airports Authority will place a high priority on safety during construction of the Project and with specific regard to the operational and safety characteristics of the rail system.

• The Airports Authority is committed to managing to the targeted subcontract allowances and also to the budgets established for the partner agencies, including its own. As stated, this will continue not only through the design effort but through sub-contract awards, vendor selections, construction and ultimate project implementation.

• The Airports Authority will be pro-active in its approach to addressing the concerns of stakeholders and others affected by the implementation of the Project.

• The Airports Authority will work closely with WMATA throughout the Project to minimize the risk of delays in start-up of revenue service.

• The Airport Authority put several provisions in the Design-Build contract that require DTP to assume schedule responsibility and adhere to the adopted baseline schedule for the project. The monthly schedule review workshops and reconciliation will be viewed as a continuous effort to enforce adherence to the adopted schedule. Our project partners including WMATA have also pre-established interface points built into the master project schedule and codified in our IGAs that they will be held responsible for meeting in order to ensure overall implementation of the project.

• The following sections of this PMP provide detailed descriptions of important aspects of the Airports Authority’s plan and processes for management of the Project.
2.0 PARAMETERS AND CONSTRAINTS

This section describes the LPA, outlines the purpose of the PMP; discusses the Project management approach; and summarizes the Project’s schedule and budget. It focuses primarily on tasks related to Final Design, though the overall management approach and mechanisms will be carried forward through the entire Design-Build process. This PMP will be updated as the Project progresses and reaches key schedule milestones.

2.1 Dulles Corridor Metrorail Project Overview

The Airports Authority, in cooperation with WMATA, is planning to construct a 23.1-mile extension of WMATA’s Metrorail system in the rapidly growing Dulles Corridor located in Northern Virginia within the greater Washington, D.C. metropolitan area. In addition to the Airports Authority and WMATA, there are a number of local stakeholders involved in the Project including VDOT and Fairfax County.

The Dulles Corridor is home to several of the Washington metropolitan region’s most dynamic and rapidly growing activity centers, including Tysons Corner, the Reston-Herndon area, Washington Dulles International Airport (Dulles Airport), and the rapidly growing residential and commercial activity centers in eastern Loudoun County. The recently completed Preliminary Engineering phase modified the alignment and elevation through Tysons Corner and was duly examined and reported in an Environmental Assessment of February 2006. The purpose of the Dulles Corridor Metrorail Project is to provide high-quality, high-capacity transit service in the Dulles Corridor. New fixed-guideway transit in the corridor will result in travel time savings between the corridor and the region’s core, expand the reach of the existing regional rail system, offer a viable alternative to automobile travel, assist in meeting the region’s air quality goals, serve diverse populations in the region, and support future development.

The Dulles Corridor Metrorail Project will extend the existing 106-mile Metrorail system from the Metrorail Orange Line in Fairfax County through Tysons Corner to Dulles Airport and beyond the airport to Route 772 in eastern Loudoun County. Most of the extension will be constructed in the median of the Dulles International Airport Access Highway (DIAAH), Dulles Connector Road, and the Dulles Greenway Toll Road but the alignment would also divert to directly serve Tysons Corner and Dulles Airport. The extension will include 11 new Metrorail stations, a rail yard site on Dulles Airport property, and an expansion of the existing rail yard at West Falls Church. Four of the new stations will be located within Tysons Corner. This alignment was selected because it offers the significant ridership potential with the least impact on residential areas.

The Dulles extension from the Orange line to Loudoun County represents an approximate 25% increase to the existing 106-mile Metrorail system. Operating and maintenance performance of this extension will have significant impact on the entire system due to its convergence/divergence near West Falls Church, at Rosslyn, and at one of WMATA’s junction points on the eastern section of the Orange and Blue lines.

2.2 Locally Preferred Alternative

The LPA shown in Figure 2-1 is a 23.1-mile Metrorail extension with 11 stations serving the major activity centers of the Dulles Corridor. For the purpose of communicating to the public that the Project is a seamless extension of the regional Metrorail system, in June 2004, DRPT and FTA renamed the Project as the Dulles Corridor Metrorail Project. Physical construction of the Project’s line, stations, and facilities will include a junction with the existing Metrorail Orange Line under the Haycock Road Bridge in the median of I-66. From its connection with the Orange Line, the new Metrorail line proceeds westward in the median on the Dulles Connector Road in Fairfax County, through Tysons Corner along Routes 123
Beyond Tysons Corner, the line follows the median of the Dulles International Airport Access Highway (DIAAH) to Dulles Airport, and then proceeds into the median of the Dulles Greenway Toll Road to its terminal station at Route 772 in Loudoun County.

Figure 2-1
DULLES CORRIDOR METRORAIL PROJECT MAP

The Dulles Corridor Metrorail Project’s July 2004 Final General Plans (plan and profile drawings) as modified by Preliminary Engineering show the following:

**Proposed Metrorail alignment**

**Location of the eleven (11) stations**

**Service and Inspection Yard at site number 15 on Dulles Airport property**

**Location and type of special trackwork of the alignment, including pocket tracks, a maintenance track east of Herndon-Monroe Station, double crossovers, single crossovers, the yard lead to West Falls Church Yard, the yard leads to yard site number 15, and tail tracks west of Route 772 Station**

**Location of traction power substations, tie-breaker stations and storm water management facilities.**

**Addition of storage tracks and maintenance facilities to the existing West Falls Church yard**

**Location of four portals of two main underground sections, one in Tysons Corner and the other on Dulles Airport property**

**Revision of alignment and elevation through Tysons Corner**
Realignment of the DIAAH at stations
Realignment of the Dulles Greenway Toll Road at two stations and at the yard leads for yard site 15

2.3 Phased Construction of the LPA

Based on FTA guidance and the timing of funding availability, the Airports Authority plans to construct the LPA in two major phases. The Project addressed in this PMP is the initial 11 miles of the LPA from the current Orange Line to Wiehle Avenue in Reston. It will include five stations, improvements to an existing WMATA Service and Inspection Yard at West Falls Church, and tail tracks outbound of the interim terminus at Wiehle Avenue. Phase 2 of the LPA will complete construction between Wiehle Avenue and Route 772 in Loudoun County, add six additional stations, and a new Service and Inspection Yard on the property of Dulles Airport.

The new Dulles Corridor service will operate as a separate Metrorail line between the Route 772 station and the Stadium-Armory station in Washington, D.C. (identified as a dashed grey line on Figure 2-2 below). This new line will also provide additional service for current users of the Orange Line (between the East Falls Church and Stadium-Armory stations) and the Blue Line (between the Rosslyn and Stadium-Armory stations). The Project (the extension from the Orange Line to Wiehle Avenue) would begin revenue service in November 2012 and has a capital cost of $2.96 billion. This figure is in year of expenditure dollars and includes $2.549 billion in Final Design and Construction costs and $412 million in financing costs through 2013.

Figure 2.2
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY METRORAIL SYSTEM MAP WITH DULLES LINE
(Shown as a dashed line from Route 772 Station to Stadium-Armory Station)

2.4 Project Status

The Project’s Draft EIS was completed in June 2002 and the LPA was approved in December 2002. A Supplemental Draft EIS, published in October 2003, focused on changes to the Project’s scope and alignment in response to public comments on the Draft EIS, and assessed potential environmental effects associated with phased construction of the LPA. The Supplemental Draft EIS public hearing process
Based on design refinements to the Project following the completion of the 50% PE plans, DRPT in coordination with FTA, prepared an EA to analyze the environmental effects of the proposed changes. The EA found no significant changes in the environmental effects of the proposed changes over those presented in the Final EIS. The Draft EA was circulated to regulatory agencies and the public on February 24, 2006. A public hearing was held on March 28, 2006 and the comment period for the EA closed on April 11, 2006.

On March 24, 2006, the Commonwealth and the Airports Authority signed a Memorandum of Understanding (MOU) setting forth the parties’ mutual desire to execute an agreement transferring management and control of both the Dulles Corridor Metrorail Project and the Toll Road from DRPT to the Airports Authority.

Since June 2006, supplemental engineering activities have been conducted to further advance certain elements of the Project prior to Final Design. This advanced engineering was required to support applications for land use permits, firm-fixed pricing, and to provide information needed to support engineering for utility relocation. These activities include:

- Traffic operational analysis
- Coordination with the proposed Beltway HOT Lanes project
- Evaluation of alternatives for the Tysons Route 123 station design
- Additional civil, roadway and streetscape design
- Utility coordination support
- Right-of-way coordination support
- West Falls Church yard improvements

On November 17, 2006, the FTA issued an Amended Record of Decision (ROD) on the EA.

On December 29, 2006, the Airports Authority and VDOT entered into a Master Transfer Agreement and the Dulles Toll Road Permit and Operating Agreement (the Permit Agreement) pursuant to which VDOT agreed to provide the Airports Authority a permit to operate the Dulles Toll Road and collect toll revenues in consideration for the Airports Authority’s obligation to fund and cause the Project to be constructed.

On March 28, 2007, DRPT, the Airports Authority and DTP entered into a Memorandum of Understanding memorializing their agreement regarding the substantive terms of a Design-Build Contract to be entered into by DTP. On June 19, 2007, the Airports Authority signed a Design-Build Contract with DTP.

On June 18, 2007, DRPT and the Airports Authority signed the Assignment and Assumption Agreement (Assignment Agreement) that transfers and assigns from DRPT to the Airports Authority, all of DRPT’s right, title and interest in the Comprehensive Agreement, including entering into the Design-Build Contract.
with DTP, effective on June 28, 2007. At the same time, DTP consented to the assignment of the Comprehensive Agreement.

Following completion of FTA’s Risk Assessment process, the Project adopted several value engineering concepts and made several modifications to the Project scope in order to provide a more cost-efficient Project that retains the core functionality. The scoping of supplemental engineering work is currently underway to incorporate these modifications into the Project design.

The Airports Authority submitted the application to enter Final Design for FTA’s approval on September 21, 2007. Approval to enter Final Design is expected to be followed by the award of a Section 5309 grant for Final Design, preparation and submittal of the FFGA package, and execution of the FFGA by FTA.

The Airports Authority will provide an update on the status of the Project on a monthly basis to the FTA’s PMOC prior to the monthly meetings held between the Airports Authority and the PMOC.

### 2.5 Purpose of the Project Management Plan

Figures 2-3 shows the Primary Plans and Procedures for use by the Airports Authority as it manages this Project, including the relative hierarchy between these plans and reports that will be used to implement the requirements of this Project Management Plan (PMP). The PMP, supplemented by the Airports Authority Quality Program Plan and the Airports Authority Safety and Security Management Plan, establishes the framework for administering this complex undertaking in accordance with the requirements of FTA. The PMP outlines the general management approach and provides guidelines for the orderly interaction of the multiple agencies and organizations involved in the Project. The requirements of the PMP are implemented by numerous plans and procedures, some described in the following sections of this PMP. The Quality Program Plan and the Safety and Security Management Plan provide guidelines for the multiple organizations in addressing quality, safety, and security requirements.
The plans and reports that support the PMP, as shown in Figure 2-3, include the Communications and Outreach Plan, RAMP, Financial Plan, Permitting Plan, and Utilities Report. These documents define the scope, processes, and division of responsibilities for these critical elements at a greater level of detail to facilitate Project management and execution. The Communication and Outreach Plan's purpose is to create and maintain an effective two-way communications channel with the community, seek to build trust and goodwill, identify needs and concerns early, and mitigate the impact of those concerns on the Project’s cost and schedule. The RAMP describes the organizational structure, coordination requirements, procedures to be employed, and specific acquisition strategies to support the Project. The Permitting Plan describes the permitting processes, applicable permits, roles and responsibilities, and schedule durations to enable sustaining permitting requirements as an integrated part of the Project schedule. The Utility Report defines the utility conflicts to permit early identification of utility companies with which to coordinate. The Utilities Report also describes the intended approach for utility relocation in which the Project leads the coordination of the relocation design activities for each affected utility company and develops Utility Agreements that include milestones for cutovers, tie-ins, and connections.

Throughout all of these plans there is a focus on adhering to the budget and schedule while at the same time retaining the quality and scope of the approved Project implemented in a safe and secure manner.

Figure 2-4 shows the Primary Plans and Procedures for DTP, including the relative hierarchy that will be used to implement the requirements of their PMP.
Figure 2-4
HIERARCHY OF DULLES TRANSIT PARTNERS’ PROJECT DOCUMENTS

- DTP Project Management Plan (PMP)
  - DTP System Safety/Security Certification Management Plan
  - DTP QA/QC Management Plan

- DTP Systems Integration Plan
  - DTP ES&H Plan
  - DTP Systems Acceptance Plan
  - DTP Customer Service Plan
  - DTP Operations & Maintenance Training Program/Plan
  - DTP Permitting Plan

Note: In case of conflict the higher document in this chart takes precedence.

PMP includes:
- Design Mgmt Plan
- Configuration Mgmt Plan
- Project Mgmt Plan
- Mgmt & Organization Plan
- Public Involvement/Public Relations Plan
- Construction Mgmt Plan
- Document Organization & Control Plan
- Software Documentation Plan
- Procurement/Subcontracting Plan
- OBE Plan
- Other Plans (TBD)
This fifth version of the PMP focuses on the Final Design phase of the Project and includes management plans for utility relocation. It defines management responsibilities; roles of Project staff; interactions among and between Project staff, consultants and other agencies and organizations; and specifies the general procedures and management tools that will be used to ensure effective Project control and successful Project completion. It fulfills FTA’s requirements for funding under the “New Starts” Program (49 CFR 633 – Project Management Oversight) and FTA’s “Project and Construction Management Guidelines, 2003 Update.” This PMP is written to comply with all of these requirements and to provide the foundation for the design, construction, and implementation of the Project. The Airports Authority has developed Project Management Procedures to oversee and manage the Project. These are listed in Appendix A. The PMP, the Plans, and the Project Management Procedures will be updated as the Project progresses and reaches key schedule milestones and the Airports Authority will continue to use them as tools to manage the Project and construction administration. The next edition of the PMP (Version 6.0) will address the Construction phase of the Project.

This PMP describes the Airports Authority’s plan to develop:

- an adequate grant recipient staff organization, complete with well-defined reporting relationships, statement of functional relationships, job descriptions, and job qualifications
- a project management organization and management structure necessary to complete Final Design and pursue construction
- a budget covering the project management organization, Final Design and early work activities
- an implementation schedule for the entire Project, including design and construction phases
- a document control procedure and record-keeping system
- QA and QC functions, procedures, and responsibilities for Final Design, construction, system installation, and integration of systems components
- monthly progress reports that include Project budget and schedule for FTA

### 2.6 Project Schedule

The Airport Authority put several provisions in the Design-Build contract that require DTP to assume schedule responsibility and adhere to the adopted baseline schedule for the project. The monthly schedule review workshops and reconciliation will be viewed as a continuous effort to enforce adherence to the adopted schedule. Our project partners including WMATA have also pre-established interface points built into the master project schedule and codified in our IGAs that they will be held responsible for meeting in order to ensure overall implementation of the project.

Various levels of schedules will be produced for the Project. They range from a Level 1 Summary Schedule for use in the public involvement program to a detailed Level 3 critical path schedule for project management and control purposes. Table 2-1 presents a preliminary milestone schedule for project development through revenue service. Revenue service of the Project is scheduled to begin in November 2012.

The major milestones for the Final Design Implementation Schedule are shown in Table 2-2. The table is organized by Operational Area. The major milestones for the Construction Implementation Schedule are shown in Table 2-3. As indicated in Tables 2-2 and 2-3, there will be overlaps between Final Design and Construction activities.
## Table 2-1
PROJECT IMPLEMENTATION SCHEDULE – MAJOR MILESTONES

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initiate Preliminary Engineering</td>
<td>October 24, 2004</td>
</tr>
<tr>
<td>Complete Preliminary Engineering</td>
<td>April 25, 2006</td>
</tr>
<tr>
<td>Submit Request to enter Final Design</td>
<td>April 28, 2006</td>
</tr>
<tr>
<td>Amended Record of Decision</td>
<td>November 17, 2006</td>
</tr>
<tr>
<td>Airports Authority certified as FTA Grantee</td>
<td>November 30, 2006</td>
</tr>
<tr>
<td>Master Transfer Agreement, and Dulles Toll Road Permit and Operating Agreement signed</td>
<td>December 29, 2006</td>
</tr>
<tr>
<td>Design-Build Contract signed</td>
<td>June 19, 2007</td>
</tr>
<tr>
<td>Assignment and Assumption Agreement executed</td>
<td>June 29, 2007</td>
</tr>
<tr>
<td>Airports Authority- Fairfax County Co-operative Agreement signed</td>
<td>July 19, 2007</td>
</tr>
<tr>
<td>Airports Authority- VDOT Co-operative Agreement signed</td>
<td>September 11, 2007</td>
</tr>
<tr>
<td>Project Funding Agreement signed</td>
<td>September 11, 2007</td>
</tr>
<tr>
<td>Airports Authority- WMATA Co-operative Agreement signed</td>
<td>September 14, 2007</td>
</tr>
<tr>
<td>Submit Final Design application</td>
<td>September 21, 2007</td>
</tr>
<tr>
<td>FTA’s approval for Final Design</td>
<td>January 30, 2008</td>
</tr>
<tr>
<td>Submit Full Funding Grant Agreement application</td>
<td>December 12, 2007</td>
</tr>
<tr>
<td>Execute Full Funding Grant Agreement</td>
<td>April 30, 2008</td>
</tr>
<tr>
<td>Begin Construction (detail in Table 2-3)</td>
<td>August 1, 2008</td>
</tr>
<tr>
<td>Start-up /Testing</td>
<td>December 2010</td>
</tr>
<tr>
<td>Safety and Security Certification</td>
<td>August 21, 2012</td>
</tr>
<tr>
<td>Pre-revenue Operations</td>
<td>September 2012-November 2012</td>
</tr>
<tr>
<td>Revenue Service</td>
<td>November 2012</td>
</tr>
<tr>
<td>Operational Areas</td>
<td>Final Design Completion Date</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Op #1 - West Falls Church Yard</td>
<td>February 18, 2011</td>
</tr>
<tr>
<td>Op #1a - K-Line Tie-In</td>
<td>December 28, 2009</td>
</tr>
<tr>
<td>Op #2 - Dulles Connector Road (DCR), Cut &amp; Cover Tunnel (I-66 Crossing)</td>
<td>August 21, 2008</td>
</tr>
<tr>
<td>Op #3 - At-Grade Trackwork, Bridge Crossings</td>
<td>February 23, 2009</td>
</tr>
<tr>
<td>Route 123 (Construction Ops #4, 5, 5a &amp; 6)</td>
<td>February 22, 2008</td>
</tr>
<tr>
<td>Op #4 - Aerial Guideway, Tysons East Station</td>
<td>April 27, 2009</td>
</tr>
<tr>
<td>Op #5 - Aerial Guideway, Tysons 123 Station</td>
<td>May 11, 2009</td>
</tr>
<tr>
<td>Op #5a - I-495 Crossing</td>
<td>January 15, 2009</td>
</tr>
<tr>
<td>Op #6 - NATM Tunnel, Tunnel &amp; East Vent Structure</td>
<td>December 17, 2008</td>
</tr>
<tr>
<td>Route 7 (Construction Ops #7 &amp; 8) - Balance of Utilities &amp; Roadway</td>
<td>January 23, 2008</td>
</tr>
<tr>
<td>Op #7 - Tysons Central 7 Station, Cut &amp; Cover Tunnel, West Vent</td>
<td>October 13, 2009</td>
</tr>
<tr>
<td>Op #8 - Aerial Guideway, Tysons West Segment</td>
<td>June 30, 2009</td>
</tr>
<tr>
<td>DIAAH (Construction Ops #9 &amp; 10)</td>
<td>March 14, 2008</td>
</tr>
<tr>
<td>Op #9 - At-Grade Trackwork, Bridge Crossings</td>
<td>March 02, 2009</td>
</tr>
<tr>
<td>Op #10 - At-Grade Trackwork, Wiehle Avenue Station &amp; Parking Garage</td>
<td>January 14, 2010</td>
</tr>
<tr>
<td>Systemwide</td>
<td>January 31, 2011</td>
</tr>
</tbody>
</table>
### Table 2-3
CONSTRUCTION IMPLEMENTATION SCHEDULE – MAJOR MILESTONES

<table>
<thead>
<tr>
<th>Operational Areas</th>
<th>Construction Completion Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Op #1 - West Falls Church Yard</td>
<td>August 25, 2011</td>
</tr>
<tr>
<td>Op #1a - K-Line Tie-In</td>
<td>February 19, 2010</td>
</tr>
<tr>
<td>Op #2 - Dulles Connector Road (DCR), Cut &amp; Cover Tunnel (I-66 Crossing)</td>
<td>August 25, 2011</td>
</tr>
<tr>
<td>Op #3 - At-Grade Trackwork, Bridge Crossings</td>
<td>January 29, 2010</td>
</tr>
<tr>
<td>Route 123 (Construction Ops #4, 5, 5a &amp; 6)</td>
<td>May 13, 2012</td>
</tr>
<tr>
<td>Op #4 - Aerial Guideway, Tysons East Station Sta.</td>
<td>January 16, 2012</td>
</tr>
<tr>
<td>Op #5 - Aerial Guideway, Tysons 123 Station Sta.</td>
<td>March 13, 2012</td>
</tr>
<tr>
<td>Op #5a - I-495 Crossing</td>
<td>June 25, 2010</td>
</tr>
<tr>
<td>Op #6 - NATM Tunnel, Tunnel &amp; East Vent Structure</td>
<td>January 25, 2012</td>
</tr>
<tr>
<td>Route 7 (Construction Ops #7 &amp; 8) - Balance of Utilities &amp; Roadway</td>
<td>July 20, 2009</td>
</tr>
<tr>
<td>Op #7 - Tysons Central 7 Station, Cut &amp; Cover Tunnel, West Vent</td>
<td>April 06, 2012</td>
</tr>
<tr>
<td>Op #8 - Aerial Guideway, Tysons West Segment</td>
<td>October 27, 2011</td>
</tr>
<tr>
<td>DIAAH (Construction Ops #9 &amp; 10)</td>
<td>March 15, 2011</td>
</tr>
<tr>
<td>Op #9 - At-Grade Trackwork, Bridge Crossings</td>
<td>October 29, 2010</td>
</tr>
<tr>
<td>Op #10 - At-Grade Trackwork, Wiehle Avenue Station &amp; Parking Garage</td>
<td>July 10, 2012</td>
</tr>
<tr>
<td>System wide</td>
<td>December 02, 2011</td>
</tr>
</tbody>
</table>

Given the Project’s Design-Build approach, it is normal and desirable that Construction will commence before Final Design is completed. Utility Relocation is considered the front end portion of the overall construction work. Utility relocation design is already underway and a request for a Letter of No Prejudice for Route 7 and Route 123 has been submitted to FTA to allow actual utility relocation construction to begin prior to Final Design approval. Utility Relocation is included in the Design-Build schedule but is not part of the Design-Build Contract. The utility relocation work will be executed as a Cost Reimbursable (CR) agreement (Time and Materials). All interfacing points between utility relocation and start of Construction are defined in the Design-Build schedule.

The Master Project Baseline Schedule is comprehensive and includes Final Design, real estate acquisition, contractor procurement actions, all construction activities, vehicle and fare collection equipment acquisition, energization, start-up and testing, system safety and security certification, and system integration into the WMATA regional operating system. The Level 1 Summary version of the Master Project Baseline Schedule will be directly linked to the detailed schedule network in Critical Path Method (CPM) format. This schedule, along with the budget, will be matched to the adopted Work Breakdown Structure (WBS). The Airports Authority shall oversee DTP’s schedule progress in accordance with the review of Project schedule procedure (PM-5.02).
2.7 Project Budget

The Final Design and Construction phase of the Project is budgeted at $2.96 billion. This figure includes $2.549 billion in Final Design and Construction costs (which includes approximately $96 million spent on Preliminary Engineering, Supplemental Engineering and Development activities) and $412 million in financing costs through 2013. A line-item budget is shown in Table 2-4 below. The Project budget reflects the outcome of the Airports Authority’s negotiations for a firm fixed price contract with DTP. Sources of funding to support the Project budget are described in the Financial Plan, and the accuracy of the budget figures will be analyzed against actual costs in the Before and After Study.

The Airports Authority is committed to managing to the targeted subcontract allowances and also to the budgets established for the partner agencies, including its own. It is the objective of the Dulles Metrorail Project to avoid, if possible, or to minimize, if necessary, the use of Project budget contingency. As stated, this will continue not only through the design effort but through sub-contract awards, vendor selections, construction and ultimate project implementation. Project Management Procedure # 5.07, Management of Project Contingency, defines the process the Airports Authority will follow to manage and control the use of Project budget contingency.

Table 2-4
PROJECT BUDGET
(Thousands in YOE Dollars)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Guideway and Track Elements</td>
<td>-</td>
<td>133,570</td>
<td>260,679</td>
<td>181,297</td>
<td>61,435</td>
<td>16,936</td>
<td>-</td>
<td>$658,917</td>
<td></td>
</tr>
<tr>
<td>Stations, Stops, Terminals and Intermodal</td>
<td>-</td>
<td>37,521</td>
<td>75,379</td>
<td>102,165</td>
<td>84,849</td>
<td>4,708</td>
<td>-</td>
<td>308,423</td>
<td></td>
</tr>
<tr>
<td>Support Facilities, Yards, Shops, Admin Buildings</td>
<td>-</td>
<td>5,917</td>
<td>15,653</td>
<td>16,381</td>
<td>9,902</td>
<td>339</td>
<td>-</td>
<td>48,392</td>
<td></td>
</tr>
<tr>
<td>Site work and Special Conditions</td>
<td>-</td>
<td>2,364</td>
<td>80,477</td>
<td>78,645</td>
<td>57,087</td>
<td>16,581</td>
<td>7,922</td>
<td>-</td>
<td>243,016</td>
</tr>
<tr>
<td>Systems</td>
<td>-</td>
<td>25,113</td>
<td>130,898</td>
<td>101,560</td>
<td>14,235</td>
<td>2,018</td>
<td>-</td>
<td>273,924</td>
<td></td>
</tr>
<tr>
<td>ROW, Land, Existing Improvements</td>
<td>-</td>
<td>51,221</td>
<td>1,796</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>53,017</td>
<td></td>
</tr>
<tr>
<td>Vehicles</td>
<td>-</td>
<td>142</td>
<td>4,421</td>
<td>26,087</td>
<td>28,462</td>
<td>50,689</td>
<td>57,881</td>
<td>868</td>
<td>168,360</td>
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<tr>
<td>Professional Services</td>
<td>53,584</td>
<td>70,503</td>
<td>157,898</td>
<td>132,298</td>
<td>112,211</td>
<td>85,980</td>
<td>39,545</td>
<td>6,299</td>
<td>658,218</td>
</tr>
<tr>
<td>Unallocated contingency</td>
<td>-</td>
<td>2,226</td>
<td>31,734</td>
<td>42,300</td>
<td>35,303</td>
<td>17,979</td>
<td>8,871</td>
<td>610</td>
<td>138,923</td>
</tr>
<tr>
<td>Finance Charges</td>
<td>-</td>
<td>33,309</td>
<td>93,581</td>
<td>60,774</td>
<td>74,109</td>
<td>78,244</td>
<td>113,673</td>
<td>411,680</td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL PROJECT COST</strong></td>
<td><strong>$53,584</strong></td>
<td><strong>$75,174</strong></td>
<td><strong>$661,182</strong></td>
<td><strong>$824,625</strong></td>
<td><strong>$695,240</strong></td>
<td><strong>$415,559</strong></td>
<td><strong>$214,064</strong></td>
<td><strong>$121,360</strong></td>
<td><strong>$2,960,779</strong></td>
</tr>
</tbody>
</table>

* "2007" includes accrued expenditures to August 31, 2007 and estimated expenditures for the remainder of calendar year 2007.

Costs shown are preliminary and subject to change based on federal approvals and funding availability. Internal totals may not equal due to rounding.

2.7.1 Financial Plan

The Financial Plan for the Project describes the overall sources and uses of funds including realistic financial projections, and incorporates the detailed financial information regarding the Project’s funding sources. The Financial Plan describes the Project’s ongoing financial planning activities and progress made to date in identifying the funding sources necessary to complete construction of the Project. The plan is being prepared by the Airports Authority in accordance with the FTA’s Guidance for Transit Financial Plans (June 2004). The Financial Plan was submitted to FTA on September 14, 2007.

A quarterly Financial Status Report will be prepared in accordance with the Common Rule (49 CFR, Part 18) which requires that accurate, current, and complete disclosure of the financial results
associated with the final design grant. All financial information will be provided on an accrual basis. The financial and cost information, including commitments, will be provided through the PRISM cost reporting system. Accounting information, including accounts payable and accounts receivable are maintained by the Airport Authority's Office of Finance.

Quarterly Financial Status Reports will also be provided to FTA through the TEAM system. The Financial Status Reports will identify the total outlays; share of outlays; total unliquidated obligations and encumbrances; and the Federal share of unliquidated obligations. All essential financial information relating to the scope and purpose of the grant will be completely and clearly displayed in the reports. In addition, the Project Director and Vice President for Engineering will provide regular monthly financial reports to senior management and the Airport Authority Board. The Airports Authority will develop a recovery plan for absorbing potential cost and schedule delays through cost mitigation measures to minimize the impact on the total project budget.

In the event of cost increases that are not covered by DTP under the terms of the design-build contract, the terms of the Airport Authority’s Funding Agreement with Fairfax County and Loudoun County dictates how these costs will be shared among the non-federal funding partners. The Airport Authority's main source of funding for the Project is proceeds from bonds secured by Dulles Toll Road revenues. Based on current revenue projections the Airports Authority has the ability to support additional project costs by modifying the debt structure or, if necessary, increasing toll revenue through toll increases. The financial plan includes additional information about the capacity of the non-Federal funding sources.

2.7.2 WMATA Costs

The Airports Authority will control WMATA’s costs in accordance with the provisions of the WMATA/MWAA Cooperative Agreement, dated September 14, 2007. Briefly, WMATA will be required to provide budgets (Technical Advisory Budgets or TABs) for approval by the Airports Authority. WMATA will monitor and document its expenditures and report them to the Airports Authority. Any period in which there is a planned versus actual overrun of five percent or greater, WMATA is required to prepare and propose a recovery plan that is subject to approval by the Airports Authority. The Airports Authority must also approve the overrun. WMATA must also advise the Airports Authority of any use of contingency which is subject to action by the Airports Authority. Finally, the Airports Authority will not be obligated to make available or timely obligate funds until WMATA has complied with all conditions contained in the Cooperative Agreement relating to funding including a satisfactory accounting of its expenditures in accordance with the TABs.

2.8 Before and After Study

As required by FTA, the Airports Authority has developed a plan for the collection and analysis of information leading to the identification of the impacts of the Project and the accuracy of the forecasts which were prepared during Project planning and development. The analysis, called the Before and After Study, has two distinct and important purposes: (1) to expand insights into the costs and impacts of major transit investments; and (2) to improve the technical methods and procedures used in the planning and development of those investments.

The Airports Authority will electronically archive the data, forecasts, and source documents for use in the analyses. Appendix B of this PMP provides a description of various data sources that will be archived for the analysis purposes. The data inventory in Appendix B was originally prepared to support either the Project’s National Environmental Policy Act review or to meet FTA’s New Starts program requirements. For key Project planning and development milestones, this documentation provides a history of the Project’s evolution, summarizes key assumptions, and presents detailed findings for each of the areas that will be considered in the Before and After Study.
2.9 Legal Authority

The Airports Authority is a public body corporate and politic created by enactment of the Virginia Act and the District Act, with the consent of Congress pursuant to the Federal Act, as amended, with the powers and authority set forth in the Virginia Act and the District Act and with full legal right, power, and authority to own, operate, improve, and maintain the Metropolitan Washington Airports, to enter into the amended Federal Lease and to carry out and perform its obligations under the Federal Lease, the Master Indenture, other finance documents and other contracts entered into in connection with the Airports Authority’s operation and responsibilities. The Airports Authority is also empowered to make and enter into all contracts and agreements necessary or incidental to the performance of its duties, including but not limited to, contracts with the federal government, other states, agencies and governmental subdivisions of Virginia, and other appropriate public and private entities.

On November 30, 2006, FTA released its determination that the Airports Authority “has or will have the legal, financial and technical capacity to carry out the program, including the safety and security aspects of the Project,” a determination FTA is required to make pursuant to 49 U.S.C. § 5309(c) (1) (B) (i) in order for an applicant to be considered eligible to receive funding from the FTA.

2.10 Project Implementation under the Public Private Transportation Act

The Virginia Public-Private Transportation Act of 1995 (PPTA) authorizes the Commonwealth, its local governments, or other public agencies to enter into agreements allowing private entities to develop, design, construct, maintain and/or operate transportation facilities, if determined that private involvement would provide the facilities in a timely and cost-effective manner. The PPTA permits private entities to submit unsolicited proposals as well as proposals solicited by public entities.

In December 1998, Raytheon Engineers and Constructors (now Washington Group International) submitted an unsolicited conceptual proposal to DRPT for the development, design, and construction of a BRT system phasing into an extension of the Metrorail system in the Dulles Corridor. Notice of receipt of the proposal was published by DRPT as required by statute. A competing proposal was submitted by the Tysons-Dulles Corridor Group (comprised of Bechtel Infrastructure Corporation and West*Group Management, LLC). The competing proposals from Raytheon and the Tysons-Dulles Corridor Group were forwarded to the Initial Review Committee, which recommended to the CTB that the Raytheon proposal be advanced to the Detailed Proposal stage. With the concurrence of the Commonwealth, Raytheon added Bechtel and West*Group Management, LLC to its team and renamed the team the Dulles Transit Partners, LLC.

On March 26, 2002, the Commonwealth requested a detailed proposal from DTP, which was done by letter dated April 2, 2002. DTP responded to the request by submitting a detailed proposal on May 31, 2002, which proposed to undertake a variety of development activities, preliminary engineering, and construction of the LPA, as approved by the CTB.

Following a 45-day period for affected local jurisdictions (the Airports Authority, Fairfax County, Loudoun County and the Town of Herndon) to review and comment on the detailed proposal, the Commonwealth convened the Advisory Panel to review the proposal and make a recommendation to the DRPT Director. After several months of review and evaluation, the Advisory Panel submitted a detailed letter on December 5, 2002, to the DRPT Director recommending that DRPT advance into negotiations with DTP.

The DRPT Director accepted the Advisory Panel’s recommendation and initiated negotiations on March 18, 2003. Negotiations were completed. Per FTA’s request, DRPT submitted a draft copy of the Comprehensive Agreement to FTA for review prior to execution by the Commonwealth. On April 1, 2004,
DTP notified DRPT that West*Group Management, LLC had withdrawn and was no longer a member of DTP.

On June 11, 2004, DRPT and DTP executed the Comprehensive Agreement (CA) in accordance with the Commonwealth’s PPTA and on July 22, 2004, DRPT issued a Notice to Proceed to DTP for the Development scope of work and to begin mobilization for Preliminary Engineering. The CA specifies that the Project shall be developed, designed, permitted, financed, acquired, constructed, equipped, and insured; and that the Project will be developed in phases. Under the terms of the Comprehensive Agreement, the Preliminary Engineering scope of work was to be completed by a joint venture of Bechtel Infrastructure Corporation and Washington Group International, known as Dulles Transit Engineers (DTE). DTE operated as a subconsultant to DTP, who was ultimately responsible for performance of both the Preliminary Engineering and Development scopes of work.

Implementation of the Master Transfer Agreement and the Permit and Operating Agreement will provide the Airports Authority with operational responsibility of the DTR for 50 years, making its revenues available to pay a substantial portion of the costs of constructing the Metrorail extension. The full transfer will be effective upon the completion of certain conditions, among which is the award of a Final Design grant to the Airports Authority from FTA. Upon transfer, the Airports Authority will delegate the operation of the DTR to VDOT on behalf of the Authority until an FFGA for the Metrorail Project is executed with the FTA. The Airports Authority will be responsible for collecting tolls and setting toll rates following its regulatory process and with consultation of a Dulles Corridor Advisory Committee.
3.0 ORGANIZATION AND STAFFING

This section discusses the overall approach for managing the design and implementation of the Dulles Corridor Metrorail Project. It also outlines how the participating agencies and entities are organized and staffed. As implementation of the Dulles Corridor Metrorail Project proceeds from Preliminary Engineering to Final Design, and through construction and start-up, the organization will evolve to maximize the efficient use of personnel and adjust to the changing workload. The Airports Authority will update the PMP prior to each phase to reflect changes in the organization and management policies and procedures.

3.1 Project Management Structure

The proposed management structure draws on the strengths and capabilities of each organization to implement the Project in a timely, cost-effective manner. This section summarizes the roles of the principal participants involved in Final Design.

Figure 3-1 identifies the Project participants and their roles on the Project. These roles are described in more detail in the following paragraphs. Information regarding the respective organizational structure of each participant is provided in Sections 3.3 through 3.8.

Figure 3-1
PROJECT FUNCTIONAL ORGANIZATION
**Project Sponsor and Grantee – The Airports Authority:** As the Project sponsor and grantee, the Airports Authority will be the direct point of contact for FTA and the agency that is ultimately responsible for the success of the Dulles Corridor Metrorail Project. In Final Design, the Airports Authority will be the federal grant applicant and recipient and have direct responsibility for the day-to-day management of the Design-Build Contract, the Final Design scope of work, the baseline schedule, the design and construction budget, and all other associated Project Management tasks. To assist in fulfilling its role, the Airports Authority has entered into intergovernmental agreements with WMATA, DRPT, VDOT and Fairfax County. The Airports Authority has also retained a Project Management Support Services (PMSS) consultant team.

**Technical Support and ROW – VDOT and DRPT:** VDOT will provide technical support to the Airports Authority in the areas of right-of-way acquisition, roadway improvements, maintenance of traffic, ITS, and design and constructability reviews. In addition, much of the Project right-of-way in Tysons Corner (along routes 123 and 7) is part of the state highway system and easements will be provided to the Project by permit. DRPT will provide technical support to the Project as needed.

**Technical Support – WMATA:** WMATA will provide staff support as technical advisor to the Airports Authority and assist with oversight of testing and start-up acceptance. WMATA will manage the interface with the existing WMATA system in accordance with schedule requirements established in the Master Project Baseline Schedule.

**System Acceptance – WMATA:** After all construction, testing and start-up related activities have been closed out, the Airports Authority intends to transfer the Project’s line, facilities, and systems to WMATA for operation, maintenance, and ultimate ownership. Upon completion of the Project’s system safety and security certification process and WMATA’s acceptance of the Project into the Adopted Regional System (ARS), in accordance with WMATA Compact procedures, WMATA will operate and maintain the new rail line as an integrated element of the full Metrorail system.

**Design-Build Contractor – DTP:** Dulles Transit Partners, LLC (DTP) will serve as the prime contractor. DTP will perform the scope of services required for Final Design and Construction. Additionally, DTP will continue to provide selected management support services to the Airports Authority, including real estate acquisition support, public involvement, and technical coordination for utility agreements and relocations and permitting.

**Local Funding Partner – Fairfax County:** Fairfax County will serve as a technical advisor in the areas of station access, land use coordination, and County permits and approvals.

The Project organization recognizes the responsibility of the Airports Authority as the FTA designated recipient for federal transit funds. The Airports Authority President and Chief Operating Officer and the Airports Authority Board are ultimately accountable to the FTA for the expenditure of federal funds for the Project. As a recipient of federal transportation grants, the Airports Authority will be subject to the oversight requirements of the FTA, particularly as they relate to budgeting, local share of funding or resources, contracting and procurement procedures, environmental protection, quality assurance and quality control, labor relations, Equal Employment Opportunity (EEO), Americans with Disabilities Act (ADA) requirements, ethics, documentation and record retention, accounting, and auditing.
3.2 Partnering

Partnering is a long-term commitment between two or more organizations to achieve specific objectives by maximizing the effectiveness and cooperation of each participant’s resources. Partnering often requires changing traditional management relationships to a shared culture without regard to organizational boundaries. The relationship is based upon trust, dedication to common goals, and an understanding of each other’s individual constraints, expectations and values. Expected benefits include improved efficiency and cost effectiveness, increased opportunity for innovation, and continuous improvement of quality products and services, all of which are underlying goals for the Project participants. Participants in previous partnering agreements in the construction industry frequently report that synergy has resulted from the parties’ integrated efforts. Such synergy is a natural outcome when two or more organizations are working toward common goals. To reach this goal, DRPT, WMATA, and DTP developed a partnering charter to establish commitment of all Project participants through the Preliminary Engineering phase. The charter has been adapted by the Airports Authority and DTP to address demands of the Final Design phase of the Project (shown in Figure 3-2).

A detailed partnering program, implemented at the executive and staff levels for Preliminary Engineering, has been revised to address the Final Design and Construction phase of the Project. Upcoming meetings with a partnering facilitator will focus on the changes in management personnel and policy since the first partnering sessions. They will also begin to address the special partnering challenges that can be expected during Final Design and Construction of a project.
Figure 3-2
FINAL DESIGN PROJECT CHARTER

Final Design Phase Project Charter

We are committed to developing and delivering a safe, buildable and affordable final design. We will accomplish this by achieving the following goals.

SCHEDULE
- Develop an integrated Master Project Schedule
- Identify and meet schedule milestones
- Assess schedule risks and select early procurement activities
- Manage external influences

TIMELY DECISIONS
- Early identification and communication of issues
- Maintain ongoing formalized communication forums to continually identify and address issues
- Maximize informal communications
- Encourage appropriate ad hoc decision making
- Take advantage of co-location and get the right people together to make a decision
- Early decisions and concurrence on Value Engineering recommendations and basis of design
- Early resolution of technical interfaces with external stakeholders

HIGH QUALITY DESIGN
- Meet or exceed WMATA design standards, operational performance, and reliability
- Develop cost-effective design considering life cycle costs, operability, constructability, sustainability, and public experience
- Integrate safety and security requirements

WITHIN BUDGET
- Complete final design activities within budget
- Explore and advance high cost project elements for Value Engineering consideration
- Manage external influences on scope and budget
- Manage and control non-construction costs

PARTNERING
- Initiate partnering programs to advance communication between project partners
- Regularly conduct continuing follow-up sessions

POSITIVE PUBLIC IMAGE
- Maintain a united team
- Speak with one voice
- Strive to meet public expectations
- Demand and provide latest and most accurate information

COLLABORATIVE TEAM
- Understanding agreement and coordination of design-build procurement process
- Communicate effectively with partners
- Commit to project covenants
- Resolve issues in a timely manner and at the appropriate level
- Focus on accomplishing the project objectives while respecting organizational roles
3.3 Metropolitan Washington Airports Authority Organization

The management and control of the Project has been transferred from DRPT to the Airports Authority.

3.3.1 Agency Organization

The Airports Authority operates Washington Dulles International Airport (Dulles Airport) and Ronald Reagan Washington National Airport (National Airport). The Airports Authority currently leases Dulles Airport and the DIAAH from the U.S. Government under the terms outlined in the Metropolitan Washington Airports Act of 1986, as subsequently amended (the current lease expires in 2067). In addition to operating Dulles and National Airports, the Airports Authority is responsible for capital improvements at both airports, the DIAAH, and the Dulles Connector Road.

The Airports Authority’s current organization consists of more than 1,000 employees in a structure that includes central administration, airports management and operations, and police and fire departments. The agency organization is shown in Figure 3-3.

Figure 3-3
AIRPORTS AUTHORITY - AGENCY ORGANIZATION

[Diagram of Airports Authority's organization structure]
3.3.2 Airports Authority’s Past Experience Managing Federal and Local Grants

The Airports Authority is a current recipient of US Department of Transportation grants from FAA. Since its formation in 1987, the Airports Authority has been awarded a total of approximately $330 million in grants from FAA, including $36.9 million as the first year’s funding of a ten-year, $200 million award issued under FAA’s Letter of Intent process. This amount would be significantly greater, except that the Airports Authority has elected to receive Passenger Facility Charges (PFC) funding in the amount of $1.5 billion.

The Airports Authority also manages other grants received from agencies within the US Department of Homeland Security and Justice for various security and public safety programs conducted on a stand-alone basis or in conjunction with local and federal law enforcement agencies. Grants are also received annually from the Commonwealth of Virginia Department of Aviation and are expended on projects in accordance with the Commonwealth’s Aviation Grant Program requirements. Taken together, expenditures under these non-FAA awards totaled approximately $3.9 million in fiscal year 2005.

In addition to grant programs, the Airports Authority also manages a federally-regulated PFC program. This program allows airports to collect passenger fees and expend them on federally-approved passenger-specific projects. PFCs are remitted to the Airports Authority directly from the airlines based on passenger enplanements, and collections and expenditures are reported to the FAA on a quarterly basis. The program began in 1994 and since that time the Airports Authority has collected and managed $1.5 billion of these funds. As an FAA grantee, the Airports Authority must meet financial capacity and capability standards established by the FAA. The Airports Authority is in compliance with standards that would apply to both FAA and FTA grantees of capital construction projects. For example, the Airports Authority is required to hire a firm of independent certified public accountants each year to conduct an audit of the financial statements of the Airports Authority in accordance with auditing standards generally accepted in the United States of America and to meet the requirements of the Federal Single Audit Act of 1984 (pursuant to OMB Circular A-133).

3.3.3 Project Management Organization

During Final Design and Construction of the Project, the Airports Authority will provide expertise in numerous fields including engineering, construction, finance, legal issues, and communications, along with staff and consultant support, to ensure that all relevant issues are identified and addressed. The Airports Authority will also provide property as well as a share of the non-federal funding for the development of the Project.

The Airports Authority Project Management Organization chart shown in Figure 3-4 depicts the key roles and relationships of the Airports Authority staff, departments and their consultants working on the Project during Final Design and Construction. Through a combination of direct and indirect reporting arrangements, the Airports Authority intends to take advantage of the depth of their existing organization and provide the skills necessary to successfully manage the Project.

On November 3, 2006, the Airports Authority issued a Request for Qualifications to identify a firm to provide technical and program management support services, reporting directly to the Project Director. The Airports Authority entered into a contract with Carter & Burgess, Inc., for Project Management Support Services (PMSS) on the Project. On behalf of the Airports Authority, the PMSS will provide transit engineering and construction expertise as needed, augmenting the Airports Authority’s existing project management staff. The PMSS is flexibly tailored to meet changing demands as the Project proceeds from Final Design into Construction and start-up.
The responsibilities of the Airports Authority project management organization are described below. The positions have been filled by new hires and former DRPT Project staff and remaining positions will be filled in 2008. Finally, the Airports Authority has secured the PMSS and has brought on board the Mercator Advisors, LLC, to provide selective financial advisory services in connection with the Dulles Toll Road. Mercator Advisors was formerly DRPT’s TIFIA advisor.

All Project staff report up to the Airports Authority Project Director, who is the single point of management responsibility for all Project activities. Only the legal, communications, procurement and financial accounting oversight functions have parallel off-Project reporting structures to ensure independence and objectivity. A summary of the Airports Authority’s Project Management staff and their qualifications and organization chart is included in Appendix C.

**Project Director**

Responsibility for successful completion of the Metrorail Project lies with the Project Director. The Project Director's focus is to provide Project management direction, control, integration, and coordination functions to the interagency and interdisciplinary team managing the Metrorail Project. More specifically, the Project Director is responsible for the overall management and direction of the delivery of services and functions, such as engineering design and Project development, construction budget and schedule control, risk management, project contingency management and dispute resolution. Other duties of the Project Director include overall management of meeting FTA reporting requirements, environmental mitigation requirements, right of way acquisition, execution of intergovernmental agreements, grant administration, and managing and updating the PMP.

The Project Director has assembled a team of experts on transit design, construction, and operations to complement existing Airports Authority staff to provide advice and counsel on complex issues and opportunities for increased safety, quality, efficiency and cost savings.

The Project Director serves as the Airports Authority's Contracting Officer's Technical Representative (COTR) for the Design-Build Contract and will direct the activities of the Contract Administration Officer in any negotiations of changes to this contract and will coordinate with the Office of General Counsel and the Contracting Officer, as required.

The Project Director is directly supported by a team composed of the Deputy Director of Project Development, Deputy Director of Design, Deputy Director of Construction, Manager of Risk Management and Project Controls, Manager of Project Administration and Manager of Project Quality Assurance/Quality Control (QA/QC) and Safety. The PMSS reports directly to the Project Director. Reporting indirectly to the Project Director are the Manager of Communications, the Deputy Director of Project Finance and the Contracting Officer.

**Deputy Director of Project Development**

The Deputy Director of Project Development is responsible for overseeing all Project development activities related to the implementation of the Project, including FTA reporting requirements, environmental planning, mitigation monitoring, agency coordination, intergovernmental agreements, budget and schedule adherence and coordination with the regional transportation management efforts. Specific duties include:

- Managing mitigation compliance during design and construction
- Managing coordination with local, state, and federal agencies
- Managing the Project's Before and After Study
- Overseeing the development and execution of Project agreements
- Coordinating the Metrorail Project with the regional transportation management plan being implemented by VDOT and Fairfax County.
• Coordinating with other active VDOT and county projects to address any cumulative impacts and identified opportunities for coordinated closures, activities, and communication.
• Overseeing property acquisition activities as well as coordination with property owners, tenants, local jurisdictions, and various Commonwealth and federal agencies.
• Managing right-of-way acquisition.

**Deputy Director of Design**

The Deputy Director of Design will provide continuous administrative and management direction of Project design, including necessary reporting. Responsibilities include actions that:

• Provide, directly or by contract, adequate technical inspection and supervision by qualified professionals of all design work in progress.
• Oversee the management of design for both Project phases.
• Assure conformity to grant agreements, applicable statutes, codes, ordinances, and safety standards.
• Maintain the Project work schedule agreed to by FTA and the Airports Authority and constantly monitor grant activities to assure that schedules are met and other performance goals are being achieved.
• Keep expenditures within the latest approved Project budget.
• Assure compliance with FTA requirements on the part of agencies, consultants, contractors, and subcontractors working under approved third party contracts or intergovernmental agreements.
• Account for Project property and maintain property inventory records that contain all of the elements required.
• Account for processing variances from WMATA, the Airports Authority, and VDOT design criteria, monitoring safety compliance, environmental compliance, and Value Engineering.
• Oversee the successful implementation of the IGAs.

**Deputy Director of Construction**

The Deputy Director of Construction will provide continuous management and technical policy oversight of Project construction. The Deputy Director of Construction is responsible for oversight of all Project construction, technical inspection, budget adherence, schedule adherence, reporting, regulatory and FTA requirements compliance, and ensuring that the Airports Authority and Project policies and systems are implemented. The Deputy Director of Construction is responsible for reviewing and approving environmental permit applications and other submissions for permits that are the responsibility of the owner as defined by the Design-Build Agreement. The Deputy Director of Construction is responsible for coordination of all construction related issues both within and outside the Project and will approve technical changes up to the amount delegated by the Contracting Officer and COTR. The Deputy Director of Construction works in close coordination with the QA/QC and Safety Manager to assure that Contract construction quality requirements and safety goals are achieved.

**Deputy Director of Project Finance**

The Deputy Director of Project Finance will primarily be responsible for developing the detailed financial plan for the Project and managing the Project's capital funding program. This position will prepare all financial documentation necessary to support negotiation and execution of an FFGA. The Deputy Director of Project Finance will coordinate extensively with other agencies to determine the preferred financing approach, manage capital funding for the Project during construction, and work with local funding partners on Project-related financial issues. This position is responsible for the day-to-day management of DTP’s and WMATA’s support for these activities, focusing on budget and schedule adherence. This position will report to the Airports Authority’s Vice President of Finance and will have an indirect reporting relationship to the Project Director. Specific duties include:

• Overseeing preparation of the Project's financial plan.
- Managing the Project's participation in the New Starts program, including the Annual Report on New Starts submittal.
- Developing and executing Project funding agreements.
- Coordinating with Project contracting officers to ensure changes in design and construction contracts are incorporated in Project cash flow requirements.
- Coordinating with the Airports Authority Financial Management Division on Project finance and accounting support.
- Coordinating with funding partners to identify funding requirements and support debt issuances, as needed.
- Managing the work of Airports Authority’s financial advisor(s) and subcontractors needed to assist with the development of the financial plan.
- Manage capital funding sources to ensure funding matches construction draw-down schedule.
- Coordinating with funding partners and bond counsel to support development of conduit financing entity.
- Supporting the Airports Authority Deputy CFO on the development of Toll Road operating agreements and/or toll rate setting to support Project funding requirements.
- Managing compliance with all applicable FTA regulations and requirements.
- Managing Final Design Grant Agreement compliance.

Manager of Risk Management/Project Controls (To be hired in April 2008)

Reporting to the Project Director, the Manager of Risk Management and Project Controls will oversee the PMSS in the preparation of schedules and cost control methodologies for all phases of development, permitting, design, engineering, procurement, and construction. This position will direct the work of the PMSS project controls team, including the monitoring of cost and schedule, and control of Project documents. This position will also be responsible for risk management on the Project, focusing primarily on controlling costs, maintaining schedule and managing project contingency. Specifically, the Manager of Risk Management and Project Controls will manage project contingency and event driven contingency, including identifying and quantifying costs to mitigate Project risks.

The Manager of Risk Management and Project Controls will direct the analysis on variances in cost and schedule performance against the plan, and communicate the reasons for the issuance of variance and proposed mitigation plans to the Project Director. This position will address FTA regulatory compliance issues.

Manager of Project Administration (To be hired in April 2008)

Reporting to the Project Director, the Manager of Project Administration will be responsible for the oversight of all project administration including utility agreements, ROW acquisition disbursements, Design-Build contract task orders, and procurement of materials, equipment, and services in accordance with approved requisitions and specifications. This position is also responsible for daily operational control of all contractual issues pertaining to administration of contracts and subcontracts.

The Manager of Project Administration will support the Project Director on staffing and personnel issues. This position is also responsible for administrative interface between the Project office and the Airports Authority headquarters’ staff and will assist other managers with invoicing review and approval and financial reporting.

Manager of Project QA/QC and Safety

The Manager of Project QA/QC and Safety has the responsibility and authority to implement the Airports Authority policies on quality assurance and on Project safety and security. To ensure the independence of these two important functions, the Project QA/QC and Safety Manager reports directly to the Project Director.
Director and has an indirect reporting relationship with the Airports Authority’s Vice President of Engineering. This position oversees the review and monitoring of DTP’s QA/QC Plan and implementing procedures and DTP’s System Safety/Security Certification Management program.

The Project QA/QC and Safety Manager has developed the Airports Authority Quality Program Plan for the Project and the Airports Authority Safety and Security Management Plan for the Project.

**Project QA/QC Supervisor (To be hired in March 2008)**

The Project QA/QC Supervisor will assist the Project QA/QC and Safety Manager in implementing and maintaining the Quality Program Plan and will review DTP’s QA/QC Plan and implementing procedures. In addition, oversight of the Project’s quality program implementation will be performed in the form of audits, surveillances, and reviews as specified by the Quality Program Plan and Airports Authority Project Management Procedures.

**Project Safety Supervisor (To be hired in March 2008)**

The Project Safety Supervisor will assist the Project QA/QC and Safety Manager in implementing and maintaining the Safety and Security Management Plan and review DTP’s System Safety/Security Certification Management Plan, DTP’s Environmental, Safety and Health Plan, and DTP’s procedures related to system safety and security and construction safety. Oversight of the Project’s system safety and security and construction safety programs will be performed in the form of audits, surveillance, and reviews as defined by the Safety and Security Management Plan and the Airports Authority Project management procedures.

**Contracting Officer**

The Contracting Officer will be responsible for the full range of pre-award and post-award contracting functions for the Project’s construction and architect/engineering (A/E) contracts including the review of solicitation packages, planning, soliciting, evaluating, awarding and administering moderate to large dollar value construction, A/E, consultant, supply and service contracts, and leasing and maintenance agreements. The Contracting Officer supervises a team of Airports Authority contract specialists and procurement technicians as well as contractor contract specialists. The Contracting Officer is the delegated contracting authority for an unlimited dollar amount. To maintain independence, the Contracting Officer will report to the Airports Authority’s Vice President of Business Administration, and will have an indirect reporting relationship with the Project Director.

This position is responsible for compliance with applicable FTA regulations, and monitoring adherence to Project budget and schedule.

**Contract Administration Officer (To be hired in May 2008)**

The Contract Administration Officer supports the Contracting Officer for the Design-Build Contract and the PMSS contract. The Contract Administration Officer will monitor compliance of all aspects of these contracts. The Contract Administration Officer will provide support on any negotiations of changes to these contracts and will coordinate with the Office of General Counsel and the Contracting Officer, as required and in compliance with the review procedures. This position reports to the Contracting Officer who will report to Airports Authority senior management directly, and will have an awareness of the obligations of the Airports Authority in the Design-Build Contract and adherence to the contract by the contract team. This position will ensure that changes to the contract are incorporated according to the Airports Authority’s processes. This position provides support on compliance with applicable FTA regulations, and monitoring adherence to Project budget and schedule.

**Manager of Rail Communications**
The Manager of Rail Communications is responsible for implementing and managing the Project's communications, marketing and outreach plan developed by DTP. This includes establishing two-way communication with the media, public and business community, setting and ensuring a consistent message, and managing the Project communications and research efforts of DTP and other consultants and partners. The Manager of Rail Communications reports directly to the Airports Authority's communications office and indirectly to the Project Director.

In strict coordination with the Airports Authority’s established policies and protocols, the Manager of Rail Communications will be responsible for:

- Coordination of the Project with operating businesses, residents, religious institutions, medical facilities, emergency response teams, and economic development interests along the alignment
- Management and implementation of the Arts-In-Transit program
- Provision of marketing support
- Conducting periodic public meetings and other events to keep the general public and commercial business interests apprised of the schedule and construction logistics as they affect the community as a whole or focused on specific areas immediately impacted by construction operations

Grants Administrator

The Grants Administrator will be responsible for administration and management of FTA grants in compliance with the grant agreements and applicable FTA circulars and regulations. Using the TEAM system to manage the grants after award, the Grants Administrator will request and withdraw federal cash only in amounts and at times as needed to make payments that are immediately due and payable. The Grants Administrator reports directly to the Airports Authority's finance office and does not have a reporting relationship with the Project Director. The Grants Administrator will submit quarterly narrative/milestone and financial status reports in TEAM. The Grants Administrator reports to the Airports Authority’s Vice President of Finance.

Senior Project Manager - Design (To be hired in May 2008)

The Senior Project Manager for Design will provide support to the Deputy Director of Project Design. This position will primarily focus on coordination with all of the affected agencies and municipalities during Final Design to improve communication between the agencies and the Project and to coordinate activities by the Project and other local projects in order to take advantage of opportunities for joint mitigations and to avoid conflicts and schedule delays. The Senior Project Manager will manage the interactions with VDOT, DRPT, Fairfax County and the Commonwealth of Virginia to ensure that all interface work is performed to the necessary minimum and in accordance with the need dates of the Design-Build contract. This position also supports reporting, technical inspection, FTA requirement compliance, regulatory compliance, the Airports Authority’s Safety and Security Policy compliance, NEPA compliance, property inventory maintenance, execution and implementation of the IGAs, Final Design Grant Agreement compliance, schedule and budget adherence and variance processing.

Senior Project Manager – Construction (To be determined in Summer 2008)

This position is being considered for the construction phase of the Project. The Senior Project Manager would report to the Deputy Director for Construction. This position is expected to support the Deputy Director of Construction in all areas of responsibility. At a point closer to the initiation of construction, an evaluation will be made as to the need for this support position.

Human Resources Management

The Airports Authority’s Human Resources Department has been providing support to the Project and has directed the recruiting efforts for the Project since the Airports Authority became the Project sponsor. The Airports Authority’s Human Resources Department will continue to provide support to the Airports Authority Project staff and to the Project itself whenever there is a need to re-train, supplement or replace Airports Authority Project staff. This will be done in recognition of the importance of maintaining a Project
team capable of efficiently managing the Project through its various stages despite any personnel changes that may occur over the lifetime of the project.

**Project Management Support Services**

The Project Management Support Services team (PMSS) augments and provides support to the Airports Authority’s organization. The PMSS team, which the Airports Authority has identified as the multi-firm team lead by Carter Burgess, will provide program management, design support, and construction oversight services for the implementation of the Project, requiring considerable on-site representation. The PMSS will report to the Airports Authority’s Project Director and will provide assistance to the Airports Authority in a consultant role. The PMSS team possesses a full range of technical and managerial professional disciplines and capabilities associated with major facilities programs and have demonstrated its ability to successfully provide project management services on large transit projects. The PMSS Organization chart shown in Figure 3-5 depicts the key roles and relationships of the PMSS staff. Notice to Proceed was given to the PMSS on August 1, 2007. A summary of the PMSS’s management staff and their qualifications and an organization chart is included in Appendix C.

**Figure 3-5**

**PROJECT MANAGEMENT SUPPORT SERVICES ORGANIZATION**

Carter Burgess has established an on-site project specific recruiting department to fill or replace open vacancies with qualified individuals. The recruiting department will use internal and external resources as well as agency services when needed to fill these positions. Ongoing training is provided for all staff. This is accomplished by an on-line university training program provided through Carter Burgess. Employees are encouraged to participate in this on-line university as well as enroll in external training and certification classes as required and necessary for their position. The PMSS will supplement and complement the Airports Authority Office of Engineering staff by providing support services for the implementation of the Project in the following types of activities:
• **Project Management and Administration**

Reporting to the Airport Authority’s Project Director, the PMSS team will provide the Project management staff to assist the Airports Authority in overseeing all aspects of the Project’s design, construction, testing, commissioning and acceptance into WMATA’s Adopted Regional System (ARS). The PMSS team will assist the Airports Authority in the interface with and oversight of the activities of DTP, WMATA, VDOT and Fairfax County and will include strict enforcement of the applicable contract or intergovernmental agreement. The PMSS Project Manager and staff will develop monitoring and reporting policies and procedures for the Project that are fully compliant with those required by the Airports Authority and the FTA. All PMSS activities will comply with issued and approved Airports Authority’s Project procedures.

The PMSS team Project management staff will also assist the Airports Authority in the full implementation of the quality assurance program developed by the Airports Authority for the Project. The Project’s quality assurance plans and procedures will be implemented within each of the functional areas of the PMSS organization.

The PMSS team will supply office support staff functions including accounting, human resources, contract management, and Project coordination for the Airports Authority.

The PMSS team will also assist the Authority in addressing the contractual aspects of the Design-Build Contract; including invoicing, financial reporting and support. In addition, should the Airports Authority require additional consulting or construction contracts with parties other than DTP, the PMSS staff will assist the Airports Authority in procuring and managing those contracts.

To implement the PMSS tasks, the PMSS Team is organized along functional lines, with senior managers reporting directly to the PMSS Project Manager, as described in greater detail below. This organization allows for a direct one-to-one relationship with the Airports Authority’s Project management staff in the same functional roles and paralleling of DTP’s staffing plan for the execution of the Project in accordance with the various and concurrent construction operations areas.

• **Project Controls and Information Technology Support**

At the direction of the Airports Authority’s Manager of Risk Management/Project Controls, the PMSS team will provide the Project Controls and IT staff required for the Project. Project Control activities and tasks will include the creation and all updating of the Project Master Schedule that will integrate the activities of DTP, WMATA, VDOT, FTA, Fairfax County and other agencies and organizations whose actions affect the Project. The Project Controls group will also implement and manage the Project’s document control and management information system; provide cost estimating services; prepare financial reports, as required by the Airports Authority and the FTA; and provide change order/claims management services for the Design-Build contract.

The group will be responsible for the design, installation and maintenance of the computer systems and Internet network within the Project Office and for assisting DTP in linking the systems with the field offices. They will also support and train users on hardware and software necessary to provide the above project management functions.

• **Planning Oversight**

  o As support to Airports Authority staff, the PMSS team will provide the following:
  
  o Initial and continuing identification of Project risk through periodic assessments, management of risk containment, and the determination and implementation of risk mitigation measures.

  o Assistance to the Airport Authority relative to their management of Right-of-Way acquisitions and easements, and environmental assessments. The PMSS Manager of Right-of-Way Acquisition, Ms. Pam Peckham, will direct this support.

  o Assistance to the Airports Authority in interfacing with FTA.
o Assistance to the Airports Authority in interface with DTP, VDOT and Fairfax County in support of VDOT’s efforts to develop and implement a regional transportation management plan.

o Assistance to the Airports Authority in the administration of the intergovernmental agreements.

- Design and Engineering Oversight
DTP is responsible for preparing the Final Design and Construction documents for the civil, structural, architectural, MEP and systems design required for the Project. DTP is required to present the Project’s designs as they are completed in formal design reviews. On behalf of the Airports Authority, the PMSS team will lead the design review task by providing the necessary technical expertise to determine that completed designs are fully compliant with the requirements of the Contract which include WMATA’s design criteria, and the standards and criteria of the other Project participants, e.g., VDOT, Fairfax County, etc., FTA requirements and industry “best practice”. As completed and presented by DTP, the PMSS will make distribution of the design documents to all cognizant organizations, categorize and log all design review comments and track the comments through to resolution.

o Other tasks to be conducted by the PMSS on behalf of the Airports Authority during the design phase of the Project include:
  o Coordination of the interface designs between scope items being provided by DTP and those being provided by WMATA and others.
  o Review and provide recommendations on any contractor proposed changes to the required design standards.
  o Participate in the development of the technical specifications and in the selection of subcontractors for each of the Contract Allowance Items.
  o Evaluate and provide recommendations on any “value engineering” proposals.
  o Actively pursue modifications in design that could lead to significant cost savings and performance enhancements specifically for those components identified as allowances in the Design-Build Contract.
  o Track the resolution of all comments issued during the permitting process and assure that these comments and corrections are incorporated by DTP into the issued-for-construction design documents.
  o Provide timely responses to DTP’s requests-for-information (RFIs) made to the Airports Authority and reviewing RFIs between DTP and its subcontractors/suppliers.
  o Review and recommend either approving or rejecting any of DTP’s requests for substitutions or the use of “or equal” materials or equipment.
  o Review and recommend acceptance of record documents prepared by DTP.
  o Assistance to the Airports Authority in interfacing with key Project participants/stakeholders including VDOT, DRPT, Fairfax County, and the Commonwealth of Virginia, to ensure that all interface work is performed to the necessary minimum and in accordance with the need dates of the Design-Build contract.

- Construction Oversight
Commencing with the preparation of the Final Design documents and extending throughout the Construction phase of the Project, the PMSS team will, on behalf of the Airports Authority, monitor all aspects of DTP’s Construction program for the aerial guideway structures, tunnels, at-grade guideway sections, passenger stations, civil and roadway modifications and improvements, West Falls Church yard and shop expansions, and other elements of the Project.

PMSS participation in construction activities will include obtaining those permits that are the Airport Authority’s responsibility and providing assistance in obtaining those permits that are DTP’s responsibility and the review and acceptance on behalf of the Airports Authority of DTP’s Construction work plans and procedures to include quality assurance and control plans, maintenance of traffic plans, construction
survey plans, construction safety and security plans, demolition plans and, as applicable for work on the ARS, DTP’s site specific work plans. The PMSS will coordinate with DTP and the Project QA/QC and Safety Manager to identify construction hold and witness points and ensure the appropriate inspections and approvals are completed. The PMSS will also monitor DTP’s full compliance with the applicable codes, all environmental requirements and any other conditions of the permitting agency.

In addition to the tasks summarized above, for portions of the work that are to be executed on a time and materials basis, e.g., utility relocations, the PMSS will review and approve on behalf of the Airports Authority all documentation of costs to include material invoices, labor hours/costs, equipment costs, etc. The Airports Authority’s Deputy Manager of Construction Oversight, Mr. John Kearney, will be assigned to support the Airports Authority’s Construction Oversight Manager in the utility relocation work to control the budget, scope and schedule to ensure that utility work is performed to the minimum necessary and in support of the need of construction work. He also has been assigned the responsibility of managing regulatory approval requirements and permitting. (See Appendix C for a description of Mr. Kearney’s professional experience)

On behalf of the Airports Authority, the PMSS team will review and participate in the approval of construction submittals and RFIs, monitor DTP’s timely completion of the Project’s record documentation and be responsible for conducting joint inspections with DTP, WMATA, VDOT, and/or Fairfax County for the initial preparation of punchlists and in verifying the completion of all punchlist work.

- **Systems Oversight**

The PMSS Systems Management group will assist the Airports Authority in assessing contract compliance of all of the Project’s system elements assigned to the Design-Build Contract, to include the train control system, traction power system and communications systems. Additionally, on behalf of the Airports Authority, the PMSS Systems Management group will monitor the procurement and interface design for those system components being provided by WMATA. The Airports Authority’s Systems Oversight Manager, Mr. Philip Castellana, will be assigned solely to the WMATA work so that WMATA status is known at all times and so that WMATA is held to perform to the needs of the project (See Appendix C for a description of Mr. Castellana’s professional experience). He will be supported by a team that are each assigned a specific area of the WMATA work according to their area of expertise. These include the areas of communications, train control and signaling, automatic fare collection, traction power, cathodic protection, systems testing and integration, rolling stock, systems safety and security and commissioning.

The PMSS Systems Management group will lead the reviews of system performance requirements, design submittals prepared by DTP, and the resolution of all issues resulting from these reviews. The PMSS will also review and, on behalf of the Airports Authority, accept other key contract submittals including the System Interface Plan, System Acceptance Plan, the procedures for and results of all post-installation, integration and performance demonstration tests, and monitor DTP’s full compliance with the Project’s Safety and Security Management Plan (SSMP) and System Safety/Security Certification Management Plan (SCMP).

The PMSS Systems Management group will function as the primary point for coordination and interface between the elements of the Project being supplied by DTP and those being provided by WMATA. This coordination and interface responsibility will include monitoring the timeliness, accuracy and completeness of interface data between DTP and WMATA, monitoring WMATA’s work plan and schedule for completing elements of their work, and participating in all commissioning activities at WMATA’s Operational Control Center.

Comparable to the progress of civil/structural elements of the Project, the PMSS will, on behalf of the Airports Authority, review and participate in the approval of system submittals and RFIs, monitor DTP’s timely completion of the Project’s record documentation and be responsible for conducting joint
inspections with DTP, WMATA, VDOT, and/or Fairfax County for the initial preparation of punchlists and in verifying the completion of all punchlist work.

- **Business Diversity Monitoring**
  The PMSS Team will support and monitor DTP’s compliance with the Airports Authority’s Equal Employment Opportunity (EEO) and the Disadvantaged Business Enterprises (DBE) programs against the requirements of the Design-Build Contract.

- **Community Relations**
  The PMSS team will assist the Airports Authority with the development and implementation of a community outreach program for the Project. Components of the community relations task include the maintenance of a Project internet site, participation in public meetings and other forums to keep the public informed of Project events and progress and coordination of the art-in-transit element of the Project.

- **Specialized Expertise**
  Specialty consultant support will be available to support the Airports Authority as needed in the following areas:
  - Expert review of specific structural, geotechnical and constructability issues.
  - Technical issues related to design criteria, specifications and standards in several disciplines.
  - Review of safety and security issues.
  - Quality Assurance issues relative to Design-Build construction.
  - System Testing and Integration Support

Table 3-1 identifies the roles and responsibilities assigned to the key staff from the Airports Authority and the PMSS in order to successfully complete the Project. As the project staff is enhanced, the assignment of individual responsibilities is being made to staff as appropriate. This includes Airports Authority responsible managers as well as PMSS staff.
## Table 3-1 Airports Authority Project Team Responsibilities Matrix

| Project | Design Management | Construction Management | Procurement | Contracting | Project Controls | Safety Management | Systems Engineering | Marketing & Communications | Planning & Implementation | Engineering Services | Field Services | Monitoring | Training | Risk Management | Field Support | Field Support | Field Support | Field Support | Field Support | Field Support |
|---------|-------------------|------------------------|-------------|------------|----------------|------------------|------------------|-----------------------|------------------------|---------------------|---------------|------------|-----------|---------|------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Project Director (S. Carney) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| CIO of Project Development (J. Van Zee) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| CIO of Design (P. Lerner) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| CIO of Construction (K. Vowlesworth) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| CIO Project Finance (L. Mitchell) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Manager of QA/QC & Safety (J. Christensen) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Q/A/QC Supervisor | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Safety Supervisor | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Contracting Officer (R. Dearing) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Contracting Administration Office | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Manager of Plan Management/Project Controls | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Manager, Rail Communications (M. McLintock) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Senior Project Manager | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Senior Project Manager | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| QA Specialist (S. Hinkle) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Diversity Officer (T. Davis) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Senior Project Manager (J. Corrier) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Community Relations Support (Commonwealth/PCO/CS/Sheph & Co.) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Project Controls Manager (A. Massmann) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Planning Oversight Manager (S. Miller) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Design & Engineering Oversight Manager (C. Roberts) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Construction Oversight Manager (J. Rather) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Construction Oversight Deputy Manager (J. Azarney) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Systems Oversight (P. Casteel) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Right-Of-Way Acquisition Manager (P. Pemberton) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Project Administration & Program Logistics (D. Ogara) | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

**Legend:**
- **X** indicates responsibility.
3.4 Virginia Department of Rail and Public Transportation

As a state agency reporting to Virginia’s Secretary of Transportation, the Department of Rail and Public Transportation (DRPT) works closely with, VDOT which is responsible for highways, as well as other transportation agencies responsible for aviation and ports. Each of DRPT’s three primary areas of activity (rail, public transportation, and commuter services) focus on the movement of people and goods throughout Virginia.

The continuing role of DRPT in the Project is clarified in the Assignment and Assumption Agreement. DRPT will assign a Project coordinator to support the Airports Authority in the implementation of the Project. Mr. Corey W. Hill, DRPT’s Chief of Transit and Congestion Management, is the acting Project Coordinator until DRPT completes its hiring process. The DRPT Project Coordinator will be responsible for managing coordination with all DRPT offices and functions required to complete the Project and will assist the Airports Authority in the administration of the obligations assumed by the Airports Authority from DRPT.

3.5 WMATA Organization

WMATA is a government agency created under a compact agreement between state and local jurisdictions of Virginia, Maryland, and the District of Columbia. It is governed by a Board of six members and six alternative members appointed by the elected officials in the compact jurisdictions. The General Manager is hired by and reports to the Board. The WMATA agency organization chart is shown in Figure 3-6. The agency is currently undergoing implementation of a re-organization.

The Airports Authority has negotiated a Design-Build Contract with DTP that provides for design and construction of the Project. Under this agreement the Airports Authority will serve as the Design-Build Program Manager and WMATA will be a technical advisor and the ultimate owner and operator of the Project. The Airports Authority and WMATA have entered into an Inter-Governmental Agreement (IGA) (discussed further in Section 14) that defines WMATA’s role as Technical Advisor during Final Design and Construction and for related support activities for the Project. WMATA has appointed John Thomas, Director of the Office of Major Capital Projects, as the Project Executive who will provide formal communications from WMATA to the Airports Authority. A summary of WMATA’s Project management staff and their qualifications and an organization chart is included in Appendix C.
3.5.1 WMATA Operational Services Project Team

The WMATA staff performing work as the Airports Authority’s Technical Advisor on the Project come from the Operational Services Department. The organization of the WMATA Operational Services Project Team is depicted in Figure 3-7. The ongoing implementation of the agency’s re-organization may result in changes to this chart.

According to the cooperative agreement between the Airports Authority and WMATA signed on September 14, 2007, WMATA’s role has been defined as a Technical Advisor for the Project. Since it is intended that WMATA will be the ultimate owner and operator of the Project, WMATA will have roles and responsibilities through the Pre-Final Design, Final Design, Construction, Integration Testing and System Performance Demonstration, and Post Substantial Completion phases.

WMATA’s key responsibilities during the Final Design phase as outlined in the Airports Authority – WMATA cooperative agreement are:

- Review and comment on transit related facility elements included in the Final Design
- Participate in all transit-related coordination meetings and workshops during Final Design
- Coordinate the provision of all technical interface information for the WMATA provided equipment, systems and hardware/software as required by the DTP
- Review DTP’s proposed listing for spare parts, special tools, test equipment, consumables and personnel training
- Review and accept the Right-of-Way Plans for transit operation and maintenance.
3.5.2 Technical Advisor Role
In accordance with the Intergovernmental Agreement between WMATA and the Airports Authority, WMATA will function as Technical Advisor to the Project during the Final Design phase and will also participate in the Project design reviews at 60% and 100% of Final Design to ensure compliance with WMATA's design, operating and maintenance criteria and standards.

3.5.3 WMATA Internal Interfaces
The WMATA team assigned to the Project will occasionally draw from other WMATA departments including the safety and security, operations, planning and engineering, and finance and administration departments, as the Project progresses.

3.6 Virginia Department of Transportation

The Virginia Department of Transportation (VDOT) is responsible for building, maintaining and operating the state's roads, bridges and tunnels. And, through the Commonwealth Transportation Board, it provides funding for airports, seaports, rail and public transportation. The Commonwealth Transportation Board guides the department's work, much like a board of directors.

Virginia is divided into nine districts: Bristol, Culpeper, Fredericksburg, Hampton Roads, Lynchburg, Northern Virginia, Richmond, Salem, and Staunton. The Project falls within the Northern Virginia District.

The executive management of the VDOT organization is shown below in Figure 3-8, with Mr. Morteza Salehi in the role of Acting Administrator for the Northern Virginia District.
Figure 3-9 shows VDOT’s Northern Virginia District reporting relationships as they pertain to the Project. Reporting to Mr. Salehi, Mr. Ronaldo T Nicholson is the Northern Virginia District Program Manager in charge of mega-projects. Currently, the Project is one of six of Northern Virginia’s mega-projects.
Mr. Peter Vigliotti will function as the full-time VDOT Coordinator to the Project and will report to Mr. Nicholson. The VDOT Coordinator will be the contact point for all matters between VDOT and the Project. HE will bring other VDOT employees, officials or officers into the Project as may be appropriate for specific issues or events and will be responsible for obtaining all Commonwealth approvals and permits necessary for the Project. VDOT will also provide support, advice and expertise for right of way acquisition and utility relocations. During construction VDOT will designate qualified inspection personnel to monitor and inspect its existing or future facilities during construction. These personnel will also review and audit inspection test results and other construction related documentation. The VDOT Coordinator will arrange to have local VDOT employees perform these tasks on an as needed basis.

Mr. Vigliotti will address and coordinate design and construction activities that impact VDOT’s facilities during Final Design and Construction of the Metrorail extension to the Dulles Airport and points further west. Mr. Vigliotti also has VDOT permitting authority.

The VDOT Coordinator will be located in the Project office to facilitate direct involvement in Project activities but will report to the Northern Virginia District Administrator. Per the Intergovernmental Agreement, the Project will reimburse VDOT for the Coordinator’s salary and related expenses. Additional information on the agreement is provided in Section 14.1.2.

3.7 Dulles Transit Partners Project Development and Design-Build Organization

Dulles Transit Partners, LLC (DTP) is the contractor that was selected by the Commonwealth under the PPTA to develop, perform design services, and execute the Project under a Design-Build Contract.

DTP completed the Preliminary Engineering work through a joint venture, Dulles Transit Engineers (DTE), which was comprised of an integrated team from both Washington Group International and Bechtel Infrastructure. The DTE organization was arranged in a manner consistent with the preferred “packaging” approach with separate Project engineers being responsible for specific areas of scope for: Line & Track,
Systems; Stations and Facilities; as well as Maintenance and Support Facilities. DTP will perform Final Design in a similar manner. The specific scope areas are shown on the organization charts. In addition to the specific scope areas, engineering and architectural disciplines provide matrix support for their areas of expertise.

The DTP and DTE organizations were initially tailored to accommodate the transition to the Design-Build phase and include support services integrated in the organizational structure. Figures 3-10, Figure 3-11 and Figure 3-12 reflect DTP’s Project Management, Engineering and Construction Management team for the Design-Build phase including delivery of the Final Design.

Figure 3-10  
DULLES TRANSIT PARTNERS - PROJECT MANAGEMENT ORGANIZATION

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Dulles Corridor Metrorail Project  
Extension to Wiehle Avenue  
Project Management Plan  
January 2008  
v. 5.0 Final; re-revised
Figure 3-11
DULLES TRANSIT PARTNERS - ENGINEERING ORGANIZATION

Figure 3-12
DULLES TRANSIT PARTNERS – CONSTRUCTION MANAGEMENT ORGANIZATION
DTP’s overall Project management organization is shown in Figure 3-10. Figure 3-11 provides additional details of the engineering portion of the Project management organization and Figure 3-12 provides additional details of the DTP construction portion of the Project management organization. Descriptions of the responsibilities of key members of the DTP Project management organization depicted in Figures 3-10, 3-11, and 3-12 are as follows.

Project Executive Director
The Project Executive Director develops and manages DTP’s obligations for the Design-Build Project and is the primary point of contact for the Airports Authority. The Project Executive Director has overall program responsibility for DTP. Reporting to the Executive Director are the Project Director, the Deputy Project Director Services, and the Project Manager Design-Build, whose responsibilities are described below. The DTP System Safety and Security Manager, Quality Manager, Environmental, Safety and Health (ES&H) Manager (responsible for environmental compliance and for personnel safety on the Project), the Public Affairs Manager, and the Prime Contracts Manager, also report to the Project Executive Director.

Project Director
The Project Director will conduct and coordinate, through assigned managers the utility relocation work, property identification, negotiation and right-of-way acquisition. He is also responsible for managing future Development activities related to Phase 2 of the Dulles Corridor Metro Rail Project under separate agreement.

Project Deputy Director Services
The Project Deputy Director Services is responsible for providing technical services for DTP’s Design-Build, Utility Relocations, and ongoing Development work. Reporting to the Project Deputy Director Services is the Human Resources Manager, the Accounting/Business Manager, the Project Controls Manager, the Acquisitions Manager, and the Project Administrative Manager.

Project Manager Design-Build
The Project Manager Design-Build is responsible for managing DTP’s design, construction, and startup testing work on the Project. Reporting to this Manager are the Deputy Project Manager Design and the Deputy Project Manager Construction whose responsibilities are described below. Also reporting to the Project Manager Design-Build is the Start-Up Manager who will be responsible for all testing after completion of construction.

Project Quality Manager
The Project Quality Manager develops and maintains the DTP QA/QC Plan and procedures, instructions, practices, and related documents that define DTP’s requirements to achieve required levels of quality on the Project. The Project Quality Manager is also responsible for verification of the proper implementation and effectiveness of the DTP QA/QC Plan and related procedures.

Systems Safety and Security Manager
The DTP Safety and Security Manager is responsible for implementing the DTP System Safety/Security Certification Management Program. He implements the requirements of this Program, chairs the Safety/Security Certification Working Group, evaluates potential hazards and vulnerabilities identified during the course of work, and prepares the final Safety/Security Certification Report and Certificate for signature of the DTP Project Executive Director at the completion of the Project.
Deputy Project Manager Design

The Deputy Project Manager Design will manage the engineering and architectural design process including coordination and integration of all design disciplines and systems to deliver a final design of drawings and specifications that meet the Project design criteria. The organization that supports this Manager in conducting this work is shown in Figure 3-11. The Design work is managed and conducted by five Project Engineers in the areas of Civil, Tunnel and Aerial Structures, Systems, and Stations and Facilities. Providing support to the design activities are the Manager of Engineering Coordination and Configuration Control and five discipline Engineering Group Supervisors. The Engineering Group Supervisors provide discipline support in terms of technical expertise and manpower to the design activities being conducted by the three Project Engineers and their assigned Assistant Project Engineers.

Deputy Project Manager Construction

The Deputy Program Manager Construction is responsible for the organization and direction of construction and related activities for the entire Project. The organization that supports this Manager is shown in Figure 3-12. The Project Superintendent reports directly to the Deputy Project Manager Construction and is responsible for managing the ongoing construction activities. Reporting to the Project Superintendent are the Manager of Electrical and Systems; the Manager of Track, Grade, and Tunnel; the Manager of Aerial Structures, and the Manager Stations. Each of these managers is in turn supported by Superintendents, Field Engineers, and Sub-Contractors. Also supporting the Project Superintendent is the Labor, MOT, and Environmental Supervisor.

The Deputy Project Manager Construction also has a staff of managers and supervisors in the areas of MOT and permits coordination, labor relations, engineering coordination, Project field engineering, and utility field coordination to provide support to the Project.

3.8 Fairfax County

The Project will be built entirely within Fairfax County. Fairfax County staff will play an active role on the project management organization team in advancing Final Design and Construction and expediting necessary County approvals. Fairfax County’s involvement will be in four primary areas:

- Project Coordination and Design Reviews
- Land Use and Construction Permitting Approvals
- Property Acquisition and Use, and Construction
- Traffic Maintenance

Fairfax County has assigned a full time Coordinator to the Project, and the Project will provide office space for him in the Project’s offices.

The Coordinator will be the contact point for all matters between the County and the Project. He will bring other County employees, officials or officers into the Project as may be appropriate for specific issues or events. He will be responsible for obtaining all County approvals and permits necessary for the Project.
4.0 PROGRAM AND PROJECT MANAGEMENT RESPONSIBILITIES

This section describes the management roles and responsibilities of the principal Project participants during Final Design and Construction.

4.1 Management Structure

The proposed management structure for the Project during Final Design and Construction is presented in Figure 3-4. The roles and responsibilities of the Project participants during Final Design and Construction phases are provided below.

4.2 Project Office

At the initiation of Preliminary Engineering, DRPT established a Project Office in the Concourse Building on Springhill Road near Route 7 in Tysons Corner. The Airports Authority will continue to have its Project offices in this building, with managers and key Project staff from the agency and the DTP team also located there. Day-to-day management of Project activities are directed from this building. Facilities suitable for conducting coordination and oversight activities have been provided. Office and meeting space has been provided for representatives from other agencies involved in the Project on both a short- and long-term basis. During the Design-Build phase of the Project, additional space in the building is expected to be secured to allow for the larger design effort required for Final Design and the early Construction activities. Construction-only related staff will be located in field offices (trailers) as soon as construction staging areas are available.

4.3 NEPA Environmental Review – Roles and Responsibilities

On behalf of DRPT, WMATA managed the Project’s initial NEPA environmental review using its own technical consultants (CTC). DRPT staff actively participated in these activities and the Airports Authority staff supported the environmental review effort. DRPT and WMATA developed a complete set of General Plans for the Project, as required by WMATA’s own project development process. DTP was not involved in preparing the Draft EIS, Supplemental Draft EIS, Final EIS or supporting engineering documentation.

During Preliminary Engineering, DRPT, in cooperation with WMATA, conducted an Environmental Assessment (EA) of the Proposed PE Design Refinements. DTP supported the preparation of the EA document covering the design modifications developed during the PE phase.

Should additional NEPA-related activities arise during the remainder of the Project, the roles and responsibilities for each of the principal participants shown in Table 4-1 would be applied.
Table 4-1
FUTURE ROLES AND RESPONSIBILITIES – NEPA ENVIRONMENTAL REVIEW

<table>
<thead>
<tr>
<th>Task</th>
<th>FTA</th>
<th>Airports Authority</th>
<th>DTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Notice of Intent</td>
<td>Approve</td>
<td>Prepare</td>
<td>Support (as allowed under NEPA)</td>
</tr>
<tr>
<td>2. Prepare NEPA Documents</td>
<td>Approve</td>
<td>Prepare</td>
<td></td>
</tr>
<tr>
<td>3. Public Hearing Report, Preliminary LPA Recommendation</td>
<td>Approve</td>
<td>Prepare</td>
<td></td>
</tr>
<tr>
<td>4. Public Hearing</td>
<td>Approve</td>
<td>Conduct</td>
<td></td>
</tr>
<tr>
<td>5. Selection of Amended LPA by WMATA Board</td>
<td></td>
<td>Support</td>
<td></td>
</tr>
<tr>
<td>6. Selection of Amended LPA by the Airports Authority Board</td>
<td></td>
<td>Prepare</td>
<td></td>
</tr>
<tr>
<td>7. FTA Record of Decision (ROD)</td>
<td>Prepare, Approve</td>
<td>Support</td>
<td></td>
</tr>
</tbody>
</table>

Definitions:

Approve: Agency to approve action

Conduct: Agency appointed or elected officials empowered to hold public hearing

Manage: Direct day-to-day management

Participate: Active in daily functions

Prepare: Responsible for preparation of necessary documents

Review: Action not requiring decision

Support: Respond to requested items and actions

4.4 Design-Build – Roles and Responsibilities

The roles and responsibilities during Final Design, Construction, Testing and Start-Up for each of the principal participants are shown in Table 4-2.
Table 4-2
ROLES AND RESPONSIBILITIES – DESIGN-BUILD

<table>
<thead>
<tr>
<th>Task</th>
<th>FTA/PMOC</th>
<th>Airports Authority</th>
<th>WMATA/VDOT</th>
<th>DTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Project Management</td>
<td>Oversight</td>
<td>Manage</td>
<td>Review &amp; Support</td>
<td>Support</td>
</tr>
<tr>
<td>2. Design Development</td>
<td>Oversight</td>
<td>Review &amp; Support</td>
<td>Review &amp; Support</td>
<td>Manage, Prepare, Approve</td>
</tr>
<tr>
<td>3. Design Review</td>
<td>Oversight</td>
<td>Review</td>
<td>Review</td>
<td>Support</td>
</tr>
<tr>
<td>4. Design Deviations</td>
<td>Oversight</td>
<td>Manage</td>
<td>Approve</td>
<td>Support</td>
</tr>
<tr>
<td>5. Construction Management</td>
<td>Oversight</td>
<td>Review &amp; Support</td>
<td>Support</td>
<td>Perform</td>
</tr>
<tr>
<td>6. Construction QA/QC</td>
<td>Oversight</td>
<td>Review</td>
<td>Review</td>
<td>Perform, Manage</td>
</tr>
</tbody>
</table>

* WMATA only

Definitions:
Approve: Agency to approve action
Manage: Direct day-to-day management
Participate: Active in daily functions
Perform: Responsible for conducting activity as specified in procedure or contract documents
Prepare: Responsible for preparation of necessary documents
Review: Action not requiring decision
Support: Respond to requested items and actions

4.4.1 Design Development
DTP will be responsible for producing design plans and specifications that can be issued for construction. As DTP prepared the preliminary engineering plans and specifications, they are fully responsible for the technical content and accuracy of the design, including elements that were advanced during supplemental engineering. DTP’s efforts will utilize the materials that are referenced as the Basis of Design in the Design-Build Contract as well as the supplemental engineering materials to advance the Final Design for the Project.
4.4.2 Design Review
DTP will be responsible for ensuring that its design meets WMATA and the Airports Authority design criteria and requirements, as well as state and local jurisdictional criteria such as VDOT and Fairfax County, as applicable. The Airports Authority will review the design documents during formal design review meetings to be conducted by DTP. Airports Authority comments and those from outside agency reviewers, will be consolidated by the Airports Authority and sent to DTP. Only comments related to criteria or permit issues will be sent as mandatory (requiring resolution). The Airports Authority will not be “approving” the design as it will need to meet the requirements specified in the criteria-based Design-Build Contract. Once DTP has resolved the mandatory comments, they will sign and seal the drawings and issue them for construction. DTP is responsible for the establishment of design packages and for the completion of those packages so as to ensure adequate review by all concerned agencies. DTP is responsible for obtaining all required construction permits for the work.

4.4.3 Design Deviations
Deviations from some criteria have already been processed by the Airports Authority, WMATA, and DTP during PE. During Final Design additional issues and/or deviations may arise as the design progresses. In cases where the criteria are obsolete or cannot be applied to the Project (e.g., changes in technology, standards, code requirements), the Airports Authority will work with the agency whose criteria applies to assist DTP in obtaining a specific variance or deviation for the Project. DTP has the responsibility to submit and obtain any deviations or variance for the Project. DTP will identify those criteria. The processing of the deviations will follow the procedures referenced in the Airports Authority Quality Program Plan.

4.4.4 Construction Management
DTP is responsible for managing the construction process in accordance with the approved quality plan, permit requirements, and other special provisions detailed in the contract. This process is more thoroughly discussed in Section 13 of the PMP. The Airports Authority will not engage in a traditional construction management role as would be typical in a design-bid-build contract, but will perform quality and construction oversight on certain aspects of the work to ensure the quality of the construction, adherence to criteria and requirements, and for claims management purposes.

4.4.5 Construction Monitoring
The Airports Authority will conduct ongoing construction monitoring of critical elements of the work to ensure that all safety, quality, and program requirements are being met. Airports Authority construction field engineers will also keep detailed records to support any change order or claim resolutions.

4.4.6 Systems Readiness Testing
DTP will be responsible for conducting the systems dynamic testing in accordance with the commissioning specification in the contract documents. WMATA agency staff will provide test trains, operators, and supervisory personnel in accordance with the System Acceptance Plan. In addition, WMATA will observe the testing and review the test reports. Completion of dynamic testing and demonstration is precedent to substantial completion of the Design-Build Contract.

4.4.7 System Safety and Security Certification
DTP will be responsible for performing the System Safety and Security Certification. WMATA and Airports Authority staff will review and approve the certification, with oversight provided by FTA’s PMOC and the Tri-State Oversight Committee. The Final Safety/Security Certification Report will be reviewed and approved by WMATA and the Airports Authority. Operations readiness will be achieved when WMATA and the Airports Authority have agreed that the work is essentially complete, the work has been successfully and fully tested, and the work has been verified to be safe and secure by applicable WMATA organizations. WMATA will be responsible at that time to implement Safety/Security Certification follow-
up procedures to assure that safety/security-related requirements are maintained during pre-revenue and revenue operations.

4.4.8 Pre-Revenue Operations

Following substantial completion of the Design-Build Contract, care, custody, and control of the Project will be transferred from DTP to WMATA. At this time, WMATA will begin pre-revenue Operational Readiness Activities to ensure that all systems are fully tested, and fully integrated for start-up and acceptable for incorporation into WMATA’s ARS prior to the start of revenue service.
5.0 MANAGEMENT AND PROJECT CONTROLS

A key element to the success of the Project is the establishment of effective Project Controls. Some of the tools for managing elements critical to the success of the Project are discussed below. These tools will be further defined as the Project proceeds beyond Final Design into Construction.

5.1 Technical and Scope Control

Scope control is achieved by the structure of the Design-Build Contract. Under the terms of the contract, only the Contracting Officer can authorize a contract change. The Airports Authority will review the designs as they are completed as well as system performance specifications to assess DTP’s compliance with the design criteria and standards and basis of design report.

5.2 Quality Assurance/Quality Control (QA/QC)

The requirements for the QA/QC program to be applied to the Project during the completion of preliminary engineering and during the Design-Build phase of the Project are addressed in the Airports Authority Quality Program Plan. The Airports Authority Quality Program Plan requirements are applicable to Project participants including the Airports Authority, DTP, and suppliers and subcontractors. This Plan complies with the guidance contained in FTA’s Quality Assurance and Quality Control Guidelines and the requirements of ISO 9001-1994, Quality Systems – Model for Quality Assurance in Design, Development, Production, Installation, and Servicing. DTP, along with applicable suppliers and subcontractors, will have a quality assurance plan that addresses and complies with the requirements of the Airports Authority Quality Program Plan.

The Airports Authority’s Project QA/QC and Safety Manager, assisted by the Project QA/QC Supervisor reports to the Airports Authority Project Director. The Airports Authority Project QA/QC and Safety Manager has been assigned the authority to ensure that a QA/QC system is established, implemented, and maintained during the course of the Project in accordance with the requirements of the Airports Authority Quality Program Plan. In matters related to quality, the Project QA/QC and Safety Manager is complete and ready access to the Airports Authority Project Director.

DTP has the primary responsibility for implementing a QA/QC program during the Design-Build phase of the work that meets the guidelines and requirements of the FTA and the Airports Authority Quality Program Plan. The Airports Authority will conduct oversight of DTP’s quality-related activities to ensure that requirements are met and that the DTP QA/QC program is effective.

The DTP QA/QC Plan defines the processes, controls, checks, and inspections that are applied to all quality-related Design-Build work processes implemented by DTP during the Design-Build phase of the Project. DTP has established a quality assurance organization independent of the design and construction groups. This quality assurance organization is led by the DTP Project Quality Manager who reports to the DTP Project Executive Director, as shown in Figure 3-10. The DTP Project Quality Manager’s responsibilities include:

Development and maintenance of the DTP QA/QC Plan and procedures, instructions, practices, and related documents that define DTP’s requirements to achieve required levels of quality on the Project.

Verification of the proper implementation and effectiveness of the DTP QA/QC Plan and related procedures.
The DTP QA/QC Plan and implementing procedures and instructions define the processes and controls that are applied to the design, procurement, construction, installation, and testing activities during the Design-Build phase of the Project. Work processes are required to be formalized and quality controls applied. These quality controls include checking, reviewing, examining, inspecting, testing, and supervising. DTP work processes and quality controls, audited and monitored by the DTP Project QA/QC and Safety Manager, are also rigorously observed and monitored by the Airports Authority throughout the Design-Build phase of the Project. To implement the QA/QC Plan requirements, DTP management is responsible to:

- Select and assign well-qualified professionals to perform Project tasks
- Assign qualified individuals to oversee all elements of the work
- Ensure that personnel performing quality-related activities have a clear understanding of their responsibilities
- Document the work and quality control processes properly.

The DTP QA/QC Plan and implementing procedures and instructions, including revisions, require approval by the Airports Authority and must be in place prior to the start of work (i.e. design control procedures and instructions must be in place prior to the start of Final Design and QC inspection procedures and instructions must be in place prior to the start of construction).

The Airports Authority Quality Program Plan, and its implementing procedures and instructions, will be reviewed for effectiveness and adequacy by the Airports Authority on an ongoing basis during the course of the Project.

### 5.3 Schedule Control

The Airports Authority’s PMSS consultant will prepare and maintain the Master Project Schedule. The Master Project Schedule will include activities, durations and relationships for all the work to be completed by DTP, and the tasks to be completed by the other Project participants, including WMATA, Fairfax County, FTA, VDOT, utility companies, etc. Updates from all Project participants will be submitted monthly to the Airports Authority in accordance with the requirements defined in the Contract Documents with DTP, or in the Intergovernmental Agreements between the Airports Authority and the other Project participants.

The Master Project Schedule will be updated by the Airports Authority using the latest version of Primavera Project Planner scheduling software. This will provide a Critical Path Method (CPM) schedule necessary to control and monitor the work. The Airports Authority Project controls group will work closely with DTP and the other Project participants to ensure that monthly schedule updates meet the objectives of the Project.

The Master Project Schedule covers the entire Project and is an evolving document that will be revised as necessary to meet changing conditions with due diligence being paid to Project milestones required by the Design-Build Contract.

The Master Project Schedule permits the summarization or expansion of the various network elements by phase, work elements, locations and responsible organization as identified in the Work Breakdown Structure (WBS). It is the primary tool for assessing overall Project status and is a critical aid in identifying and managing the interfaces and interdependencies between DTP and the other Project participants.
Schedule reviews and updates will be conducted on a monthly and as-needed basis to assure adherence to the schedule requirements. Any schedule changes are to be analyzed to model “what-if” scenarios, to evaluate potential delays, or to develop work around solutions. The schedule reviews will be performed according to the airports Authority's established procedure for review of Project schedules (Project Management Procedure 5.03).

5.4 Progress Payments

Progress payments for the Design-Build work require that work equaling the value of the payment requested is adequately documented by DTP. The Airports Authority will require that the monthly application for payment show total value of work performed for each individual work activity completed during the monthly payment period by WBS. The Project controls group will be responsible for evaluating and recommending progress payments for approval. Application for payment is required to include a monthly progress report, an approved updated schedule of values, a detailed CPM schedule and validation that the as-built drawings have been updated. Progress payments relate to product output since the Airports Authority must agree to each proposed schedule and cost activity and assume responsibility of recommendation for acceptance. The processing of Design-Build Contract payments will be conducted according to the procedures listed in Project Management Procedure PM-5.05.

5.5 Cost Control and Job Accounting Systems

Cost control will be accomplished through careful identification, coding, tracking, trending, forecasting and reporting of Project costs. Approved budgets will be established at the outset of the project and kept current through the application of change orders throughout the course of the work. Cost control is provided through the continuous monitoring of cost commitments as well as period and accumulated cost performance. Cost commitments, in terms of awarded contracts, are compared with budget estimates generating revised cost Estimates at Completion (EAC) reflecting any variances. As change orders are approved, the revised commitment adjusts the current budget and the current EAC accordingly. In cases where contractual arrangements allow changes in quantities or unit costs to have the ability to affect cost outcome, periodic and accumulated cost expenditures are trended at frequent intervals generating cost performance analysis which in turn is used to estimate final EAC costs.

Job accounting will be accomplished, in conjunction with the Airports Authority Accounting Department, through the use of a previously established Code of Accounts and Work Breakdown Structure. Strict administration and application of these account codes to budgets, changes, actual and EAC costs ensures that costs remain accurately and correctly categorized in the system.

The Project cost will be managed using PRISM Enterprise Cost system. The system will provide the ability integrate the schedule information with cost for the purpose of developing and maintaining cost projections and cash flows. As part of the Project management, financial accounting, resource management, and reporting, the system will provide the ability to manage:

- Baseline, approved and control budgets
- Change management
- Progress measurement
- Earned value performance measurements
- Resource Project assignment
- Staff and other direct costs planning
- Standard account and employee based reports and graphics at the Project and enterprise levels.
5.6 Tracking Federal Project Costs

The Code of Accounts and the Project WBS, applicable to the CPM Schedule, have been developed such that they support the segregation of Federal Project costs into the appropriate SCC codes and identifies and segregates non-Federal Project costs for clear differentiation. Unique codes distinguishing non-Federal from Federal Project costs will be assigned and communicated down to the expenditure level (time cards, T and M tickets, invoices, etc.) for accurate collection and differentiation in the cost and payment system.

5.7 Change Orders and Claims

The Airports Authority’s Contract Administration Officer (CAO) oversees technical and cost management of change orders and claims. The change order process is described in Article 19 of the Design-Build Contract. The goal of the Project organization is to avoid disputes and claims by establishing a relationship of trust and confidence. As part of this relationship the parties shall disclose and discuss any issues that may affect the cost or time of performance for the work at bi-monthly meetings between senior representatives of the parties. Once an issue has been identified as a potential claim, the first attempt at resolution will be at the field level through best efforts and good faith negotiations. If an issue cannot be resolved at the field level, it will be elevated within each organization to senior representatives of each party. Dispute avoidance and resolution will conform to the requirements of Article 28 of the Design-Build Contract. The Airports Authority’s procedure guidelines for processing Design-Build changes as defined in Project Management Procedure PM-5.01 are referenced in the Project’s Quality Program Plan.

5.8 FTA Project Management Oversight

The Airports Authority will work closely with FTA’s Region III Office (TRO-III) and the Washington Metropolitan Office (WMO) overseeing WMATA’s Capital Planning and Operating Programs, to ensure that FTA requirements for entering Final Design are met. Upon approval of the Final Design request, the Airports Authority will coordinate with the FTA through regularly scheduled monthly meetings, and as otherwise needed, with the assigned Project Management Oversight Contractor (PMOC). The Airports Authority will make monthly submissions of Project budget and schedule reports at these meetings (pursuant to FTA Project and Construction Management Guidelines).

These meetings will include FTA – PMOC representatives and Project representatives. Once a date is established for each meeting, the Project Director is responsible for the meeting agenda and materials.

5.9 PMP Control and Revisions

The Airports Authority will be responsible for the maintenance and distribution of the PMP, as well as coordination of review, approval, and distribution of revised and new PMP documents. All master file copies (hard copy and electronic) of the PMP, referenced procedures, manuals, and plans will be maintained in the Project’s document control system. The maintenance and distribution of the PMP and subsequent revisions will be in accordance with the Document Control procedures.

Parties requesting revisions to the PMP will provide a brief description of the change, reason for the change, urgency, and identify other documents affected by the change to the Project Director.
Project Director will determine whether the requested change is valid and will distribute the proposed change to the appropriate Project staff for review and comment. The Airports Authority will incorporate the approved revisions into the PMP, and distribute the revised document to the PMP holders. Major updates to the PMP will be prepared at key FTA project development milestones.

5.10 Document Control

DTP has established an electronic document control system named “InfoWorks” for use by DTP on the Project. During Preliminary Engineering InfoWorks was utilized by both DRPT and WMATA and was the Project’s overall document control system.

Early in the Design-Build phase of the work, the Airports Authority will establish a document control system separate from DTP to control Airports Authority-related documentation. The proposed document management system is Open Text Enterprise Context Management Solution, which will provide features that include the following:

- Archiving and imaging ability to archive electronic documents in different formats, including video clips and pictures.
- Business process management ability to establish workflow routings and follow-ups with specific responsible parties.
- Document management and collaboration facility to establish collaboration among different workgroups on documents.
- Digital asset management ability to store, search and identify specific information.
- Email management ability to interface with Microsoft Outlook in terms of relevant information on emails and proper archiving.
- High volume document processing ability to process archiving of high volume documentation such as high speed scanning of batch documents.
- Record management ability to control access of information by defined hierarchy/access rights based on user/group specific rules.
- Web content management ability to operate on a web based environment. System deployment ability through Citrix Server setup.
- Interfacing management system will have the ability to interface with InfoWorks and Primavera Expedition (WMATA document control system).
- Seamless integration with One View Portfolio Management System.

DTP will continue to utilize InfoWorks during the Design-Build phase to control DTP-related documentation. The DTP InfoWorks document control system is based upon a DTP established electronic communication and coordination management system accessible through the DTP Project’s local area network (LAN) and the internet.

The Airports Authority electronic document control system will also be accessible through a LAN and the internet. The system will be managed by the PMSS. The Airports Authority system will allow Airports Authority team members and outside reviewers (e.g. WMATA, VDOT, and County staff), whether in the Project office, or at a remote location, to share Project information, including drawings and other documentation submitted by DTP to the Airports Authority for review. The Airports Authority electronic document control system is described in detail in Project Management Procedure PM-1.02, Document Control.

Both DTP’s InfoWorks and the separate Airports Authority document control system will meet document control requirements addressed in Section 4.0 of the Airports Authority Quality Program Plan. Both systems offer the following benefits:
5.11 Cost Estimating

The adjustment of contract cost by change order can be accomplished by submittal of a lump sum proposal, changed quantities times unit prices, or time and material pricing and accumulation. In order to conduct independent cost estimates for contract changes requested by the owner, contractor or end user; and provide other cost services such as “what-if” cost analysis, The Airports Authority will establish an independent cost estimating group.

Cost estimating will be performed by professional cost estimators led by a Cost Control Manager supervising a Senior (Lead) Estimator and other estimators as required for the workload. One benefit of the cost estimating services being provided by the PMSS staff is that there are corporate estimating services available to supplement staff requirements when the workload warrants it.

Cost estimating will be performed utilizing the HCSS Estimating System populated with unit costs and other estimating data specifically developed for this Project and supplemented by Project cost information derived from contract proposals, change order submittals, invoices and other administrative sources to supplement the systems database of information. The database will also receive an annual review by the Senior Estimator to validate the accuracy of the information therein. Items discovered during this review will be adjusted to improve the accuracy of the estimating system.

Cost estimates will be provided in one of three formats generally corresponding with the level of information available upon which to base the estimate. These formats include rough order of magnitude (plus or minus 30% or greater depending upon the level of information), engineer’s estimate (plus or minus 20%, but this is highly dependent upon the detail and comprehensive nature of the scope definition and the quantities available) and definitive estimate. Definitive estimates generally carry an accuracy level of less than plus or minus ten percent and are the preferred deliverable for cost recommendations to support procurement operations.

All estimates, regardless of type will include as complete a description of the direct and indirect materials and labor operations for design, procurement, receipt, installation and testing of the Work as is appropriate or it will include as complete of an itemization of the assumed description as is available for the format of estimate. Quantities of materials, labor and equipment hours will be carefully established from drawings or other available sources for the level of estimate required; and will be documented in the estimate. Where specific quantities are not available for estimator take-off, quantities may have to be assumed. Any quantity assumptions will be documented similar to other assumptions upon which the estimate is based. Quantities will be taken off and organized to coincide with the way units and assemblies reside within the estimating system. Quantities will be displayed and made available.

The preparation of any estimate may be requested by event, written or oral request. Regardless of the cause that generates the request for an estimate, the Lead Estimator will document the event, the date of the event, assign a responsible estimator and establish a target date for its completion.

Before any estimate is prepared the requesting party and responsible technical representatives will be clearly identified to the assigned estimator such that there will be no question as to who is responsible for
any decisions or assumptions regarding the estimate. The requestor and responsible technical representative will participate in a scoping meeting to establish the basis and understandings upon which the estimate is to be based. The minutes of this meeting will be documented and published by the estimator. Once an estimate has been authorized by any of the above requests the estimating department will assign an estimate number from the next available number and track its completion progress on the Estimate Log. The Lead Estimator shall be responsible for keeping the Estimate Log current at all times and issuing a monthly estimating report describing estimating activities for the period.

Estimates will be presented in summary by major cost codes as appropriate. Codes will define Pay Items, FTA SCC code, and the CPM WBS code when possible and appropriate. All completed estimates will contain the written approval of the PMSS Lead Estimator.

The Lead Estimator will have responsibility for overall oversight and coordination of the estimate preparation process under the supervision of the Airports Authority’s PMSS Cost Control Manager (CCM). Once the estimate has been reviewed and recommended to the PMSS Project Manager and Airports Authority’s Project Director for use, a copy of the estimate and any supporting work products will be kept in the permanent Project records.

5.12 Progress Reporting and Report Management

Monthly Progress Reports will be issued that will document cost, schedule and physical progress expressed in both narrative and analytical form. Narratives will include descriptions of monthly accomplishments, cost and schedule performance, milestones achieved, and other pertinent performance segregated to focus upon each project participant in addition to DTP. Analytical information will include numerous representations of cost and schedule including planned versus actual performance. This information will be presented in both narrative and graphical format, including schedule bar charts and columnar cost reports and spreadsheets.

Reporting will be made available through a web reporting and integration portal called the One View Portfolio Management System. In a web based application it will integrate, in a single source, information from the following computerized applications which will be used on the project:

- Schedule – CPM Schedule, Primavera Project Management, Version 5
- Financial and Cost – PRISM Enterprise Cost System
- Document Control – OpenText Livelink
- Cost Estimating – HCSS Estimating System

Some of the important features of this web based system include:

- The executive “dashboard”, which is a custom report for top level managers;
- Project performance metrics reporting, such as earned values status, schedule progress information, funding draw downs, budget tracking and obligations, cost trends, etc.;
- Access to monthly narrative and analytical progress reports;
- Cost information is archived in a database that permits accurate point-of-time data retrieval;
- Various levels of security allow for the protection of information and allow the system manager to isolate the users of sensitive cost information.

Reports will be prepared by responsible PMSS personnel including Engineering, Construction and Project Controls management.
6.0 LABOR RELATIONS & POLICY

This section of the Project Management Plan addresses the labor relations issues.

6.1 Labor Relations and Policy

DTP will be responsible to provide all necessary labor required to complete the Design-Build work until substantial completion. DTP will utilize union labor for the work to be self-performed during construction. Subcontractors will be utilized in certain specialty areas. Subcontractors will consist of union and merit shop contractors. Subcontractor proposals shall be evaluated and awarded to the best qualified bidder.

DTP will comply with all affirmative action and equal employment opportunity requirements. Federal and local regulations applicable to the work shall be managed and adhered to during Construction.

6.2 Responsibilities

DTP and its agreements with labor providers and subcontractors will continually be exploring ways to improve safety, quality, and productivity.

A Drug and Alcohol Program for all Project personnel will include pre-hire, for cause, post accident, and random testing.

6.3 Wage Rates and Job Classifications

The wage rates and fringe benefits as provided in the appropriate local collective bargaining agreements on the date of notice-to-proceed, including all increases due during the construction of the Project, shall be the wages and fringes paid over the duration of the Project. Classifications including apprentice designations shall follow local union guidelines.

All labor will be subject to compliance with the rules and regulations that apply to the Project including Davis-Bacon wage requirements.

6.4 Wage and Hour Requirements

DTP will utilize time clocks, electronic badging systems, or other systems for effective management of the timekeeping process for personnel entering the Project site. All labor will be paid in accordance with labor agreements in place at the time the work is performed.

Shift work and around the clock work is envisioned for some aspects of the work due to the severe traffic limitations on hours of work and other local restrictions. Shift differential will be provided in accordance with governing agreements and laws.
6.5 Federal, State and Local Regulations

The labor agreement shall not violate any applicable federal or state laws. This includes all affirmative action and equal employment opportunity requirements. Local regulations applicable to the work shall be managed and adhered to during Construction.

6.6 No Strike Agreements

The standard provisions of labor agreements include provisions that there shall be no strikes, picketing, work stoppages, slowdowns or any other disruptive activity for any reason by the union, or by any workers, and there shall be no lockout by the Contractor. The union cannot sanction, aid, abet or encourage such disruptive activity. Any worker engaging in such activity shall be subject to disciplinary action including discharge. The local unions’ responsibilities in this regard are backed up by the International unions.
7.0 RISK ASSESSMENT

The Airports Authority has conducted an evaluation of Project risk and initiated the development and implementation of a Risk Management Plan. FTA conducts its own risk assessment as part of its oversight of the Project and will work with the Airports Authority to develop a mutually agreed upon Contingency and Risk Management Plan.

7.1 Airports Authority Risk Evaluation

One of the most important management tools for the Project is the identification and evaluation of risk during the Final Design, Construction and testing/commission phases of the Project. The categories of risks include (but are not limited to):

- **Scope** – Potential for changes in Project scope to elements including stations, fleet size, guideway, systems, and site development.
- **Agreements** – Potential for delays due to difficulties in securing approvals for FTA’s Notice to Proceed with Final Design, permits, and other approvals.
- **ROW Acquisition** - Cost and time exposure related to acquiring the real property needed to construct and operate the rail extension.
- **Utility Relocation** – Potential for changes due to unknown utilities and uncooperative utility companies.
- **Design Process** – Potential for changes due to required alignment changes, major standards changes, or delays in owner approvals.
- **Vehicle Procurement** – Potential for changes to vehicle design and late delivery of vehicles.
- **Procurement (excluding vehicles)** – Potential for market changes that affect the prices for the subcontracted items that are yet to be bid and the commodities subject to the Design-Build Contract’s commodities escalation clause.
- **General Construction** – Potential for changes due to availability of specialist labor, changes in restrictions on roadway traffic management, weather delays, delays in provision of Owner-responsible elements (e.g., fare collection), extended testing/commissioning time, and a construction accident.
- **Tunnel Construction** – Potential for changes due to collapse, settlement, and unknown ground conditions.
- **Aerial Guideway Construction** – Potential for changes due to unknown ground conditions and changed work restrictions.
- **Station/Facilities Construction** – Exclusive of scope changes and general construction changes, potential for changes due to limited lay down areas and interfaces with adjacent joint development.

The methodology employed by the Project to evaluate risks has been to:

Identify a comprehensive and non-overlapping set of “risks” that could affect the Project cost and schedule

For each risk, assess its likelihood of occurrence and the cost and schedule impacts if it does occur (e.g., impacts expressed in terms of additional costs and/or delays to particular activities in the cost and schedule model(s))

Develop a probabilistic cost and schedule model (e.g., using the Monte Carlo technique) to assess the uncertainty in cost and schedule, considering the risks as well as other uncertainties (e.g., in unit prices).

The Project risk assessment has been based on the 100% Preliminary Engineering submittals and the latest Basis of Design Report, which incorporates the “Open Items” scope elements added to the Project.
The risk assessment was updated to consider the overall estimated cost of the Project considering the negotiated price, terms, and conditions of the Design-Build Contract. This effort led to the quantification of the risks to establish the appropriate Project contingencies.

### 7.2 Airports Authority Risk Management Plan

Based upon the risk analysis completed to date, a Risk Management Plan will be fully developed by the Airports Authority that identifies the activities, procedures and organization needed to appropriately manage the risks, and establishes the budget and schedule milestones (including contingencies) considered in this Risk Management Plan. These milestones may include:

- Right of Way Acquisition Completion
- Utility Design Completion
- Utility Relocation Completion
- Final Design at 60% (including systems allowances)
- Final Design at 100% (including all allowances)
- Tunnel Completion
- Foundations for Stations and Elevated Guideway Completion
- Guideway Completion
- Initial/First Static and Dynamic Testing
- Power Distribution Completion

High risk elements have been identified from the risk assessment, appropriate mitigation strategies. The impacts of the strategies were measured through the probabilistic modeling process and this process will be updated and refined based on inputs from the FTA and current Project status. The Plan will show a time-phased allocation of contingency that corresponds to the occurrence of individual risks and the ability for risk mitigation. The risks will be monitored throughout the Project, focusing on key activities such as the start of utility relocation and other critical path elements. In addition, the risk analysis will be updated at major Project milestones, such as FFGA approval, completion of utility relocations, the completion of Final Design, and completion of NATM tunnel work.

### 7.3 FTA Risk Assessment Process

As part of its process leading to an FFGA for the Project, FTA, through the PMOC, is conducting cost and schedule risk assessments. The PMOC has prepared scope, cost and schedule characterizations related to the risk assessment. The three draft characterization packages were reviewed with FTA representatives in July 2006, and were revised by the PMOC based on discussions during the review meeting. The PMOC’s risk assessment activities resumed with the decision not to proceed with the large bore tunnel. The PMOC provided copies of the draft risk assessment reports on scope, cost and schedule for review. Comments were reviewed jointly between DRPT, the Airports Authority and the PMOC in October 2006. A Risk Register Workshop with DRPT, the Airports Authority, FTA and the PMOC was held on November 28 through 30, 2006.

The PMOC prepared Spot Reports in May 2007 that assessed and evaluated the updated Grantee’s scope, cost estimate, and schedule. These reports and the updated risk register were discussed at the Risk Register Consolidation Workshop, which was held on June 12 to 14, 2007. The PMOC submitted a draft spot report on the Project’s budget, schedule, and contingency review as the basis for the
Contingency Workshop that was held July 10 to 12, 2007. The Contingency Workshop focused on three areas: 1) review and adjustment of the Baseline Cost Estimate (BCE), 2) review and adjustment of the inputs for its schedule risk analysis, and 3) refinement of the risk register. The outcome of the meeting will be an updated Budget, Schedule, and Contingency Review that will present PMOC's initial recommendations for the budget, schedule and contingency. As a result of risk assessment meetings with FTA, their recommendations have been included in Final Design.
8.0 ENVIRONMENTAL ANALYSIS AND MITIGATION

The environmental effects of and appropriate mitigations for the Project have been investigated and documented. In addition to the Draft, Supplemental Draft, and Final Environmental Impact Statements prepared between 2000 and 2004, an Environmental Assessment was prepared in 2006 covering the PE design refinements. The Amended ROD was issued on November 17, 2006.

8.1 EIS and Mitigation

A Draft Environmental Impact Statement (Draft EIS) for the Dulles Corridor Metrorail Project was published in June 2002. A Supplemental Draft Environmental Impact Statement (Supplemental Draft EIS) was completed in October 2003. A Final Environmental Impact Statement (Final EIS) was published in December 2004. The Final EIS evaluated changes to the Project's scope or alignment in response to public comments on the Draft and Supplemental Draft EIS, and assessed any potential environmental effects associated with phased construction of the LPA.

Recommended mitigation measures identified in the Final EIS were considered during the development of the Preliminary Engineering plans. Formal mitigation commitments that must be incorporated into the Project's design have been detailed in the Final EIS and documented in the Record of Decision issued by FTA in March 2005 and separately by FAA in July 2005.

8.2 Environmental Assessment and Amended ROD

Based on design refinements to the Project following the completion of the 50% PE plans, DRPT in coordination with FTA prepared an Environmental Assessment (EA) to analyze the environmental effects of the proposed changes. The EA found no significant changes in the environmental effects of the proposed changes over those presented in the Final EIS. The Draft EA was circulated to regulatory agencies and the public on February 24, 2006. A public hearing was held on March 28, 2006 and the comment period for the EA closed on April 11, 2006. DRPT prepared a public hearing report and FTA issued its amended ROD on November 17, 2006.

8.3 Transportation Management Plan

Among the required Project mitigations identified in the ROD is development of a Congestion Management Plan. In May 2007 the Project's Congestion Management Plan was renamed to the Transportation Management Plan (TMP). In accordance with Section 11.05(b) of the Permit Agreement, the Airports Authority will assist in and provide the proportionate share of the cost of a TMP for the Northern Virginia region to address traffic congestion caused by the construction of transportation projects in the region. The TMP shall be developed to assist in implementing strategies to reduce reliance in single occupancy vehicle travel in and around the Project construction area and generally to decrease the amount of vehicular travel to and from the construction zone. The TMP shall consist of the following elements, without limitation:

Implementation of strategies and services to reduce the amount of single occupancy vehicles traveling to the construction area (including without limitation programs to promote ridesharing, teleworking/telecommuting, public outreach and information, incident management by police and fire departments, and VDOT driver assistance)

Employer sponsored activities (including without limitation employer outreach, alternative work schedules, commuter benefits programs, and preferential parking for vanpools and car sharing).
Incident management (including without limitation strategically located driver assistance teams, wreckers, policing of traffic at major intersections, and maintaining response rates of fire and rescue teams).

Communications teams that will develop communications plans to inform the public, employers, and employees of current construction activities for the Project and inform the public of alternative routes around the construction sites.

VDOT shall coordinate the Project’s TMP with all other TMPs developed for other transportation construction projects in the vicinity of the Project. VDOT will implement the specific TMP strategies through MOUs with Project partners (Airports Authority, DRPT, Virginia State Police, Fairfax County, etc.).
9.0 PROCUREMENT/CONTRACT ADMINISTRATION

The following section describes the procurement approach for the acquisition of services, labor, material and equipment for the Project and the administration of the resulting contracts. The overall procurement approach addresses the specific issues related to:

The Design-Build Contract with DTP for Airports Authority services,
The professional services contract with the consultant team to provide technical and Project management support services to the Airports Authority.

The Airports Authority will administer these contracts and agreements as required to successfully complete the Project. In addition, WMATA will conduct the procurement of Project-related railcars and automatic fare collection equipment.

9.1 Procurement Policies – DRPT and Airports Authority

The selection of DTP to provide the Design-Build construction services was accomplished by DRPT in accordance with the PPTA of 1995. This act enables the Commonwealth of Virginia to authorize agreements with private entities to provide transportation facilities that would otherwise be provided through the traditional planning process. The Act specifies that the PPTA process be used only when it will result in the facility being available in a more timely or cost effective manner than as a result of the traditional process.

The PPTA is substantially different from the design-bid-build process that is typically used for procurements funded by the federal government. The PPTA fully meets the requirements of 49 CFR part 18, that is, to promote fair and open competition, and to obtain best value for the government. It is also consistent with FTA’s Third Party Contracting Requirements, as set forth in Circular 4220.1E. The PPTA process has previously been utilized by the Commonwealth on federally-funded projects, such as the Pocahontas Parkway Project around Richmond, Virginia, and Route 28 in the Dulles Corridor.

The solicitation and award of consultant and other support contracts for the Airports Authority during the course of the Project will be performed in accordance with the Airports Authority’s Contracting Manual, Project Management Procedure PM-5.03 referenced in the Airports Authority Quality Program Plan, and in compliance with FTA circular 4220.1E.

9.1.1 Pre-Award Procedures

For each contract, pre-award procedures are followed to ensure that:

All provisions required by federal and state regulations are included
Responses to requests for information have been included
Any proposal/bid protests have been handled in accordance with the Commonwealth’s or the Airports Authority’s procurement procedures, as applicable, and FTA requirements.

The Airports Authority has assigned a Contracting Officer to the Project to support procurement and contract administration-related activities.

9.1.2 Contract Administration

Contract administration is the day-to-day management of contracts and includes contractor oversight and direction, processing invoices and contract changes, grants administration, and contract compliance. The contract administration duties are the responsibility of the Airports Authority’s Contracting Officer (CO)
and the Contracting Officer’s Technical Representative (COTR). Project Management Procedure PM-5.03 referenced in the Project’s Quality Program Plan describes Airports Authority’s established procedures for contracting and contract administration.

9.2 Airports Authority Procurement Plan

Final Design services for the Design-Build phase of the Project are covered under the firm-fixed-price contract with DTP, signed June 19, 2007. The Airports Authority will issue an authorization for DTP to begin utility relocation activities. This effort will be under terms outlined in a supplement to the Comprehensive Agreement. The Airports Authority will direct DTP to proceed with the Final Design activities when Final Design approval is received from FTA. Full notice to proceed with the Design-Build Construction Contract will be issued to DTP in early 2008, subsequent to the execution of the FFGA.

9.2.1 Project Management

The Airports Authority will provide oversight and coordination of DTP, as well as the direction of activities related to other Project stakeholders. Management of the Project will be led by the Airports Authority’s staff that will include, among others, key personnel from Engineering, Finance, Procurement and Legal.

The Airports Authority staff will be supported by the PMSS that will provide specific technical and management expertise needed for the successful execution of the Project. These consultants will be co-located with the Authority’s staff and will function as an integral part of the Project team.

WMATA representatives will also assist the Project Management Team as technical advisor for compliance with WMATA design criteria, the testing and acceptance of the system and the operational and safety aspects of the Project from the perspective of the ultimate owner and operator of the rail extension. As with the consultants, the full-time WMATA personnel will be co-located with the Airports Authority’s Project team.

9.2.2 Project Management Oversight

The Airports Authority will fully support the FTA’s PMOC in its efforts to monitor the performance of the contract activities. This will include participation in PMOC meetings, provision of appropriate technical and management information and timely responses to PMOC requests.

9.2.3 Consultant Services

Consulting services for technical, management, and legal support have been and will be procured as needed through the Airports Authority’s procurement process. The scope of these services will be determined by the Airports Authority staff and may be modified from time to time as required to achieve Project goals and objectives.

Some of the contracts for consulting services will be in place prior to the beginning of Final Design by DTP.

9.2.4 Design and Construction Contracts

The Airports Authority has entered into a contract with DTP to implement the Project. This contract covers design and construction activities. The Airports Authority will not issue full notice-to-proceed for construction activities until execution of the FFGA. DTP will have full responsibility (design, materials and workmanship) for the construction contract work as defined in the contract documents. The Design-Build Contract was executed with DTP under the terms defined in the CA.
9.2.5 Design and Construction Management Oversight

The Airports Authority has the responsibility for oversight of the Final Design and Construction of the Project in accordance with their Project management procedures. All construction-related quality assurance activities, including quality control inspections, will be performed by DTP or their subcontractors under the oversight of the Project quality assurance staff. These activities will include review of design drawings and specifications, construction and inspection activities and procedures; surveillance of construction and QC inspection activities; review and management of construction changes; inspection of construction hold and witness points; and review and correction of non-conforming work. Project staff will also conduct oversight of Project cost control and reporting; schedule reviews and analyses; DBE and EEO auditing; real estate acquisition management and oversight.

9.2.6 Construction Interfaces with Existing Metrorail System

While the Airports Authority will oversee DTP’s construction activities, WMATA will also provide additional technical support in transit-related areas. For Project work that is related to the tie-in with the existing WMATA system, close coordination will be required between DTP and WMATA to assure continued safe and reliable Metrorail operations. These interfaces primarily are at the connection of the Project to the Orange Line, and at the West Falls Church maintenance area. The Airports Authority will facilitate the coordination between WMATA and DTP.

9.3 DTP’s Subcontracts and Procurement Plan

DTP’s subcontracts and procurement activities include receipt of the specification and/or material or service requisition; supplier/subcontractor bidding and selection; negotiation of, entry into, and administration of purchase orders and subcontracts. Additionally, DTP will engage in supplier surveillance; and receipt, acceptance, and storage of equipment and materials at the jobsite. DTP will develop a procurement/subcontracting plan consistent with the overall Project milestone schedule for purchasing major equipment, subcontracts and materials and will develop and maintain the Material Assignment Schedule (MAS).

The MAS will delineate the division of responsibilities among parties, including responsibilities for DTP management, engineering, contracts, procurement, construction, and start-up. DTP will manage equipment and materials on a real-time basis throughout all Project phases, from design to installation. DTP will effectively integrate material control, purchasing, expediting and inspection, traffic and logistics, inventory control, and supplier information.

Consistent with the obligations in the Design-Build Contract, DTP will establish a DBE plan to ensure compliance with Project DBE requirements. The DBE plan will require suppliers and subcontractors to diligently comply with their commitments to the program. The MAS will be used as a tool to identify work packages that, in keeping with the Project’s goals, will provide meaningful opportunities for disadvantaged businesses. The Airports Authority shall oversee DTP’s compliance with this obligation.

9.3.1 Allowance Items

The Design-Build Contract includes allowances for the pricing of certain subcontracts that have been determined to be subject to uncertain future pricing. The Airports Authority determined during Contract negotiations with DTP that the proposed pricing for these subcontract scopes were high due to the level of design at the completion of PE, the extended schedule for implementation, and potential changes in market conditions. During the subcontracting process for these allowable items, DTP will provide the Airports Authority with advance copies of bid documents and allow participation of the Airports Authority in the bid evaluation process. Specifically, DTP will provide the Airports Authority with the following for each allowance item:
• Bidder pre-qualification criteria
• The potential list of bidders for approval
• The request for proposal package
• The request for proposal and evaluation award criteria for review and approval

The Airports Authority will have representatives on the technical and commercial evaluation teams for each allowance item. DTP will submit the bids for each item along with the evaluated price and its recommendation for award to the Airports Authority for approval.

The Airports Authority will coordinate with WMATA to confirm that the proposed subcontract scopes, where appropriate, comply with WMATA’s Design Criteria and Standard Technical Specifications as adapted for the Project.

Once the subcontract is awarded for a specific work scope, that work, including all technical, cost, and schedule risk will become a part of the firm-fixed price Contract

9.3.2 Permanent Materials
DTP will procure or subcontract to provide all equipment, materials, system components and services required to complete the Project. For procurement of major equipment, DTP will also procure construction spare parts for use prior to turnover.

9.3.3 Construction Equipment
Construction equipment will be obtained through purchase, rental and lease agreements based on the anticipated use of the equipment, lifecycle costs and durations required.

9.3.4 System Components
System components will be purchased or provided via specialty subcontractors to comply with the technical requirements. In general, the system components are required to be the same as, or demonstrated to be compatible with, existing WMATA systems to insure seamless operability and integration with the existing Metrorail system.

9.4 WMATA Procurement Plan

WMATA will be responsible for the procurement of rail vehicles, maintenance vehicles, station maintenance equipment and Automatic Fare Collection (AFC) equipment for the Project as described below. WMATA is also contracting to procure and install a new fiber-optic backbone between the Jackson Graham Building and West Falls Church station.

9.4.1 Rolling Stock Procurement
WMATA’s Metrorail Revenue Vehicle Fleet Management Plan includes information necessary to estimate the fleet requirements for both the Wiehle Avenue extension and Phase 2 of the Dulles Corridor Metrorail Project, as an increment to through service on the Orange Line to Stadium-Armory station. The new vehicles will be compatible with existing WMATA rolling stock, and will conform to WMATA’s specifications. WMATA’s technical and procurement specifications will be reviewed and coordinated with the Airports Authority to ensure compatibility with the program schedule and budget.

At the request of the Airports Authority, WMATA will procure the full component of 128 vehicles needed to meet the requirements of both Wiehle Avenue extension and Phase 2 of the Project (sufficient to extend
the system to Dulles Airport and into Loudoun County) using its existing procedures for new vehicle purchase.

Currently, WMATA is generating specification and bid documents, and will be carrying out the entire bid and award process. WMATA will also be responsible for vehicle contract administration, design review, quality assurance, as well as management of vehicle production and acceptance.

WMATA will keep the Project Director informed of each step in the vehicle procurement process, and will submit a written periodic progress report summarizing events.

WMATA will be responsible for Vehicle Safety and Security Certification so that the new vehicles meet WMATA's Safety and Security Certification Program Plan and any other applicable federal or state requirements. All costs related to this function will be reimbursed by the Project. Such tests and certifications should be included in WMATA's monthly progress report to the Airports Authority.

9.4.2 Automatic Fare Collection Equipment Procurement

WMATA will procure the AFC equipment for the Project. The Project adds five stations and Phase 2 will add six more stations. WMATA has determined the number of each type of AFC device needed from ridership forecasts and, with the Airports Authority's concurrence, will procure the appropriate number of entry-exit Gates, Ticket Vending Machines, Add-Fare Machines, and Transfer Vending Machines for each station in each Phase of the Project. WMATA is responsible for providing specification and bid documents and for carrying out the bid process.

Oversight and inspection of AFC production and installation is the responsibility of WMATA. During Final Design, WMATA will provide the interface information to the Airports Authority necessary for DTP to coordinate its design and construction of the facilities required to support the AFC system.

WMATA will install the AFC equipment in stations after such stations have reached a state of completion ready to accept AFC equipment. Conduit and wiring will have been installed by DTP in readiness for AFC installation. The Project will reimburse WMATA for costs associated with AFC provided to the Project.

9.4.3 Maintenance and Security Vehicle and Equipment Procurement

WMATA will procure vehicles and equipment necessary for maintenance and security of the Project after passenger service begins. WMATA has provided its requirements for non-revenue rail vehicles, on-highway maintenance and security vehicles, and facilities maintenance equipment and, with the Airports Authority's concurrence, will procure the appropriate number of each type of vehicle and equipment. WMATA is responsible for providing specification and bid documents and for carrying out the procurement process.

WMATA is responsible for oversight, inspection, and acceptance of the vehicles and equipment. During Final Design, WMATA will provide the interface information to the Airports Authority necessary for DTP to coordinate its design activities. The Project will reimburse WMATA for costs associated with vehicles and equipment provided to the Project.

9.4.4 Operations Control Center and Communications

WMATA will provide modifications to its existing Operations Control Center (OCC) and communications systems necessary to incorporate the Project into the Approved Regional System (ARS). This includes the design, material procurement, installation, and testing of hardware and software in the OCC and fiber-optic communications equipment between the OCC and West Falls Church.

WMATA is responsible for oversight, implementation, and integration testing of the system modifications. During Final Design, WMATA will provide the interface information to the Airports Authority necessary for
DTP to coordinate its design and construction of the facilities required to interface with the OCC and communications systems.

### 9.5 Quality Assurance Requirements

Quality assurance requirements for the Project are addressed in Section 5.2 of this Project Management Plan and are detailed in the Airports Authority Quality Program Plan. The Airports Authority Quality Program Plan, Section 5.0, Purchasing, addresses specific requirements and controls that must be applied to procurement activities on the Project. These requirements and controls are applicable to the Airports Authority, DTP, and consultants, suppliers, and subcontractors who perform purchasing activities as part of their work on the Project.

### 9.6 Identification of DBE Opportunities

On September 14, 2007, Mr. James E. Bennett, President and Chief Executive officer of the Airports Authority, signed the Airports Authority’s Disadvantaged Business Enterprise policy statement. The statement declared that, “The Airports Authority has established a Disadvantaged Business Enterprise (DBE) program in accordance with U.S. Department of Transportation (DOT), 49 CFR Part 26. The Airports Authority has received federal financial assistance from the Department of Transportation, and as a condition of receiving this assistance, the Airports Authority has signed an assurance that it will comply with 49 CFR Part 26.”
10.0 DESIGN PROGRAM

The primary objective of the design program is to advance the existing Preliminary Engineering designs through Final Design resulting in issued-for-construction documents that are complete, accurate, and in full compliance with the appropriate criteria and standards.

10.1 Management of Design

Final Design activities will not commence until FTA approval to enter Final Design is received. The Airports Authority will issue a limited notice to proceed for design activities following FTA approval. DTP is responsible for the preparation of Final Design documents that are fully compliant with the Design-Build Contract. All Final Design documents will be prepared, under Airports Authority oversight, by the "engineer or architect in responsible charge" in the DTP organization. The Deputy Director of Design will lead the Airports Authority’s oversight role supported throughout by technical staff for each of the appropriate disciplines.

10.2 Design Criteria, Standards, and Specifications

The Project utilizes design criteria and standards from the Airports Authority, WMATA, and VDOT and affected utility companies as top level design requirements for the Project. It is important that the Project comply with these design criteria and standards to ensure that the Project, an extension of the existing Metrorail System, meets overall system requirements related to system reliability, maintainability, accessibility, system safety, and security. Changes to the design criteria and standards that are identified during the course of the Project must be compatible with existing WMATA systems, must be approved by the Airports Authority and WMATA, and must be processed through the formal design change process before the changes are implemented by DTP.

DTP will ensure the Final Designs, including drawings, specifications, and other design documents are in accordance with the design criteria and standards adopted for the Project. If either DTP or the Airports Authority determines that there is a compelling reason to deviate from these requirements, the proposed deviation will be documented and submitted to the appropriate party, e.g., WMATA, VDOT, etc. for evaluation. The processing of the deviations will follow the procedures for review of changes to design standards (Project Management Procedure PM-2.02 referenced in the Airports Authority’s Quality Program Plan). Prior to submittal, each deviation must be evaluated for systems safety and security-related hazards and vulnerabilities. The deviation submittal shall include a description of the deviation, its justifications, its effects, and any results if the deviation is not granted. If the deviation is conditionally accepted for consideration by the Airports Authority, it is submitted to the WMATA Design Control Board or VDOT for final approval.

During Final Design, design review documents shall be submitted to the Airports Authority in accordance with the Design-Build Contract. The design review documents will include intermediate and final design drawings and technical specifications used to design, procure, install, and construct the Project. In addition, these design submittals will be provided concurrently to VDOT, WMATA, Fairfax County, Loudoun County, and other applicable public agencies and jurisdictions for review and comment. These reviews will ensure that the DTP design documents comply with the design criteria and standards as well as other public agency requirements.
10.3 Configuration Management

DTP has established a configuration control process that requires the evaluation, coordination, and approval of changes in the configuration of an item after establishment of a technical baseline. This baseline is required to be in compliance with the appropriate design criteria and standards and any approved deviations.

The baseline consists of approved technical documentation for an item as set forth in drawings and associated lists, specifications, and referenced documents. Drawings are uniquely numbered and specifications follow a standard format. Specification paragraphs are numbered and identified. Complete drawing lists are established. A record is made of the total number of drawings, the titles of drawings, the revision status, and the dates the drawings are approved.

The contract provisions and agreements the Airports Authority have with DTP and the project partners emphasize a burden of proof that will be enforced regarding severely limiting the types of events or conditions eligible for a change. This applies to the Design-Build contract as well as the enforcement of betterments with project partners and third parties such as utilities. Changes to approved drawings or specifications are required to be made in accordance with established procedures. The Airports Authority will monitor DTP’s design changes for compliance with design criteria and standards. Changes that deviate from WMATA design criteria and standards and other requirements specified by the Comprehensive Agreement require the approval of WMATA and the Airports Authority. These deviations will be processed for approval as specified by Paragraph 10.2 above and per Project procedures and instructions.

Permanent files are maintained of contract documents which include historical information relating to Project changes. As the Project is implemented, the configuration control process evolves to include the documentation of the completed changes in terms of Project Record Documents.
11.0 RIGHTS-OF-WAY ACQUISITION

This section addresses acquisition of property rights necessary for the construction, operation, and maintenance of the Project. A separate RAMP was submitted to the FTA on May 31, 2007, and is summarized in the following sections.

11.1 Right-of-Way Acquisition Management

The Airports Authority is managing the acquisition of right of way necessary to construct and operate the Project. However, specific acquisition activities necessary for conveyances of property interests will be conducted by DTP with review and approval by the Airports Authority and other agencies as appropriate. The Airports Authority, on behalf of the Project, will maintain executive oversight of DTP for all decisions that are made regarding right of way for the Project. The Airports Authority's procedure on monitoring of Design-Build contractor property acquisition activities, Project Management Procedure PM-3.01, is referenced in the Project's Quality Program Plan.

11.2 Right-of-Way Acquisition Management Plan

A RAMP has been prepared in parallel with the completion of preliminary engineering. The organizational structure, coordination requirements, procedures to be employed, and specific acquisition strategies are described in the Plan. An inventory of property requirements resulting from the Preliminary Engineering drawings has been developed. The approach of the ROW Acquisition Plan was specifically structured to support a Design-Build construction effort. This ROW Acquisition Plan:

- Describes appointment of a Property Acquisition Agent along with duties which include having a team of agent-subcontractors skilled in appraisal and acquisition of properties
- Describes the Project’s property acquisition strategy including relocation activities
- Identifies the coordination tasks and documentation requirements to support property acquisition
- Establishes a schedule for property acquisition activities
- Identifies organizational roles and responsibilities related to right of way acquisition
- Describes the Property Acquisition Process
- Describes the Relocation Process
- Includes discussion of Assessment of Damages as part of the Cost Estimate
- Includes a table of conveyances and displacements identifying residential, commercial, and government owned parcels
- Includes a flow chart of activities setting forth sequencing of procedures with the action of each participant shown
- Identifies property interests to be acquired.
- Lists conveyances by Fairfax County and by Proffer of privately owned parcels
- Describes utility easements (which are the subject of another plan described in Section 14.2)
- Describes negotiation and closing with property owners
- Describes Eminent Domain Condemnation process for use if negotiations fail
- Describes preparation of Acquisition Packages
- Describes and identifies temporary easements for construction purposes.
11.3 Property Acquisition and Relocation Assistance

Property interests to be acquired are identified in the ROW Acquisition Plan based on Preliminary Engineering completed in April 2006 as well as ongoing Supplemental Engineering for Route 7. The Project is advancing engineering in preparation for a Design-Build approach, and updates to property requirements have been incorporated in the revision of the ROW Plan.

As a federally-assisted Project, property acquisition and displacement activities must comply with regulations set forth in Title 49 CFR, Part 24 which implements the Uniform Relocation Assistance and Real Property Acquisition Policies Act, as amended. On November 20, 2006 FTA approved an amended Record of Decision finalizing the Project alignment, including an aerial portion through Tysons Corner. This action enabled property acquisition activities to begin in 2007.

The Project is being developed through cooperation of multiple agencies at federal, regional, state and local levels, including FTA, Airports Authority, VDOT and Fairfax County. Work is progressing with these agencies to define the property acquisition program, and acquisition activities with private landowners were initiated in May 2007. Community outreach efforts have resulted in preliminary contacts with property owners to review impacts of planned acquisitions.

At the state level, support for property acquisition activities is being provided by VDOT. The Airports Authority is coordinating with the Northern Virginia District of VDOT for use of VDOT acquisition procedures and electronic database system. VDOT will approve environmental assessments and process condemnation certificates prepared under the direction of the Airports Authority. VDOT will also provide property for use by the Project within existing state highway corridors. The Airports Authority will provide land use permits and easements for use by the Project of property within the Dulles Connector Road and DIAAH. Coordination is required for the Project to share this corridor with other current and planned transportation uses. The Airports Authority may acquire certain land interests in their name that are required for both the Project and other planned improvements in the corridor.

Through proffer agreements, Fairfax County has acquired ownership of several key properties adjacent to proposed station areas, with several additional properties still to be proffered for Metrorail use. Fairfax County is also accepting land dedications from developers in return for future density credits on property remainders. Several properties are listed in this plan as potential dedications based on requests by land owners. Dedicated properties and proffers will be conveyed to Fairfax County, and the County will provide easements to the Airports Authority allowing entry and construction of Project facilities.

WMATA will provide specific land areas within the West Falls Church Service and Inspection Yard for facilities supporting the Project. In addition, WMATA will review all property interests to be acquired by the Project for rail purposes to confirm that WMATA’s operational and maintenance requirements can be met. Property interests acquired from private owners that are used for rail operation and maintenance will be transferred to WMATA at completion of the Project. Property interests formerly held by the Airports Authority and VDOT will allow future WMATA use through permit rather than by property transfer.

Property interests acquired from Fairfax County and private owners that involve recorded conveyances in the form of fee simple deeds are the subject of the ROW Acquisition Plan. Property interests acquired from the Airports Authority, VDOT and WMATA will be obtained by permit, easement or intergovernmental agreement using existing procedures of each agency.

Based on current requirements, the Project will acquire interests on eighty-five separate parcels. This is a reduction in property requirements from previous revisions of the ROW Acquisition Plan. The land requirements needed for storm water ponds by making use of a Fairfax County regional pond have been reduced. Additionally, these are agreements with land owners to share planned facilities where appropriate, and these have reduced land requirements, displacements anticipated for the Project.
All property interests acquired by the Project in the name of the Commonwealth of Virginia will be acquired by fee simple deeds or easements using VDOT-approved forms. Private utility company easements will be acquired by the Project in the name of each utility company using VDOT approved forms.

Several properties acquired for storm water ponds along the Toll Road may be acquired in the name of the Airports Authority. Ponds have been designed to utilize existing the Airports Authority controlled rights of way with additional property interests acquired only as necessary. The ponds are either entirely on the Airports Authority controlled property or on a portion. Procedures and responsibilities for these acquisitions will be finalized after transfer of the Project to the Airports Authority. In the update of the ROW Acquisition Plan, these acquisitions are assumed to be performed using VDOT procedures and authorities.

The inventory of property interests to be acquired for the Project is summarized in a property acquisition list. It was initially developed based on property interests identified in the Final Environmental Impact Statement and has been revised as Preliminary Engineering and Supplemental Engineering progressed in order to accommodate refinements in design. It was expanded to include property interests needed from the Airports Authority, VDOT and WMATA. The Property Acquisition List identifies the type of interest to be acquired, the area of this interest and details regarding ownership and use of the property. It continues to be refined and updated as the Project's design advances and will be submitted on a monthly basis to FTA.

11.4 Property Management Plan

Maintenance and protection of property interests acquired in the name of the Commonwealth of Virginia will be provided by the Property Acquisition Agent until control of the property is transferred to the Design-Build contractor. The Project does not anticipate holding property interests for any significant time before construction is authorized.

The Property Acquisition Agent will be required to maintain an inventory of all real property and improvements acquired for the Project. The inventory will be updated when physical possession of the property occurs.

The responsibility of the Property Acquisition Agent includes protecting the property from vandalism, encroachment or other misuse, as well as taking measures to insure public safety. Maintenance and protection of the property will be a Project expense.

Property management following completion of the Project will be provided by VDOT in coordination with WMATA and depending on use of the property. Properties used for roadway purposes will remain under VDOT responsibility. Properties used for Metrorail facilities will be conveyed to WMATA.

11.5 Scheduling and Cost Estimates

This information was developed as part of the ROW Acquisition Plan dated May 31, 2007, and is included as Appendices to the Plan. Appendix B of the ROW Acquisition Plan contains a Property Acquisition Schedule while Appendix E of the ROW Acquisition Plan contains a Right of Way Cost Estimate.

A cost estimate for the property interests to be acquired was generated in June 2006 based on completed Preliminary Engineering. The estimate was revised in April 2007 to include changes in property requirements from Supplemental Engineering and again in May to reflect property dedications to Fairfax
County. The cost estimate includes property valuation (by square foot) and assessment of damages initially provided by an appraiser on the Property Acquisition Agent’s team.

The estimate was developed considering costs for land values, improvements and damages for each property from which interests are to be acquired. The estimate for land values included costs for temporary and permanent easements as well as for fee acquisitions. Relocation expenses were included for those acquisitions involving displacements and/or personal property moves. The estimate includes a contingency for condemnation increments and settlements that is based on VDOT experience for right of way acquisitions in Northern Virginia.

The cost estimate has considered impacts in the form of damages to property remainders. As most of the incurable damages are directly related to the Project’s design, efforts will continue to evaluate design refinements as appropriate to reduce these impacts. For land values the estimate is based on the area of fee acquisitions and the areas for permanent, temporary and utility easements. Assumptions were made for business displacements and relocation payments based on the Pre-Acquisition Relocation Assistance Planning Report. Working with an appraiser, unit land values were established for each property to be acquired and factors were developed for valuation of easements.

11.6 Conveyance to WMATA

As a condition to the Project being accepted into the Adopted Regional System, the Project will convey to WMATA a property interest in the Project adequate to assure WMATA’s continuing control of the Project property throughout the useful life of the Project. WMATA will continue to participate in the review of Project design drawings during both Preliminary and Final Engineering to ensure a sufficient property interest is acquired for WMATA to adequately operate and maintain the transit system. Parcel specific drawings will be prepared for the conveyance of property rights at the end of construction.
12.0 COMMUNITY RELATIONS

The Communications and Outreach Plan for Phase 1 Design/Build (Plan) is based on the Airports Authority’s commitment to remain transparent to the community -- businesses, residents, commuters – throughout construction.

Developed by DTP for the Airports Authority and updated in June 2007, the Plan outlines communications and outreach efforts needed for constructing a complex linear project through a part of the region that contains more than 125,000 jobs, 35,000 residents and one of the nation’s largest retail districts.

12.1 Community Relations Goals

The Plan is designed to provide information needed when it’s needed and to establish how that information is to flow. In addition to timely management of frequent and accurate information, the Plan’s goals include:

- Providing general and specific project information to many audiences through businesses, homeowner groups, community groups, media, employers, public officials and others
- Prioritizing needs and concerns
- Establishing channels/systems for responding to complaints
- Developing pro-active strategies to work with different audiences
- Providing information to help minimize congestion to multiple entities
- Providing advance and regular traffic information from DTP to the Airports Authority and VDOT, as part of the TMP.

12.2 Strategic Approach

The Project will face many community relations challenges, including accurate communication of schedule delays and costs, retaining public confidence, and the necessity for timely release of information on a fast moving, complex and large Project. Communication strategies will follow the rule of “Communicate information, early and often” to minimize loss of faith and trust. Detailed charts of potential issues and associated strategies are on pages 1-10 of the Plan.

12.3 Roles and Relationships

The Airports Authority is responsible for oversight and execution of the Plan. The Airports Authority will be the sole public voice for the Project and will direct all public messages and will coordinate communications with public agencies. The Airport Authority’s Manager of Rail Communications will oversee implementation of the Plan. VDOT will be the lead agency on dispensing traffic impact information that will be provided by DTP as part of its MOT and communications obligations. The Airports Authority will be responsible for Transportation Demand Management spelled out in the detailed Construction Communications section of the Plan and related appendices. The Plan also includes specific Crisis Communications directives.
12.4 Outreach Audiences

The Airports Authority will continue to work with a variety of audiences, including businesses, citizens groups, commerce, commuters and Dulles Toll Road users, employers and employees, public officials, business groups (chambers of commerce), and shoppers, etc., to promote the on-going understanding of the progress, impacts and goals of the Project. Tools to be used include, but are not limited to:

- Outreach information meetings
- Construction site tours
- Establishment of an information store in a strategic location
- Participation in community fairs, festivals
- Youth and education programs
- Continuing expansion of existing information (email) networks
- Mailings
- Providing information to elected officials who may receive complaints

12.5 Online Communication

Online user rates in the project impact area are as high as 95 percent. To maximize that opportunity for communicating, the following actions will be taken:

The website will be restructured to provide real time traffic conditions and alerts, TDM information, station designs, event calendars etc.

Construction alerts will be available via emails and text messaging.

Website promotions will increase.

12.6 Media Relations

As Construction approaches, media scrutiny will increase. The media provides a positive channel to communicate critical information. The media also becomes a magnifier for challenges and a forum for public debate.

The media audiences include local print and broadcast media, trade and national publications and editorial writers, columnists and bloggers. Communication strategies will include monitoring news coverage daily, maintaining and expanding relationships with the media, pitching feature stories on the Project team and other pertinent topics, offering semi-annual site tours, organizing events, providing factual support, maintaining the Project website section, and creating B-roll packages. As stated above, the Airports Authority will be the sole public voice for the Project and all press inquiries will be handled by the Airports Authority's communications team, including the Manager of Rail Communications.

12.7 Research and Evaluation

The project team has a responsibility to ensure that resources allocated to communications are effective in keeping the public informed. Both qualitative and quantitative research will be done to help mold outreach and ad campaigns.
13.0 CONSTRUCTION MANAGEMENT

The Airports Authority will provide day-to-day oversight of the Design-Build Contract during Final Design and Construction to ensure the completed segments are implemented in accordance with the Project’s standards and design criteria.

13.1 Roles and Responsibilities – Design-Build Construction

DTP has the primary responsibility for construction management. DTP’s approach to construction management of the Project is detailed in DTP’s Project Management Plan. The Airports Authority will be responsible for conducting extensive oversight of DTP’s construction activities to ensure that construction proceeds in compliance with Project requirements. Specific oversight activities include the following:

- Review and approval of DTP construction and QC inspection procedures
- Review and approval of the DTP Permitting Plan
- Identification and observation of construction-related hold and witness points
- Surveillance of DTP and subcontractor construction and QC inspection and test activities
- Surveillance of DTP’s construction-related personnel safety and environmental programs
- Surveillance of DTP’s permitting and maintenance of traffic processes
- Monitoring of DTP’s field change and nonconformance control processes.

The Airports Authority will also oversee the Project’s right-of-way acquisition and utilities relocation programs during the construction of the Project.

13.2 Construction Contract Administration

The Airports Authority will administer the Design-Build Contract with DTP during the construction of the Project. Key contract administration-related activities that will be conducted by the Airports Authority include the following:

- Approval of key DTP personnel performing construction-related activities
- Review and concurrence of the Project construction schedules
- Monitoring and evaluating construction work progress and processing payments to DTP based upon that work progress
- Managing, approving and processing design and construction-related contract changes.

Additional detail on these activities will be described in the PMP for Construction and in specific Project procedures.

13.3 Construction Safety

As described in Section 7 of the Project’s Safety and Security Management Plan, the responsibility for construction safety for the Project has been assigned to the Contractor. DTP will assign an Environmental, Safety, and Health (ES&H) Manager to the Project. DTP’s Project Executive Director through the Project Director and the ES&H Manager are responsible for all matters concerning environmental, safety and health on the Project including implementation of an effective ES&H program.
The ES&H Manager will be responsible for establishing and implementing the Project ES&H Program meeting all applicable federal, state and local codes, owner’s site requirements, and ES&H core processes. This Program will be documented in the Project ES&H Plan and will address the following areas:

- Orientation/Training Programs
- Work Permits
- Emergency Action Plans
- Environmental Permitting and Compliance
- Safety Meetings
- Publicity Related to Safety
- Safety Motivation and Incentive Plans
- ES&H Inspections and Assessments
- Medical Plan and Facilities
- Sanitary Facilities
- Site Security
- ES&H during Startup and Integrated Testing
- Reviews and Assessments.

The ES&H Plan will be reviewed and approved by the Airports Authority and monitored for proper implementation. All Project participants performing activities on the work site will be required to comply with the requirements of the Project ES&H Plan.

13.4 Change Order Control

A procedure for change order control (Project Management Procedure PM-5.01) has been developed consistent with the change order process described in the Design-Build Contract. The procedure and methods developed for identifying and processing change orders will be consistent with the requirements of the Design-Build Contract provisions.

13.5 Payments and Claims Close-out

A procedure for handling payments and claims (Project Management Procedure PM-5.05) has been developed consistent with the payment and claims close out process described in the Design-Build Contract. The specific procedures and methods developed for identifying and processing change orders will be consistent with the requirements of the Design-Build Contract provisions.

13.6 Logistics Plan

A Constructability Report was prepared by DTP during Preliminary Engineering that assessed constructability, access, work methodology, and material selection. Focus was placed on construction site laydown, construction access, staging, and significant aerial guideway erection issues. The latter included construction across major arteries, constructability of concrete piers, stations and tunnel construction methods. The Preliminary Engineering addressed most of the construction issues. Outstanding issues that still need to be addressed during Final Design and Construction are documented in the Constructability Report.
In accordance with DTP’s construction execution strategy, the Project has been divided into 10 major operational areas or tasks. These areas follow a basic type of construction or facility located within each operational area. Within the operational areas, there are additional subsets identifying significant roadway crossings, stations or WMATA interfaces within the operating Metrorail system.

Major work elements include utility work, surface street work, maintenance of traffic (MOT), at-grade track work, at-grade bridge crossings, aerial guideway structures, tunnels, stations, detention ponds, traction power stations, train control, and communications systems.

The Project location presents unique challenges for access to the construction operations. These challenges are a combination of the urban setting, high volume traffic areas, the linear nature of the construction, different types of construction and changing conditions and limitations. Certain assumptions concerning utilities, I-495 interface with future VDOT plans, future High Occupancy Toll (HOT) Lane modifications, construction site access, adequate laydown area, craft parking, operational work hours and the ability to stockpile material at the Dulles Airport have been considered in the development of the construction schedule.

The construction operations have multiple interfaces and coordination with public agencies, including the Airports Authority, WMATA, VDOT, and Fairfax County. These agencies will be critical in developing maintenance of traffic operations, access to work zone, staging areas, construction permitting and relocation of publicly owned utilities.

Construction staging areas and laydown needs in an urban construction setting become critical components to the construction staging and sequencing procedures. Having access to critical materials close to the construction zones is essential in maintaining construction cost and schedule. Proposed material laydown/staging areas will require the acquisition of temporary right of way to support these locations. Material laydown/staging area for Tysons West Station and for Tysons Central 7 Station (in reasonable proximity to the station work) is critical given the tight median work zone available. The Constructability Report provides a plan to deal with construction craft parking and laydown and staging areas. Eleven locations were identified in the Report that could provide the necessary space to facilitate construction. The actual locations to be used will be defined during early activities and Final Design.

13.7 Value Engineering

Consistent with the Value Engineering effort expended during the Preliminary Engineering Phase, an independent Value Engineering report provided analysis and recommendations for potential Project cost savings. After analysis by the Airports Authority, DRPT, WMATA and other Project stakeholder agencies, selected items from the Preliminary Report for Value Engineering were incorporated into the PE design. The procedures for implementing the Value Engineering are identified in the Design-Build Contract.

A Value Engineering Update Report was submitted to FTA on October 31, 2006. The Value Engineering proposals in the Update Report were further considered during Design-Build Contract negotiations with DTP. Some of the proposals and additional Value Engineering suggestions have been incorporated in the Project while others will be considered during Final Design.

Another update to the Value Engineering Report was submitted to FTA on July 20, 2007, documenting the disposition for each of the proposals. This updated report includes additional VE proposals that have been initiated by the Airports Authority. It is intended that many of these proposals will be refined and assessed during Final Design. Presently, the Airports Authority is in discussions with WMATA regarding the impact of each on system operations and maintenance.

An additional update to the Value Engineering Report has been prepared and submitted with the Final Design Request dated September 21, 2007. This update reflects the additional scope modifications that
have been incorporated into the Project and any change in status of previously identified VE recommendations.

13.8 Materials Testing

Materials testing for both the utilities relocation work and the design/build work on the Project will be the responsibility of DTP. Materials testing is performed in accordance with the codes and standards included as part of the Contract and as specified in the technical specifications prepared by DTP and reviewed by the Airports Authority in accordance with Project Management Procedure PM-5.06. The Airports Authority Project Quality Plan, Section 8.0, specifies that test laboratories that are utilized on the Project by DTP to conduct testing such as soil testing, aggregate testing, concrete testing, electrical testing, mechanical and welding testing, nondestructive examinations, and calibration of measuring and test devices be accredited by a recognized accreditation body. The Airports Authority monitors DTP material testing activities during construction in accordance with Project Management Procedures PM-1.04, Quality Audits; PM-1.05, Quality Surveillance; and PM-4.02, Monitoring of Site Construction, Installation, and Testing, and verifies that the testing is conducted in accordance with quality assurance and technical requirements.

13.9 Utility Relocation

Relocation of utilities will be required in order to construct the Project as designed. Some work is being done on utility relocation in advance of the remaining Project construction in order to maintain the Project schedule. For this reason, the plans for managing the utility relocation activities, generally considered a construction activity, are included in this version 5.0 PMP that otherwise focuses on the Final Design phase of the Project.

The Airports Authority has arranged for the required utility relocation work to be performed on a Time and Material payment basis. DTP will act as the agent for the Airports Authority regarding all issues with utility relocation including coordination of design, access to site, construction, negotiating scope agreements with each utility company and negotiating the price and schedule for all work to be performed by utility companies in support of the project. Utility relocation design drawings will be prepared by both the utility companies and DTP. The work will be performed by DTP and its subcontractors as well as the various utility companies. All utility relocation work will be negotiated, coordinated and, in some cases, installed by DTP or its subcontractors. DTP will be the point of contact between all utility companies and the Project. As design and construction progress, the Airports Authority will interface with DTP on a day-to-day basis.

13.9.1 Interfaces and Relationships

DTP will be the first line of communication with the utility companies and the lead in scope negotiations and coordination with each utility company to establish an agreement, scope and cost for their work on the project. DTP will coordinate all work in the field for each utility company and schedule their work according to the Project baseline schedule. DTP, their subcontractors, and each utility company will be responsible to apply for their permits from VDOT or other agencies as required to perform their work on the project. Each permit required is indicated on the Project baseline schedule to allow review time and to coordinate the mobilization and work of the field crews. The Airports Authority's inspectors and Construction Oversight Manager will assist in communication and coordination with VDOT to expedite the permitting process.

As there will be several utility companies accessing all project segments of the utility corridor, DTP will establish control of these areas or work zones to allow safe and efficient access for the utility companies.
to plan and perform their work in a timely fashion. The Airports Authority’s field inspectors will monitor DTP’s arrangements and coordination of these work zones. DTP is required to provide progress and schedule updates to the Project Community Outreach team so that it can interact with the local businesses and residents to keep them aware of the progress and potential impacts to traffic and local access.

### 13.9.2 Roles and Activities

The Airports Authority’s Construction Oversight Manager will oversee and direct the field inspectors and work closely with the DTP Utility Manager and staff to assist in coordination with agencies and utility companies. The PMSS will attend all coordination meetings and maintain open dialogue and correspondence with each stakeholder affected by the work. The Airports Authority’s Construction Oversight Manager will assist DTP in making field decisions to react to conditions or activities that could impact budget or schedule. As necessary, the Airports Authority’s Construction Oversight Manager will make field decisions regarding work that is outside of the anticipated utility relocation scope. These decisions will only be made after a discussion with the Airports Authority’s Manager of Design and Engineering Oversight. The Airports Authority’s Construction Oversight Manager may be required to direct the contractor to work overtime or add to the crew size to complete a critical portion of the utility relocation work that could have an effect on the overall Project schedule. This direction will be documented by the Airports Authority’s Construction Oversight Manager in a Field Work Authorization.

The VDOT Coordinator will assist in “over the shoulder” reviews of the project design to ensure each portion of the design and work plan is in compliance with VDOT standards. This “hands on” VDOT interface will assure timely review by the VDOT Permitting team. The VDOT Coordinator will also be available to schedule VDOT inspectors and monitor conditions in the field for their compliance with the permits.

DTP will subcontract with a large, locally established Heavy Civil Contractor for roadway improvements and civil work associated with relocation of utilities. DTP will direct and coordinate all work by this subcontractor to support the relocation of existing utilities including excavation for and construction of ductbanks and manholes as required by the Project’s integrated design.

All field work will be closely monitored by Airports Authority inspectors. These inspectors will keep track of all hours, material and equipment used in this effort while tracking the production of the field crews performing the work. As this work progresses under DTP control, daily reports will be developed by each inspector that will record the work installed or completed, the material placed, the equipment used as well as any issues regarding safety or quality. Any issues recognized regarding safety or quality will be orally communicated to the DTP foremen or superintendents immediately and these conditions will be noted on the Daily Reports or in a formal written notification of an unsafe condition. Daily Reports will be reviewed by the Airports Authority’s Construction Oversight Manager and a weekly report will be developed from this information. These reports will be used to verify the monthly billings by DTP and each participating utility. The Airports Authority’s Construction Oversight Manager will be responsible to approve invoices for all work in the field.

### 13.9.3 Utility Betterments

All design, supply, construction, installation and management work in support of utility relocation necessary for construction of the Project will be paid for by the Airports Authority. Any utility betterments (concurrent activities not required for construction of the Project) or additional property required for the betterments will be the responsibility of the utility companies. Any work performed by the utility companies or their subcontractors in support of these betterments will be noted in the Daily Reports by the Airports Authority inspectors. Betterment work will not be permitted to have any effect on the Project schedule or budget. Any additional property required in support of these betterments will not be the responsibility of the Project or the Airports Authority.
13.9.4 Roadway Modifications

A critical portion of the Design Build Contract is the roadway modification to support the installation of the Metrorail system, the five new stations and ancillary structures. The cost of this roadway work has been removed from the firm fixed pricing portion of the Design Build budget and will be paid from an allowance of funds under Airports Authority control. This roadway work will also be closely monitored by the Airports Authority’s inspectors to check and verify the work, quantities of material and quality of the work. The Subcontractors’ Scopes of Work, estimates and contracts for roadway work will be closely reviewed to ensure compliance with the Design Build contract and budgets.

This roadway work will have a direct effect on the traffic in the Northern Virginia area. Airports Authority managers and inspectors will conduct Constructability Reviews of all work plans to determine the most efficient methods and means in performance of this work. The Airports Authority will assist the DTP coordination effort with VDOT’s permitting department by working closely with VDOT to maintain visibility through “over the shoulder reviews” of the project design to keep the responsible agency representatives informed of the day-to-day development of the designs. As the design progresses with regular VDOT input, it is anticipated that roadway design reviews and approvals should be completed and permitted in a timely fashion.

13.9.5 Design-Build Contract

Outside of the utility relocation work being handled under the Time and Material arrangement and the allowances established for certain subcontracted elements of work, the balance of the project scope will be handled under the firm fixed portion of the Design-Build Contract. Some of this firm fixed price work in the Design-Build scope must be performed in parallel with the utility relocation work. This work may be required to support the final location of the utilities and will make best use of the interruptions to the traffic by installing several complimenting features of the Project design. Every effort is being made by DTP and the Airports Authority through design and coordination of work to minimize the number of traffic diversions during Project construction. The scope of work under the Design-Build budget will also be monitored by Airports Authority inspectors to ensure the work is being performed per the design drawings and the contractor QA plan is being implemented. The Airports Authority Construction Oversight Manager will be responsible to ensure the work is properly recorded and the billing for this work is tracked under the Design-Build fixed budget.
14.0 INTERGOVERNMENTAL AND UTILITY AGREEMENTS

The following sections describe intergovernmental and utility agreements that have been, or will be executed, to facilitate the coordinated execution of the Project among the various governmental and non-governmental agencies.

14.1 Intergovernmental Agreements

Implementation of the Project requires the Airports Authority to enter into numerous agreements with governmental and non-governmental agencies. The Airports Authority is authorized under the Virginia Act and the District Act to enter into agreements with federal, regional, state and local governmental agencies to secure required funding, permits and certificates in connection with the Airports Authority’s operation and responsibilities. On November 30, 2006, the FTA certified the Airports Authority as being eligible to receive FTA funds for the implementation of public transportation. Capital funding for the Project will be secured by the Airports Authority through agreements with several funding partners, including FTA, and Fairfax County. The Airports Authority is also responsible for coordinating activities with the various entities affected by the implementation of the Project, negotiating interagency agreements, and managing permits acquisition and approval. Examples of the types of agreements to be completed are listed below.

14.1.1 Federal Transit Administration

The Airports Authority will enter into an FFGA with FTA that details the Project, the level of Section 5309 funding committed to the Project and FTA’s anticipated disbursement schedule.

14.1.2 Virginia Department of Rail and Public Transportation

On June 18, 2007, the Airports Authority and DRPT signed the Assignment and Assumption Agreement which transfers the Comprehensive Agreement to Develop the Dulles Corridor Metrorail Project with Dulles Transit Partners (DTP) from DRPT to the Airports Authority. The Comprehensive Agreement, which was signed on June 11, 2004, describes the specific terms and conditions of the Commonwealth’s agreement with DTP to conduct preliminary engineering, design and construction of the Project. The terms of the Comprehensive Agreement also define DTP’s ongoing role in utility relocation and property acquisition support during the Design-Build phase, clarifying the transfer of the Dulles Toll Road and the Dulles Corridor Metrorail Project from DRPT to the Airports Authority.

14.1.3 Washington Metropolitan Area Transit Authority

On September 14, 2007, the Airports Authority signed an intergovernmental agreement with WMATA that defines the scope of technical support to be provided by WMATA during Final Design and Construction, and the appropriate method of reimbursement for these services. The scope includes capital equipment and design, procurement, installation and commissioning; technical advisor during design and construction; and future owner and operator.

The agreement outlines WMATA’s specific responsibilities in its role as Technical Advisor for the following phases: pre-final design, final design, construction, and post-construction completion (including testing and start-up.) The agreement includes a budget for these services.

14.1.4 VDOT

The Airports Authority has entered into three agreements with VDOT. These are the Master Transfer Agreement (signed December 29, 2006), the Dulles Toll Road Permit and Operating Agreement (signed December 29, 2006), and the Cooperative Agreement (signed September 11, 2007). The agreements describe the terms and conditions of the transfer as well as the new roles and responsibilities of each signatory agency and set out the terms necessary for the timely implementation of the Project.
The Master Transfer agreement outlines the legal and financial requirements of the Airports Authority and VDOT under the proposed transfer of the Dulles Toll Road to the Airports Authority. The agreement includes representations and warranties, pre-closing covenants, conditions precedent to closing, and procedures for termination prior to closing.

The Permit and Operating Agreement provides the specific terms associated with the transfer of operational responsibility of the Dulles Toll Road from VDOT to the Airport Authority. The agreement describes the each party's rights and obligations for tolling and the use of toll revenues; bond financing; design, property acquisition and construction; management of the toll road; capital improvements and safety orders; contracting practices and interrelations among other transportation facilities.

The Airports Authority and VDOT entered into a cooperative agreement as of September 11, 2007 which establishes the roles and responsibilities of each agency in completing the timely implementation of the Project. The Agreement establishes terms and conditions for financing and constructing the project; design and construction reviews; land use and construction permits; reimbursement of VDOT agency staff time; acquisition of right-of-way on behalf of the project; utility relocation responsibilities; maintenance of traffic; and the conditions for construction and final acceptance of VDOT facilities.

14.1.5 Fairfax County
The Airports Authority and Fairfax County entered into a cooperative agreement on July 10, 2007. The agreement describes the relationships between the Airports Authority and Fairfax County, the duties and rights of one to the other. The agreement defines each agency's role in project coordination and design reviews; conveyance of rights-of-entry; land use and construction permitting approvals; property acquisition and use; and traffic maintenance.

14.1.6 Funding Agreement
The Airports Authority, in cooperation with Fairfax County and Loudoun County, has developed a multilateral funding agreement among the non-Federal funding partners. This agreement outlines the overall funding commitments of the non-Federal funding partners for Phases 1 and 2 of the Project.

The overall funding commitments are based on the allocation percentages defined in the Draft EIS updated to reflect the fixed contribution by FTA for the Wiehle Avenue Extension (Phase 1), the transfer of the Dulles Toll Road to the Airports Authority, and the Airports Authority's intention to use Dulles Toll Road revenues to replace funding for Phase 2 originally intended to be provided by the Federal government. The funding agreement also addresses the treatment of in-kind contributions, cost reductions and increases, financing costs, and the timing of contributions. The agreement was signed on September 11, 2007. The Project Financial Plan is based on the agreed terms of this agreement.

14.2 Utility Agreements
A Utilities Report has been prepared by DTP dated April 2006 describing the steps taken by DTP to locate utilities and plan for their relocation when they interfere with construction of the Project. An updated Utilities Report that was submitted to FTA on May 31, 2007 provides details on the current status of utility relocation design and the anticipated schedule of these relocations.

Agreements with the various utility companies are in two forms. First, in the fall of 2006, DRPT authorized the utility companies, by letter, to begin preparing relocation designs. This authorization included the methodology for reimbursement of design expenses. Second, DTP prepared draft Utility Agreements (Force Account Agreements) which discuss the procedures and reimbursement of utility relocation construction. These agreements are currently under review by the Airports Authority's legal
staff and negotiations with the utility companies began in August 2007. Upon completion of these negotiations, they will govern work performed by the utility companies for the duration of the Project.

Management of the utility design and relocation program has been and will continue throughout the life of the Project. Prior to the Design-Build phase, it included performing engineering and collecting sufficient utility company information to achieve four principal goals:

- Develop composite plans that represent existing utility conditions in relation to Project design requirements
- Determine anticipated conflicts
- Determine anticipated right of way impacts
- Develop an approach for the relocation of affected utilities.

On December 20, 2006, the FTA approved DRPT’s request for a Letter of No Prejudice (LONP) allowing it to incur costs for utility relocation design work. This utility relocation design work includes utility company designs, cost estimates, relocation schedule/plans, and applications for utility relocation permits. This design work is ongoing.
15.0 CONFLICT RESOLUTION

In its efforts to foster cooperation and an effective working relationship among the participants, the Airports Authority will require that all parties actively participate in partnering techniques to identify and resolve issues that may arise during Project implementation.

The Airports Authority will utilize the following dispute escalation and resolution process as set forth in Article 28 of the Design-Build Contract.

15.1 Cooperation and Communications

DTP and the Airports Authority are required to work with each other throughout the Project and have agreed to communicate regularly with each other at all times so as to avoid or minimize any claims. As part of the relationship of trust and confidence established between DTP and the Airports Authority under the Contract, both parties shall disclose and discuss any issues that may affect the cost or time of performance of the Work, whether or not such issues result in a claim, at quarterly meetings between senior representatives of the parties.

15.1.1 Negotiations

DTP and the Airports Authority will first attempt, within fourteen (14) days of the initiation of a Claim, to resolve the claim at the field level through best efforts and good faith negotiations between DTP’s authorized representative and the Airport Authority’s authorized representative.

15.1.2 Elevated Negotiations

If a claim cannot be resolved through the parties’ authorized representatives, then, upon the request of either party, DTP’s Senior Representative and the Airport Authority’s Senior Representative shall meet as soon as conveniently possible, but in no case later than fourteen (14) days after such a request is made, to attempt to resolve such claim. Prior to any meetings between such representatives, the parties will exchange relevant information that will assist the parties in resolving the claim and, if applicable, make available any independent expert opinion.

15.1.3 Independent Expert

If a claim involves an issue or dispute where the assistance of an independent expert may be helpful, the parties may, by mutual agreement, engage a jointly selected independent expert with technical or other appropriate expertise to assist them. The independent expert will, if agreed upon by the parties, review and render an advisory opinion within sixty (60) days of his/her retention or a longer period if the parties mutually agree.

15.1.4 Submission of Certified Claim

If a claim cannot be resolved to the mutual satisfaction of both parties, regardless of whether or not Sections 15.1.2 or 15.1.3 have been complied with, then DTP shall submit a Certified Claim as set forth in Section 15.2.

15.2 Certified Claim and Procedures

DTP shall submit a written certified claim (“Certified Claim”) to the Airport Authority’s Contracting Officer signed by a duly authorized officer of DTP. The Certified Claim at a minimum shall include: (a) the nature of the relief sought; (b) a narrative that fully explains the facts and circumstances underlying the Certified Claim, including the basis of the Airports Authority’s liability to DTP; and (c) specific reference or inclusion.
of all actual cost accounting records, actual schedule data, as-built data, and other documentation fully supporting any request for adjustment to the contract price or extension of time.

The Certified Claim shall contain a certification that: (a) the claim is made in good faith, and that the supporting data is current, accurate, and complete as of the date of certification; (b) the amount of additional compensation and/or time of performance requested accurately reflects a reasonable adjustment in the added cost and time of performance to which Contractor reasonably believes it is entitled; (c) and that there is supporting actual cost accounting records and actual schedule as-built data that reflect the Work performed as of the date of certification.

Within thirty (30) days of receipt of the Certified Claim, the Airports Authority’s Contracting Officer shall issue a written decision to DTP regarding the dispute. This decision will be considered final and conclusive unless, within thirty (30) days from the date of receipt of the Airports Authority’s Contracting Officer's final decision, DTP furnishes a written request to the Airports Authority’s Contracting Officer for mediation of the issue(s) in accordance with Section 15.3.

15.3 Mediation

If the parties cannot resolve the dispute in accordance with Sections 15.1 or 15.2, the parties agree to submit the dispute to mediation. The mediation process shall be initiated within thirty (30) days of the submission, and the parties shall endeavor to conduct and complete the mediation within sixty (60) days after the appointment of the mediator. Such mediation shall be a “dispute resolution proceeding” within the meaning of Virginia Code § 8.01-576.4, and all communications and materials made in or in connection with the mediation are confidential in accordance with Virginia Code § 8.01-576.10. The parties shall mutually agree on the selection of a mediator who shall be a neutral as defined in Virginia Code § 8.01-0576.9, and shall share equally the costs of the mediator’s fee and other administrative fees of the mediation. If the parties are unable to agree upon a mediator, a mediator shall be appointed pursuant to the Construction Industry Arbitration Rules and Mediation Procedures of the American Arbitration Association. The parties agree to produce documents as may be required by the mediator to facilitate the mediation.

In the event that the mediation fails, the mediator shall issue a certification of the failure of mediation to the parties. No later than ten (10) days after such certification, the Airports Authority’s Contracting Officer shall issue its written final decision to DTP regarding Certified Claim.

15.4 Legal Proceedings

As to such portion of the Certified Claim that is denied by the Airports Authority, DTP may institute a civil action for such relief as it claims to be entitled to under the contract. DTP’s compliance with Sections 15.2 through 15.3 above shall be a condition precedent to bringing a civil action.

DTP and the Airports Authority waive their respective rights to a trial by jury on any claim or cause of action upon, arising under, arising out of or related to the contract or other proceeding or litigation of any type brought by any of the parties against any other party whether with respect to contract claims or actions, tort Claims, or otherwise. DTP and the Airports Authority agree that any such claim or cause of action shall be tried without a jury. Without limiting the foregoing, the parties further agree that their respective right to a trial by jury is waived by operation of this section as to any action, counterclaim or other proceeding which seeks, in whole or in part, to challenge the validity or enforceability of the contract.
The sole and exclusive jurisdiction and venue for any legal action between the parties arising out of or relating to the contract shall be filed in and decided by a court of competent jurisdiction in the Commonwealth of Virginia.

15.5 False Certifications

Any Certified Claim that is based on false statements or material misrepresentations shall entitle the Airports Authority to a full recovery of all costs and fees incurred by the Airports Authority in investigating, analyzing, negotiating, mediating and litigating such claim, including attorney’s and consultant’s fees. This remedy is a contractual remedy and does not otherwise affect the other rights of the Airports Authority in law or in equity.

15.6 Continuance of Work During Dispute

At all times during the term hereof, including during the course of and notwithstanding the existence of any claim: (a) DTP shall perform as directed by the Airports Authority, in a diligent manner and without delay, shall abide by the Airports Authority’s decisions or orders, and shall comply with all applicable provisions of the contract documents; and (b) the Airports Authority shall perform its obligations under the contract in a diligent manner and without delay. Records of the work shall be kept in sufficient detail to enable payment in accordance with applicable provisions in the contract documents.
16.0 SAFETY CERTIFICATION

A system safety and security program has been implemented that addresses applicable FTA requirements and guidelines related to system safety and security during the design and construction of the LPA. The LPA is an extension to the operating WMATA Metrorail system. System safety and security requirements related to this operating system, including extensions to the system, are contained in the WMATA Safety and Security Certification Program Plan. The Airports Authority system safety and security program also addresses applicable requirements of this WMATA Plan. The procedures for monitoring of Design-Build contractor's system safety and security certification activities (Project Management Procedure PM-6.01) and monitoring of the Design-Build contractor’s environmental, safety, and health activities (Project Management Procedure PM-6.02) will be followed by the Airports Authority.

16.1 The Airports Authority Safety and Security Management Plan

The Airports Authority Safety and Security Management Plan (SSMP) defines the requirements and responsibilities for the implementation of safety and security requirements during the design and construction of the Project. This Plan documents the Airports Authority’s policy on safety and security and defines the roles and responsibilities of the Airports Authority, WMATA, and DTP in implementing, monitoring, and complying with applicable safety and security requirements during the course of the Project. The SSMP references the Dulles Corridor Metrorail Project System Safety/Security Certification Management Plan (SCMP). The SCMP describes in more detail the safety and security certification process that will be implemented by DTP during the Final Design, Construction and testing on the Project.

The SSMP defines the scope of the safety and security program that falls under the responsibility of the Airports Authority during the course of the Project. The Airports Authority Project QA/QC and Safety Manager, assisted by the Project Safety Supervisor, has been assigned the authority to ensure that the requirements of the SSMP are implemented properly by all Project participants. The SSMP encompasses the following equipment, facilities, plans, and procedures:

- System-wide Elements – includes the third rail, train control system, voice and data communications, CCTV, digital image recorders, intrusion detection system, traction power substations, track, supervisory control and data acquisition, and fire protection and suppression systems
- Fixed Facilities – includes stations, parking garage, pedestrian overpasses and bridges, structures and bridges, and rail yards
- Safety and Security Plans and Procedures including items such as the Project System Safety/Security Certification Management Plan (SCMP); the Environmental, Safety, and Health Plan; and procedures and instructions such as the procedure for Hazard and Vulnerability Identification and Resolution.

Because the Project is an extension to an operating transit system, certain activities remain the responsibility of WMATA. Equipment, activities, plans, and procedures related to safety and security that are the responsibility of WMATA but that are outside of the scope of the SSMP include:

- Project vehicles and fare collection equipment
- Maintenance, revision, and control of safety and security requirements contained in WMATA Design Criteria and Design Standards
- Operations/Maintenance Plans and Procedures such as Emergency Preparedness Plan, Snow Operating Procedures, and Operations Administrative Procedures.
The SSMP also addresses safety oversight by the Tri-State Oversight Committee (TOC) that has been established to provide oversight of the WMATA Metrorail System as required by 49CFR Part 659, Rail Fixed Guideway Systems; State Safety Oversight. The TOC will provide oversight of the system safety and security program that will be implemented on the Project during the design, construction, inspection, and testing.

16.2 System Safety/Security Certification Management Plan (SCMP)

The SCMP describes the safety and security certification process that DTP will implement during the Project. During Preliminary Engineering, DTP assigned a Safety and Security Manager to the Project. A Project Safety/Security Certification Working Group (SCWG) was established and representatives from the Airports Authority, WMATA, and DTP assigned to the SCWG. The SCWG directed and assisted the DTP Safety and Security Manager in developing the SCMP. The SCWG will continue to function during the course of the Project's design, construction, and testing of the Project and will act as a review board for activities, analysis, and reports on safety/security-related issues. In this role, and in the role of driving the safety/security certification process, the SCWG, led by the DTP Safety and Security Manager, has the responsibility of assuring that all safety/security-related reviews and analyses are performed and that all hazards and vulnerabilities identified during the course of the Project are documented and resolved.

The SCMP specifies that the following activities be conducted during the Design-Build phase of the Project:

- Conduct hazard/vulnerability evaluations of any deviations from WMATA design criteria and standards and resolve hazards/vulnerabilities identified during the course of the work
- Develop and maintain a Safety/Security Certifiable Items List that is used to ensure that all certification activities have met the safety and security standards of the Project
- Develop and complete design conformance checklists to confirm that the design conforms to WMATA safety and security-related design criteria and standards
- Verify and document that installation/construction on the Project complies with the design
- Verify and document that the startup and integrated testing program and results comply with the design and with safety and security requirements for the Project.

When the activities described above have been completed, DTP will prepare a Final Safety/Security Certification Report that certifies that the Project, or phase of the Project, is in compliance with Project safety/security requirements. The Final Safety/Security Certification Report will be reviewed and approved by WMATA and the Airports Authority. Operations readiness will be achieved when WMATA and the Airports Authority have agreed that the work is essentially complete, the work has been successfully and fully tested, and the work has been verified to be safe and secure by applicable WMATA organizations. WMATA will be responsible at that time to implement Safety/Security Certification follow-up procedures to assure that safety/security-related requirements are maintained during pre-revenue and revenue operations.
17.0 PLANNING FOR OPERATIONS START-UP

The Testing and Commissioning activities for the Project consist of Installation Verification Tests, Subsystem Tests, Functional Tests and Integration Tests. The Installation Verification Tests are incorporated into the Post Installation Check-Out (PICO) Testing activity. Subsystem Tests refer to independent system tests functioning in a subsystem’s operating section of the Project. For example, Traction Power, Automatic Train Control, Communications systems, station equipment like elevators and HVAC systems will all be tested for conformance to the design within the nearest limits of their operation.

Throughout the duration of the Contract, DTP will be required to verify that the design, fabrication, installation, and performance of the system (comprised of the Fixed Facilities and the Operating System) comply with the requirements of the Contract Documents. This verification will be determined by: (1) Analysis, (2) Inspection, and/or (3) Test. The monitoring of site construction, installation and testing, and startup and integration testing will be done in accordance with the Airports Authority procedures Project Management Procedures 4.02 and 4.03.

DTP shall prepare and submit a System Acceptance Plan for approval that sets forth the specific acceptance activities that are necessary for DTP to demonstrate that the System Project, both the fixed facilities and the System elements, are compliant with the requirements of the Contract. This Plan shall include a Compliance Verification Matrix that identifies the specific requirements of the Contract and the method(s) used for verification of each. The Acceptance Plan will be closely aligned with the Project’s Quality Program Plan and shall include specific inclusions and/or specific cross references.

Verification of the operating systems is accomplished by DTP’s Qualification Tests Factory Tests, Post Installation Checkouts, Integration Testing, and System Performance Demonstration activities. DTP’s verification of the fixed facilities shall be conducted throughout the progress of construction in accordance with the procedures described in the System Acceptance Plan.

The System Performance Demonstration shall follow the Integration Testing activities and will verify that the System can operate in compliance with the Contract Documents and shall demonstrate the integration of the Project with WMATA’s Adopted Regional System (ARS).

17.1 Post-Installation Checkout

PICO testing will be initiated by DTP upon completion of installation of system equipment. This will include the systematic testing of the equipment to verify the proper functional performance of each individual component.

PICO testing will be accomplished utilizing DTP prepared and Airports Authority approved test procedures. DTP shall maintain and submit to the Airports Authority for review a formal and permanent record of each test performed to verify the results of the test. Any failure of Post-Installation Checkout testing is to be documented and the corrective action recorded up to the time when the components or Subsystem tested is determined to have been successfully tested.
17.1.1 Integration Testing
The purpose of Integration Testing is to determine that the System equipment operates properly when integrated with other equipment at that particular operating site. DTP shall perform and document all Integration Testing. The integration activities shall verify that each subsystem, and assemblies thereof, are installed and interconnected in accordance with accepted design and shop drawings, and with the manufacturer’s engineering installation instructions; and that they function in accordance with the intended design.

DTP is required via the contract to give sufficient notice to the Airports Authority if WMATA equipment or personnel are required to verify any portion of the system to be tested under this section to ensure proper coordination and equipment availability.

Integration Testing Procedures shall be included as a supplement to the System Acceptance Plan and be accepted prior to performing any test. The required format for all inspection and testing procedures is provided to DTP in the contract documents. A pre-test meeting will be held among the Airports Authority and the interfacing parties to review the testing procedures, test dates and durations, witness test data record format, test date failure and success criteria, etc.

The Airports Authority has the right to reject a test procedure or require additional tests if, in the Airports Authority’s sole opinion, the proposed procedure test does not adequately verify or demonstrate the performance of the subject component, subsystem, or system.

DTP is required by contract to notify the Airports Authority a minimum of 14 days in advance of each test. All Integration Test Reports will be submitted to the Airports Authority within 14 days following the test.

DTP shall prepare and submit a Dynamic Testing Readiness Report, for the Airports Authority’s and WMATA’s approval that serves as notice and documents that work required for the start of dynamic testing or any other testing requiring WMATA vehicles has been completed in accordance with the System Acceptance Plan and related procedures.


17.1.2 System Performance Demonstration
The purpose of the System Performance Demonstration is to demonstrate that the integrated systems of the Project perform individually and collectively as required by the contract and in particular shall demonstrate the integration of the Project with WMATA’s Adopted Regional System (ARS).

The System Performance Demonstration Tests will incorporate anticipated normal and abnormal service operations and simulations of emergency operations. This testing will include those operational static and dynamic tests necessary to verify the system operational compliance as a working integrated system within the whole Adopted Regional System.

If the System Performance Demonstration Tests disclose that the Project fails to meet the minimum performance standards or other requirements of the Contract Documents. The Airports Authority will advise DTP as to the particular failures to be remedied. After performance necessary corrective work, DTP shall provide written notification to the Airports Authority and then conduct another System Demonstration Test. This procedure shall be repeated until successful completion of the System Demonstration Tests.

In addition to the System Performance Demonstration Tests, the Airports Authority and WMATA will conduct prior to completion of the System Performance Demonstration Test period such inspections, surveys, and/or testing as they deem desirable. If such inspections, surveys and or tests disclose that
any work does not meet the requirements of the Contract Documents, the Airports Authority will promptly advise DTP as to any defects in the work necessary to be corrected as a condition to substantial completion and as to any defects which may be corrected as Punch List items. Upon correction of the defects identified as prerequisites to substantial completion. DTP shall provide written notification to the Airports Authority, and the Airports Authority may elect to conduct additional inspections, surveys and/or testing. This procedure shall be repeated until the Airports Authority finds that all prerequisites to Substantial Completion have been met.

17.1.3 Operational Readiness

Upon the successful completion of System Performance Demonstration and the requirements of the Contract Documents, the Airports Authority will issue a Certificate of Substantial Completion.

WMATA will then conduct Operational Readiness Test which includes in service-testing and evaluation, to verify Operational Readiness. DTP is required to provide support to WMATA during these tests, however, upon Substantial Completion; WMATA will assume control of the system. DTP’s successful completion of the Punch List and other requirements of the Contract Documents lead to Final Acceptance by the Airports Authority.

17.2 System Acceptance

Acceptance of the System involves Substantial Completion and Final Acceptance. Substantial Completion signifies the end of the design, supply, construction, testing and System Performance Demonstration phase of the Work and the complete readiness of the System to enter Operational Readiness Testing and Commissioning. Final Acceptance indicates satisfaction of all Contract requirements and the release of DTP from further responsibility under the Contract except for the guarantee/warranty provisions.

Following successful completion and documentation of all System Performance Demonstration testing activities and substantial completion of the requirements of the Contract Documents, DTP may formally submit their request for the Certificate of Substantial Completion.

Following Substantial Completion WMATA will take control of access to and operation of all portions of the Project. DTP shall not conduct any activities on the Project after Substantial Completion without prior notification and concurrence of WMATA. Prior notification, concurrence and compliance with WMATA policies and procedures are required for all work associated with the ARS throughout the duration of the Contract.

17.2.1 Final Acceptance

Promptly after Substantial Completion, DTP shall perform Punch List items and other Work, if needed. The Punch List items and other Work activities shall fully satisfy DTP’s other obligations under the Contract Documents necessary to achieve Final Acceptance, including ensuring that the Project has been completed and all components have been properly adjusted and tested.

WMATA, with reasonable technical support of DTP, will conduct Operational Readiness Activities after Substantial Completion of the Contract. Following issuance of the Certificate of Substantial Completion, WMATA will assume responsibility for control of access to and operation of all portions of the Operating System. DTP shall not conduct any activities in the Operating System without prior approval of WMATA.

WMATA will conduct Operational Readiness Activities by operating trains and other equipment necessary to simulate Adopted Regional System operations. Passengers will not be transported during Operational Readiness Activities. It is anticipated that a three month period will be required to complete the Operational Readiness Activities and the training of Operators in the new service territory. The testing period may be extended if operational or equipment function problems are encountered.
DTP shall provide technical support to the Airports Authority for the identification and remediation of Project defects found during this period. Upon DTP’s satisfactory completion of all of the terms and conditions of the Contract Documents, Final Acceptance will be issued to DTP.
18.0 GENERAL JOINT DEVELOPMENT PROGRAM

Joint development during the Project will be handled by Fairfax County in accordance with *Fairfax County Procedures Regarding Requests Made Pursuant to the Public-Private Education Facilities and Infrastructure Act of 2002 (PPEA)*. The County will be responsible for soliciting, selecting, negotiating, and managing joint development proposals related to the Project. Joint developments will be based on and accommodate the proposed Project facilities, as applicable, and will conform to FTA requirements.

In accordance with the PPEA, Fairfax County is currently planning a transit oriented, multi-use redevelopment project at the Wiehle Avenue station. The redevelopment will be in accordance with joint development policies and guidelines outlined in Fairfax County’s policy plan, comprehensive plan, and the station area plans. Fairfax County issued the request for proposal (RFP) for Wiehle Avenue Station development on September 19, 2007. The closing date for Fairfax County to accept development proposals is November 15, 2007. The Wiehle Village Center and Metro Station project will include a multi-level park-and-ride structure with approximately 2,300 spaces that will be built concurrently with the Project as a joint development project between a private developer and Fairfax County.

A portion of the affected property, which is currently being used as a park-and-ride lot, was originally purchased by the County with funds provided through an FTA grant. Therefore FTA approval will be required to confirm that the development conforms to its intended use as a transit-related facility, according to the eligibility criteria and certificate of compliance requirements stated in the February 7, 2007, *Notice of Final Guidance on Eligibility of Joint Development Improvement under Federal Transit Law*. WMATA must also confirm that the garage and bus parking designs meet their standards for Metrobus operations and are in compliance with *WMATA Joint Development Policies and Guidelines*.

Fairfax County will continue to pursue joint development opportunities around other stations where such opportunities exist.