

**Washington Metropolitan Area Transportation Authority
Board Action/Information Summary**

Action
 Information

MEAD Number:

Resolution:
 Yes No

PURPOSE

The purpose of this action is to request Board of Directors approval of a final financial plan for Phase 1 of the Dulles Corridor Metrorail Project which involves an eleven-mile five-station extension from the existing Orange Line to Wiehle Avenue. A Full Funding Grant Agreement (FFGA) will be required to secure any authorized federal funding for portions of the Dulles Corridor Metrorail Project.

DESCRIPTION

The Metropolitan Washington Airports Authority (MWAA) will be undertaking the construction of the Dulles Corridor Metrorail Project as part of an agreement with the Commonwealth of Virginia. Pursuant to this agreement, the Commonwealth will also transfer operations and management of the Dulles Toll road to MWAA. MWAA and the Commonwealth are working expeditiously to ensure that all federal requirements are met to allow MWAA to secure approval from the Federal Transit Administration (FTA) for Phase 1 of the Dulles Corridor Metrorail Project. Preliminary financial plans were presented to the WMATA Finance, Administration and Oversight (FAO) Committee on January 11, 2007. Subsequently, Metro's Chief Financial Officer has prepared the attached operating financial plan for Phase 1.

FUNDING IMPACT

Dulles Phase 1 is projected to account for only three percent, or \$45.6 million, of the Metro's projected operating and maintenance expenses for FY12 (the assumed first year of operation). The impact on the operating subsidy allocated to the local jurisdictions in that year is less than a 2 percent increase, or \$9 million. No additional local jurisdiction contributions to the capital budget are projected until FY19 (seven years after the start of operations). Detailed analysis of the operating and maintenance expenses and capital costs are found in Appendix A, Dulles Corridor Metrorail Project Final Operating Financial Plan.

RECOMMENDATION

That the Board of Directors approve the attached final financial plan for the Dulles Corridor Metrorail Project Phase 1, extension to Wiehle Avenue.

PRESENTED AND ADOPTED:

SUBJECT: DULLES FINANCIAL PLAN FOR FULL FUNDING GRANT AGREEMENT
INCLUDING METRO'S FINANCIAL CAPACITY

PROPOSED
RESOLUTION
OF THE
BOARD OF DIRECTORS
OF THE
WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

WHEREAS, The Washington Metropolitan Area Transit Authority (WMATA) is intended to be the ultimate owner and operator of the Dulles Corridor Metrorail extension project after it is accepted as part of WMATA's Adopted Regional System and revenue service begins; thereafter WMATA and its member jurisdictions will be responsible for funding the operations and maintenance of the system, including any required operating subsidies in accordance with WMATA Board Resolution #2000-35 adopted on May 25, 2000 (Policy for Capital and Operating Costs for New Starts Projects); and

WHEREAS, A Full Funding Grant Agreement (FFGA) for the Dulles Corridor Metrorail Project Phase 1 (Dulles Phase 1), extension to Wiehle Avenue which includes both a capital and operating financial plan, will be required to secure any authorized federal funding for portions of the Dulles Corridor Metrorail Project; and

WHEREAS, All non-federal capital funds for the Dulles Phase 1 extension will be provided by the Commonwealth of Virginia, Fairfax County, and the Metropolitan Washington Airports Authority; and

WHEREAS, Staff has reviewed and refined the preliminary financial plans and it is estimated that the cost of operating and maintaining the Dulles Phase 1 extension would increase WMATA's total operating and maintenance costs by three percent (\$46 million) in the first full year of operation; now, therefore let it be

RESOLVED, That the cost of operating and maintaining WMATA's current bus and rail systems, in addition to Dulles Phase 1, is within the financial capacity of WMATA and the contributing jurisdictions and the Board approves the Final Operating Financial Plan appended as Attachment A; and be it further

RESOLVED, That this Resolution will be effective immediately.

Reviewed as to form and legal sufficiency.



Carol B. O'Keeffe
General Counsel

Attachment-A: Dulles Corridor Metrorail Project Final Operating Financial Plan



ATTACHMENT A

DULLES CORRIDOR METRORAIL PROJECT

FINAL OPERATING FINANCIAL PLAN

Presented to the Board of Directors
Finance, Administration and Oversight Committee

June 14, 2007

Prepared by

OMBS
Office of
Management
& Budget
Services

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

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Section 1: Introduction

The Metropolitan Washington Airports Authority (MWAA) has assumed operational and management control of the Dulles Toll Road and the Dulles Corridor Metrorail Project. Virginia Department of Rail and Public Transportation (DRPT) and MWAA are working expeditiously to ensure that all federal requirements are met to allow MWAA to execute the Full Funding Grant Agreement (FFGA) for the Dulles Corridor Metrorail Project Phase 1 (Dulles Phase 1), extension to Wiehle Avenue. A FFGA will be required to secure any authorized federal funding for portions of the Dulles Corridor Metrorail Project.

Preliminary financial plans were presented to the WMATA Finance, Administration and Oversight (FAO) Committee on January 11, 2007. Subsequently, the Chief Financial Officer's (CFO) office was requested to review and refine this material in preparation for the Board's adoption of a final financial plan.

Findings

The preliminary financial plans presented in January had a solid foundation. However, the materials were updated and more recent financial data and developments were incorporated. In addition, the financial plan was expanded to include the impact on the Capital Improvement Program (CIP). **Finally, the analysis concludes that the cost of operating and maintaining the Dulles Phase 1 extension would increase WMATA's total operating and maintenance costs by three percent in the first full year of operation.**

Jurisdictional Financial Support

Because Dulles Phase 1 is projected to account for only three percent of the operating and maintenance expenses for FY 2012 (the assumed first year of operation), its impact on the operating subsidy allocated to the local jurisdictions in that year is proportionally small. As for local jurisdiction contributions to the capital budget, no additional cost associated with Dulles Phase 1 is projected until FY 2019 (seven years after the start of operations).

Section 2: Operating and Maintenance Expenses

Expenses Results

WMATA's operating and maintenance (O&M) expenses have been projected for each fiscal year from 2008 through 2030. O&M expenses allow for the daily provision of services in Metrobus, Metrorail, and MetroAccess. Typical O&M expenses include employee salaries, fuel for buses, electricity for trains, and supplies. For the purpose of this analysis, debt service costs are excluded from O&M expenses.

The projected O&M expenses have been segregated between base expenses and Dulles Phase 1 expenses. Base expenses include those associated with operating the current Metrobus and Metrorail systems (335 bus routes, 86 stations, and 106.1 miles of revenue track), as well as all other programs and activities found in the current O&M budget. Dulles Phase 1 expenses are based on five stations and eleven miles of revenue track.

Table 1 displays the projected O&M expenses for FY 2008 through FY 2030 for both the base and Dulles Phase 1. Base expenses rise from approximately \$1.15 billion in FY 2008 to \$2.38 billion in FY 2030. O&M expenses for Dulles Phase 1 begin in FY 2011 at approximately \$7.2 million and account for start-up activities. These expenses then rise to \$45.6 million in FY 2012 with the start of Dulles Phase 1 revenue operations. By FY 2030, Dulles Phase 1 expenses will rise to \$83.3 million.

The chart below Table 1 places the above projections within the context of actual O&M expenses from FY 1996 to FY 2006, and budgeted O&M expenses for FY 2007. The period FY 1996 to FY 2006 includes the completion of the Green Line, the Largo extension, and the New York Avenue station; a total of 12 stations and 17.3 miles of revenue track.

Table 2 disaggregates by mode the O&M expense projections from Table 1. It is assumed that all expenses associated with Dulles Phase 1 will be for the Metrorail mode only. Note, each mode includes its share of administrative and support expenses. The chart below Table 2 shows that FY 2012 Dulles Phase 1 expenses account for only three percent of WMATA's total O&M expenses.

Revenue Results

Cost recovery rates for the three modes have been consistent in the last few years. It is assumed for this analysis that the cost recovery rates approved in the FY 2007 operating budget will be used to determine the amount of subsidized O&M expenses in FY 2008 through FY 2030. Table 3 shows the assumed cost recovery rates for Metrobus, Metrorail, and MetroAccess utilized for FY 2008 through FY 2030.

Table 4 shows the resulting subsidized O&M expenses by mode from multiplying the expense projections in Table 2 with the cost recovery rates in Table 3. In total, subsidized expenses are expected to rise from \$448 million in FY 2008 to \$1.06 billion in FY 2030. Relying on historic cost recovery rates is considered to be an accurate predictor of future revenue given long-standing budget results, which demonstrate a consistent ratio over time. A more complex approach would incorporate assumptions of future ridership, fare increases, demand elasticity, and service levels, but would not produce a revenue forecast any more reliable than what is predicted using constant cost recovery rates.

Methodology

This projection of future O&M expenses utilizes the concept of unit costing. This approach begins with segmenting the operating budget into seven functional areas (see below). Each functional area includes one or more related program or activity. These functional areas differ from modes in that functional areas do not include a portion of administrative costs. Administrative costs are collected in the functional area entitled “All Other Expenses.”

Each functional area, with the exception of “All Other Expenses,” is associated with a measurable variable (see below). These variables represent a single, predictable way of measuring activity within each functional area. Dividing the budget for each functional area by its associated variable yields a cost per variable. Data (both costs and variables amounts) from FY 2005 and FY 2006 actuals and FY 2007 budget are utilized to compute cost per variables for three fiscal years.

| Functional Area | Variable | Cost Per Variable |
|-------------------------------|------------------------|--------------------------|
| Bus Transportation | Bus Revenue Miles | Cost per Bus Mile |
| Bus Maintenance | Bus Fleet Size | Cost per Bus |
| Rail Transportation | Rail Revenue Miles | Cost per Rail Mile |
| Rail Car Maintenance | Rail Fleet Size | Cost per Rail Car |
| Facilities Maintenance | Stations & Track Miles | Cost per Station & Track |
| Paratransit | Passenger Trips | Cost per Trip |
| All Other Expenses | | |
| Total Operating Budget | | |

The second step in the analysis is to determine the cost per variable for FY 2008 and beyond. For determining cost per variable for FY 2008, two approaches are used. If the cost per variable does not follow a consistent trend from FY 2005 to FY 2007, then the average of the three years is used for FY 2008. If the cost per variable does follow a consistent trend from FY 2005 to FY 2007, then this trend is continued to determine the cost per variable for FY 2008. For all remaining future years (FY 2009 through FY 2030), a three percent annual inflation rate is used.

The third step in the analysis is to determine the amount of each variable, in each future fiscal year (FY 2008 through FY 2030). Appropriate methods are utilized for each variable, and summarized in the following table.

| Variable: | Basis for future amounts: |
|------------------------|--|
| Bus Revenue Miles | Trend analysis and fleet management plan |
| Bus Fleet Size | Bus Fleet Management Plan |
| Rail Revenue Miles | Trend analysis and fleet management plan |
| Rail Fleet Size | Rail Fleet Management Plan |
| Stations & Track Miles | Held constant for base; increased for Dulles Phase 1 |
| Passenger Trips | Trend analysis |

Future annual costs per functional area can be computed by multiplying the future annual cost per variable in step two with the future annual variable amounts in step three. Future annual costs for "All Other Expenses" are set at 20 percent of each annual budget. Future annual functional area costs are then translated into budget modes (see Table 2). This process is repeated for Dulles Phase 1 by adjusting the variable amounts in step three. As previously noted, it is assumed that all incremental costs associated with Dulles Phase 1 will be in the Metrorail mode only. Metrobus is assumed to be unaffected by Dulles Phase 1, because even though additional bus service will be provided to bring passengers to the Dulles Phase 1 stations, such service will not necessarily be provided by WMATA.

Appendix A includes the actual data and calculations found in this analysis.

Subsidy Allocation to Local Jurisdictions

The allocation of O&M expense subsidy to the local jurisdictions varies by mode. For the purpose of allocating Metrobus and MetroAccess subsidies (see Table 4) to the local jurisdictions for FY 2008 through FY 2030, the jurisdictional percentages found on page 284 of the Proposed Fiscal 2008 Annual Budget are utilized. Holding these rates constant during this period is considered to be as accurate an approach as utilizing the current adopted formulas. The formula approach would have required assumptions of population, ridership, and service levels both by jurisdiction and by fiscal year.

The Metrorail subsidy allocations used for FY 2008 through FY 2011 are the same as the jurisdictional percentages found on page 284 of the proposed FY 2008 budget. For FY 2012, the assumed first year of Dulles Phase 1 operation, the current adopted formula is utilized with appropriate assumptions of population, ridership, and station assignments. With five more stations being allocated to Virginia, its percentage of the total Metrorail subsidy increases by 3.3 percentage points, while that of the District of Columbia and Maryland decrease. The resulting jurisdictional percentages are then held constant for FY 2013 through FY 2030.

The jurisdictional allocation of total subsidized O&M expenses (base, Dulles Phase 1, and all modes combined) is shown in Table 5.

PROPOSED

Table 1: Projected WMATA Operating and Maintenance (O&M) Expenses

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Base | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,300.9 | \$ 1,343.8 | \$ 1,384.1 | \$ 1,432.9 | \$ 1,479.1 | \$ 1,530.5 | \$ 1,579.4 | \$ 1,629.4 | \$ 1,684.1 |
| Dulles Phase 1 | | | | 7.2 | 45.6 | 50.4 | 51.9 | 53.5 | 55.0 | 56.6 | 58.3 | 60.2 |
| Total | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,308.1 | \$ 1,389.4 | \$ 1,434.5 | \$ 1,484.8 | \$ 1,532.5 | \$ 1,585.6 | \$ 1,636.0 | \$ 1,687.6 | \$ 1,744.3 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|----------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Base | \$ 1,740.3 | \$ 1,798.1 | \$ 1,857.1 | \$ 1,917.9 | \$ 1,979.9 | \$ 2,038.6 | \$ 2,103.8 | \$ 2,166.4 | \$ 2,238.5 | \$ 2,306.3 | \$ 2,381.7 |
| Dulles Phase 1 | 61.9 | 63.8 | 65.8 | 67.7 | 69.7 | 71.8 | 73.8 | 76.1 | 78.5 | 80.8 | 83.3 |
| Total | \$ 1,802.3 | \$ 1,861.9 | \$ 1,922.9 | \$ 1,985.5 | \$ 2,049.6 | \$ 2,110.4 | \$ 2,177.6 | \$ 2,242.5 | \$ 2,317.0 | \$ 2,387.1 | \$ 2,465.0 |

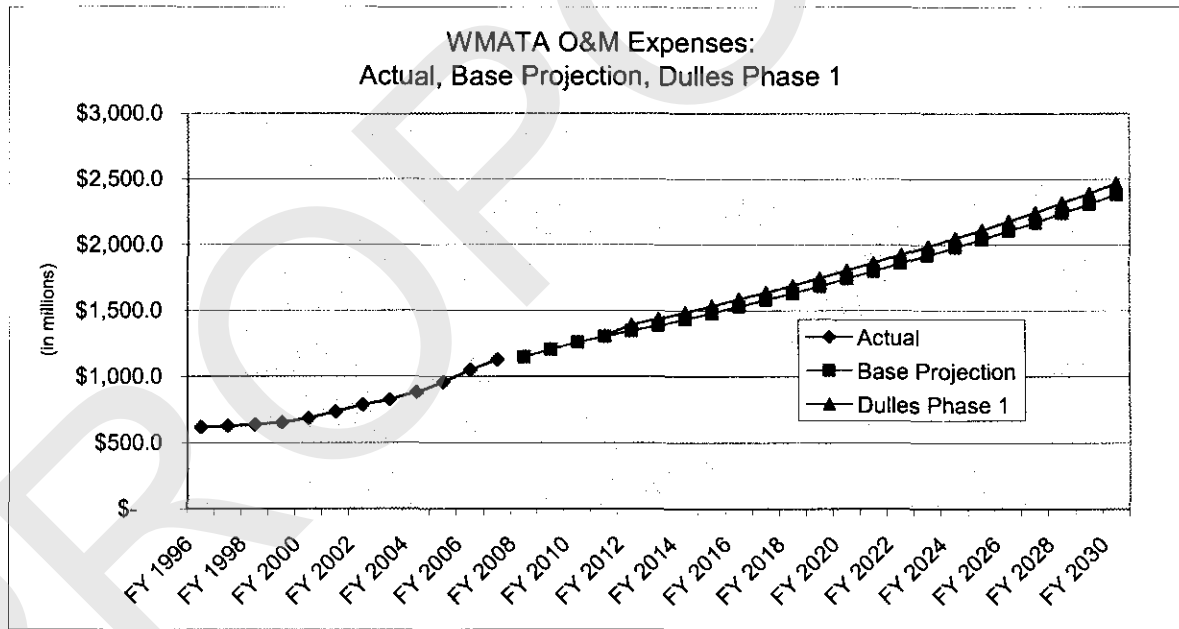


Table 2: Projected WMATA Operating and Maintenance (O&M) Expenses by Mode

(in millions)

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 |
|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Base: | | | | | | | | | | | | |
| Metrobus | \$ 432.5 | \$ 453.4 | \$ 480.6 | \$ 495.6 | \$ 510.9 | \$ 526.3 | \$ 542.3 | \$ 558.5 | \$ 575.2 | \$ 592.1 | \$ 609.3 | \$ 628.7 |
| Metrorail | 649.6 | 678.1 | 701.7 | 723.5 | 745.9 | 768.2 | 792.3 | 816.3 | 841.6 | 866.9 | 892.7 | 920.8 |
| MetroAccess | 64.8 | 71.9 | 76.7 | 81.8 | 87.0 | 89.6 | 98.3 | 104.3 | 113.7 | 120.4 | 127.4 | 134.6 |
| Subtotal | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,300.9 | \$ 1,343.8 | \$ 1,384.1 | \$ 1,432.9 | \$ 1,479.1 | \$ 1,530.5 | \$ 1,579.4 | \$ 1,629.4 | \$ 1,684.1 |
| Dulles Phase 1: | | | | | | | | | | | | |
| Metrorail | | | | 7.2 | 45.6 | 50.4 | 51.9 | 53.5 | 55.0 | 56.6 | 58.3 | 60.2 |
| Total | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,308.1 | \$ 1,389.4 | \$ 1,434.5 | \$ 1,484.8 | \$ 1,532.5 | \$ 1,585.6 | \$ 1,636.0 | \$ 1,687.6 | \$ 1,744.3 |

| | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 |
|------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Base: | | | | | | | | | | | |
| Metrobus | \$ 648.4 | \$ 668.6 | \$ 689.1 | \$ 710.1 | \$ 731.4 | \$ 753.0 | \$ 775.2 | \$ 797.6 | \$ 822.6 | \$ 847.7 | \$ 873.6 |
| Metrorail | 949.7 | 979.3 | 1,009.6 | 1,040.7 | 1,072.4 | 1,104.2 | 1,137.5 | 1,172.0 | 1,208.7 | 1,245.2 | 1,283.5 |
| MetroAccess | 142.2 | 150.2 | 158.4 | 167.1 | 176.1 | 181.4 | 191.1 | 196.8 | 207.2 | 213.4 | 224.6 |
| Subtotal | \$ 1,740.3 | \$ 1,798.1 | \$ 1,857.1 | \$ 1,917.9 | \$ 1,979.9 | \$ 2,038.6 | \$ 2,103.8 | \$ 2,166.4 | \$ 2,238.5 | \$ 2,306.3 | \$ 2,381.7 |
| Dulles Phase 1: | | | | | | | | | | | |
| Metrorail | 61.9 | 63.8 | 65.8 | 67.7 | 69.7 | 71.8 | 73.8 | 76.1 | 78.5 | 80.8 | 83.3 |
| Total | \$ 1,802.3 | \$ 1,861.9 | \$ 1,922.9 | \$ 1,985.5 | \$ 2,049.6 | \$ 2,110.4 | \$ 2,177.6 | \$ 2,242.5 | \$ 2,317.0 | \$ 2,387.1 | \$ 2,465.0 |

**Projected FY 2012
O&M Expenses**

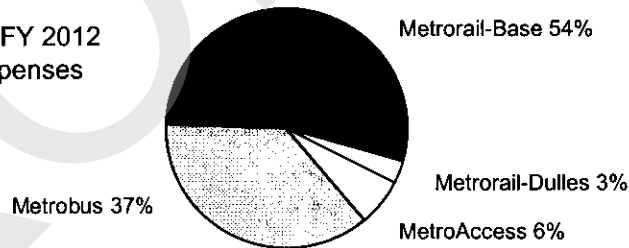


Table 3: Assumed Cost Recovery Rates for FY 2008-2030 by Mode

| | | |
|-------------|--------|--|
| Metrobus | 32.75% | Same rates as in the Approved Fiscal 2007 Annual Budget |
| Metrorail | 80.58% | |
| MetroAccess | 6.39% | |

Table 4: Resulting Subsidized Operating and Maintenance (O&M) Expenses by Mode

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base: | | | | | | | | | | | | |
| Metrobus | \$ 290.9 | \$ 304.9 | \$ 323.2 | \$ 333.3 | \$ 343.6 | \$ 353.9 | \$ 364.7 | \$ 375.6 | \$ 386.8 | \$ 398.2 | \$ 409.8 | \$ 422.8 |
| Metrorail | 126.2 | 131.7 | 136.3 | 140.5 | 144.9 | 149.2 | 153.9 | 158.5 | 163.4 | 168.4 | 173.4 | 178.8 |
| MetroAccess | 60.7 | 67.3 | 71.8 | 76.5 | 81.5 | 83.9 | 92.0 | 97.6 | 106.5 | 112.7 | 119.2 | 126.0 |
| Subtotal | \$ 477.7 | \$ 503.9 | \$ 531.3 | \$ 550.3 | \$ 569.9 | \$ 587.0 | \$ 610.5 | \$ 631.7 | \$ 656.7 | \$ 679.2 | \$ 702.3 | \$ 727.6 |
| Dulles Phase 1: | | | | | | | | | | | | |
| Metrorail | | | | 1.4 | 8.9 | 9.8 | 10.1 | 10.4 | 10.7 | 11.0 | 11.3 | 11.7 |
| Total | \$ 477.7 | \$ 503.9 | \$ 531.3 | \$ 551.7 | \$ 578.7 | \$ 596.8 | \$ 620.6 | \$ 642.1 | \$ 667.4 | \$ 690.2 | \$ 713.6 | \$ 739.3 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|
| Base: | | | | | | | | | | | |
| Metrobus | \$ 436.0 | \$ 449.6 | \$ 463.4 | \$ 477.5 | \$ 491.9 | \$ 506.4 | \$ 521.3 | \$ 536.4 | \$ 553.2 | \$ 570.1 | \$ 587.5 |
| Metrorail | 184.4 | 190.2 | 196.1 | 202.1 | 208.3 | 214.4 | 220.9 | 227.6 | 234.7 | 241.8 | 249.3 |
| MetroAccess | 133.1 | 140.6 | 148.3 | 156.4 | 164.8 | 169.8 | 178.9 | 184.2 | 194.0 | 199.8 | 210.2 |
| Subtotal | \$ 753.6 | \$ 780.4 | \$ 807.8 | \$ 836.0 | \$ 865.0 | \$ 890.6 | \$ 921.1 | \$ 948.2 | \$ 981.9 | \$ 1,011.7 | \$ 1,047.0 |
| Dulles Phase 1: | | | | | | | | | | | |
| Metrorail | 12.0 | 12.4 | 12.8 | 13.1 | 13.5 | 14.0 | 14.3 | 14.8 | 15.2 | 15.7 | 16.2 |
| Total | \$ 765.6 | \$ 792.8 | \$ 820.6 | \$ 849.2 | \$ 878.5 | \$ 904.6 | \$ 935.4 | \$ 963.0 | \$ 997.1 | \$ 1,027.4 | \$ 1,063.2 |

Table 5: Allocation of Subsidized Operating and Maintenance Expenses by Jurisdiction (Base + Dulles Phase 1, All Modes)

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| District of Columbia | \$ 182.1 | \$ 191.5 | \$ 202.1 | \$ 209.4 | \$ 218.2 | \$ 225.0 | \$ 233.2 | \$ 240.9 | \$ 249.5 | \$ 257.6 | \$ 265.9 | \$ 275.1 |
| Maryland: | | | | | | | | | | | | |
| Montgomery Co. | 82.0 | 86.7 | 91.3 | 95.0 | 97.1 | 100.1 | 104.5 | 108.3 | 112.9 | 117.0 | 121.2 | 125.7 |
| Prince Georges Co. | 100.3 | 106.5 | 112.4 | 117.2 | 121.6 | 125.4 | 131.4 | 136.4 | 142.8 | 148.2 | 153.8 | 159.8 |
| Subtotal | \$ 182.3 | \$ 193.2 | \$ 203.8 | \$ 212.2 | \$ 218.7 | \$ 225.6 | \$ 235.9 | \$ 244.7 | \$ 255.8 | \$ 265.2 | \$ 275.0 | \$ 285.6 |
| Virginia: | | | | | | | | | | | | |
| Alexandria | 19.3 | 20.2 | 21.3 | 22.0 | 22.8 | 23.5 | 24.3 | 25.0 | 25.9 | 26.7 | 27.5 | 28.4 |
| Arlington Co. | 32.1 | 33.6 | 35.3 | 36.6 | 38.1 | 39.3 | 40.6 | 41.9 | 43.2 | 44.5 | 45.9 | 47.4 |
| Fairfax City | 1.1 | 1.1 | 1.2 | 1.2 | 1.3 | 1.4 | 1.4 | 1.5 | 1.5 | 1.6 | 1.6 | 1.7 |
| Fairfax Co. | 59.5 | 62.8 | 66.1 | 68.7 | 77.9 | 80.3 | 83.5 | 86.3 | 89.6 | 92.6 | 95.7 | 99.1 |
| Falls Church | 1.4 | 1.4 | 1.5 | 1.6 | 1.7 | 1.7 | 1.8 | 1.8 | 1.9 | 2.0 | 2.0 | 2.1 |
| Subtotal | \$ 113.3 | \$ 119.2 | \$ 125.4 | \$ 130.1 | \$ 141.8 | \$ 146.2 | \$ 151.5 | \$ 156.5 | \$ 162.1 | \$ 167.3 | \$ 172.7 | \$ 178.6 |
| Total | \$ 477.7 | \$ 503.9 | \$ 531.3 | \$ 551.7 | \$ 578.7 | \$ 596.8 | \$ 620.6 | \$ 642.1 | \$ 667.4 | \$ 690.2 | \$ 713.6 | \$ 739.3 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-------------------|
| District of Columbia | \$ 284.5 | \$ 294.1 | \$ 303.9 | \$ 314.1 | \$ 324.4 | \$ 334.0 | \$ 344.9 | \$ 355.0 | \$ 367.0 | \$ 378.2 | \$ 390.8 |
| Maryland: | | | | | | | | | | | |
| Montgomery Co. | 130.4 | 135.2 | 140.2 | 145.3 | 150.5 | 155.0 | 160.6 | 165.3 | 171.4 | 176.6 | 183.0 |
| Prince Georges Co. | 166.1 | 172.5 | 179.1 | 185.9 | 193.0 | 198.7 | 206.1 | 212.2 | 220.4 | 227.1 | 235.7 |
| Subtotal | \$ 296.5 | \$ 307.7 | \$ 319.3 | \$ 331.2 | \$ 343.5 | \$ 353.7 | \$ 366.7 | \$ 377.6 | \$ 391.8 | \$ 403.7 | \$ 418.7 |
| Virginia: | | | | | | | | | | | |
| Alexandria | 29.3 | 30.2 | 31.2 | 32.2 | 33.2 | 34.2 | 35.3 | 36.3 | 37.5 | 38.6 | 39.8 |
| Arlington Co. | 48.9 | 50.4 | 52.0 | 53.7 | 55.3 | 57.0 | 58.7 | 60.4 | 62.4 | 64.3 | 66.3 |
| Fairfax City | 1.7 | 1.8 | 1.8 | 1.9 | 2.0 | 2.0 | 2.1 | 2.2 | 2.2 | 2.3 | 2.4 |
| Fairfax Co. | 102.6 | 106.2 | 109.9 | 113.7 | 117.5 | 121.0 | 125.1 | 128.8 | 133.3 | 137.3 | 142.1 |
| Falls Church | 2.2 | 2.2 | 2.3 | 2.4 | 2.5 | 2.5 | 2.6 | 2.7 | 2.8 | 2.9 | 3.0 |
| Subtotal | \$ 184.7 | \$ 190.9 | \$ 197.3 | \$ 203.8 | \$ 210.5 | \$ 216.8 | \$ 223.8 | \$ 230.4 | \$ 238.2 | \$ 245.4 | \$ 253.6 |
| Total | \$ 765.6 | \$ 792.8 | \$ 820.6 | \$ 849.2 | \$ 878.5 | \$ 904.6 | \$ 935.4 | \$ 963.0 | \$ 997.1 | \$ 1,027.4 | \$ 1,063.2 |

Section 3: Capital Improvement Program

Upon completion of the Dulles Phase 1, it will become part of the WMATA Adopted Regional System. Its long-term maintenance and capital reinvestment needs will be funded through WMATA's expenditure-based Capital Improvement Program (CIP) beginning in FY 2019.

Cost Results

WMATA's capital program costs have been projected for each fiscal year from 2008 through 2030. In general, there are two components of WMATA's current CIP: the Infrastructure Renewal Program (IRP); and other, non-IRP programs, that address demand for expansion of service, and improvements to system safety and accessibility.

The IRP is focused on life-cycle infrastructure renewal. Typical IRP cost includes rehabilitation and replacement of facilities and equipment, buses and rail cars, and operational and information systems, as well as the labor associated with performing this work.

Examples of costs associated with non-IRP programs include bus and rail car procurements to expand fleets, systems to support such expansion, construction of new facilities, and the labor associated with designing, engineering, and managing these programs.

Projected capital costs have been segregated between base and Dulles Phase 1 cost. Base cost relates to maintaining the existing system as it is reflected in the current FY 2008-2013 CIP. The current CIP period reflects conclusion of the Metro Matters program, which funds expansion of WMATA's bus and rail fleets, including procurement of up to 185 new buses and 122 rail cars.

As previously mentioned, WMATA will not incur capital cost associated with Dulles Phase 1 until life-cycle rehabilitation programs begin in FY 2019. These multi-year programs will rehabilitate the five stations and eleven miles of revenue track previously constructed. In FY 2026, the 128 Dulles rail cars will be due to begin their mid-life rehabilitation.

Table 6 presents a summary of the total CIP, FY 2008 through 2030, and separately identifies base and Dulles Phase 1 expenses over time. The chart below Table 6 displays the relative proportions of these two cost components. The period through FY 2011 represents conclusion of the Metro Matters program. Thereafter, acceleration in base cost reflects continued aging of the existing system, stabilization of life-cycle rehabilitation programs for that system, and an assumption of renewed financial commitment by jurisdictional partners to sustain its safety and reliability for the long term. (See Capital Appendix Tables B1 and B2 for detail that illustrates differentiation of

the base into Metro Matters and post-Metro Matters components, and identifies events affecting determination of capital needs during the analysis period.)

Table 7 presents the FY 2008 through 2030 CIP disaggregated by program category. As the Metro Matters program winds down during FY 2009 through 2012, new financial strategies will be developed to meet capital needs. The chart below Table 7 displays Dulles Phase 1 as a proportion of the total program, and further identifies the relative proportions of rolling stock, facilities/equipment, and Metro Matters programs over the twenty-three year analysis period.

Methodology – Cost Projections

The Metro Matters Funding Agreement and proposed annual work plan are incorporated into the projection of capital improvement costs for FY 2008 through FY 2030.

The projected cost of facilities and equipment are based on actual cost experience to date of the current 106-mile Metrorail system, and recommended funding levels found in the F.R. Harris *Facilities and Equipment Condition Assessment Report* (1998). These projections were discussed with members of WMATA's project management community who made valued contributions to the final analysis. These contributions included the need to rehabilitate in future years the parking garages that were added to the Metrorail system subsequent to the release of the F.R. Harris report.

Future costs of rehabilitating the bus and rail fleets are based on the current fleet management plans.

Completion of Dulles Phase 1 is projected for FY 2012. The first rehabilitation programs are expected to begin seven years later. The projected cost of these programs is an extrapolation of the existing system rehabilitation costs, plus \$7.2 million annually for the aerial structure.

Capital Funding Projections

Funding assumptions used are consistent with those presented in the Proposed Fiscal 2008 Annual Budget. In addition, the following assumptions are also made:

1. For FY 2008 – FY 2013, an annual increase 7.5% is applied to the Federal Formula Grant Funds, which is consistent with the Proposed Fiscal 2008 Annual Budget. For FY 2014 – FY 2030, a more conservative 3% annual increase of the Federal Formula Grant Funds is assumed.
2. The annual jurisdictional debt service payments of interests and principal on two existing bond series (final maturity FY 2011 and FY2014, respectively) will continue to be provided semi-annually to WMATA by the jurisdictions.

3. The federal formula grant requires 20% matching funds from jurisdiction partners, known as the “local match”. Additional jurisdictional contribution required to balance the CIP is known as local “over-match”.
4. The allocation of jurisdiction contribution is the same as is found in the Metro Matters Funding Agreement.

Table 8 presents projected capital program costs compared to funding available, without considering over-match by jurisdiction partners above and beyond that which is required to meet federal grant matching requirements. For purposes of this analysis, the difference between projected capital program cost and available funding equals the local over-match. In the graph below Table 8, the jurisdictional over-match for any given year can be visualized as the area between the “capital needs” line, and the “funding available” line.

Table 9 presents total capital funding available, including the local over-match, disaggregated by federal vs. non-federal sources. Non-federal sources are further disaggregated into local match vs. over-match amounts. The graph below Table 9 displays the relative proportions of all fund sources supporting the total twenty-three-year program.

Table 10 presents the total projected jurisdictional contribution by year, for FY 2008 through 2030. Amounts include both the federal grant match, and over-match.

Table 6: Projected WMATA Capital Cost Summary

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 581.9 |
| Dulles Phase 1 | | | | | | | | | | | | 35.7 |
| Total | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base | \$ 573.5 | \$ 576.8 | \$ 586.4 | \$ 632.0 | \$ 627.5 | \$ 615.7 | \$ 624.5 | \$ 588.6 | \$ 588.6 | \$ 594.6 | \$ 594.6 |
| Dulles Phase 1 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 71.5 | 71.5 | 71.5 | 71.5 | 71.5 |
| Total | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 |

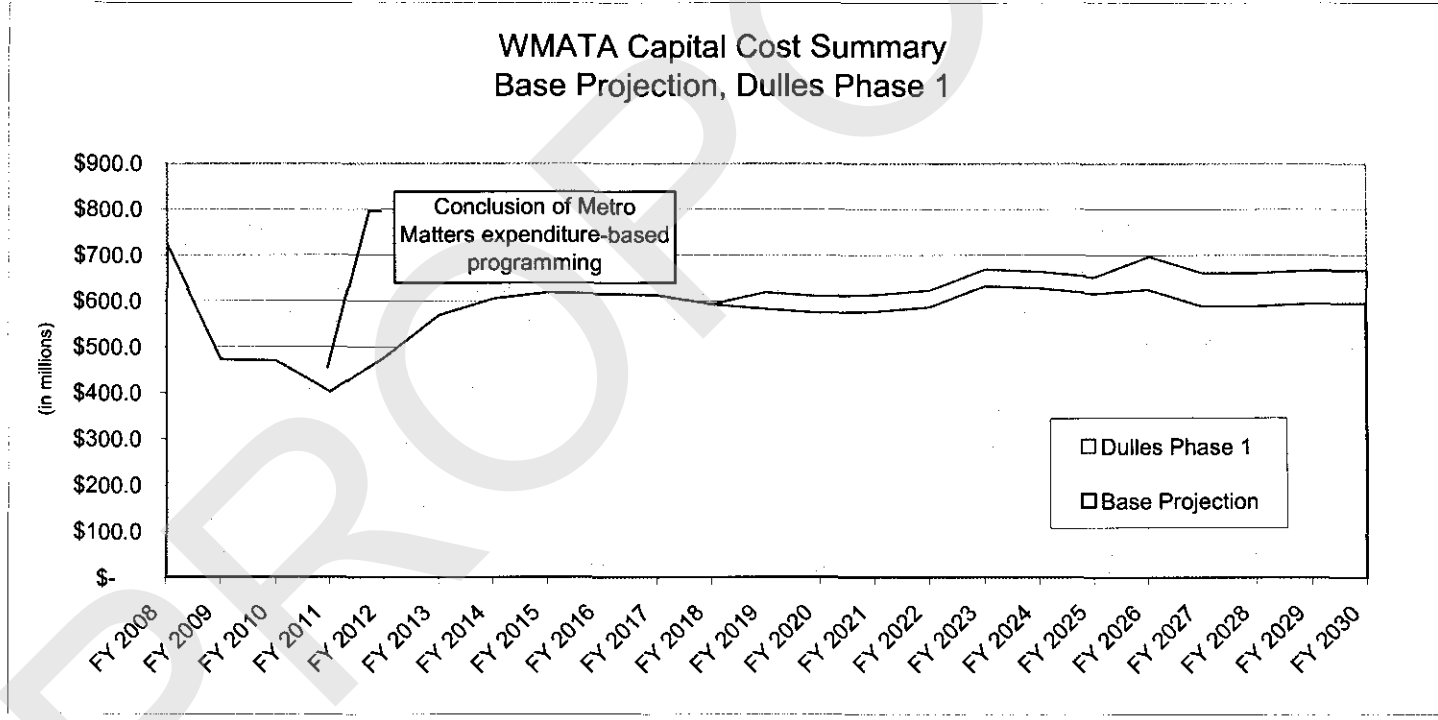


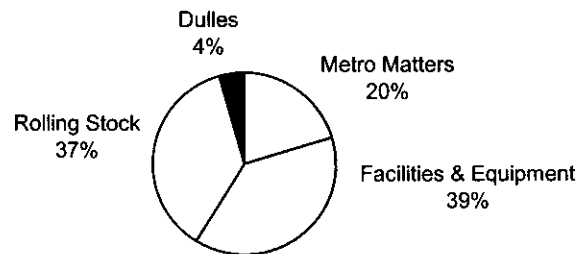
Table 7: Projected WMATA Capital Improvement Program by Program Category

(in millions)

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base | | | | | | | | | | | | |
| Metro Matters | \$ 719.8 | \$ 469.8 | \$ 466.4 | \$ 198.0 | \$ 184.2 | \$ 131.8 | \$ 91.3 | \$ 91.3 | \$ 88.5 | \$ 85.5 | \$ 65.7 | \$ 51.6 |
| * Facilities & Equip. | | | | 155.0 | 238.4 | 257.3 | 263.0 | 276.5 | 276.5 | 276.5 | 276.5 | 280.5 |
| * Rolling Stock | | | | 45.9 | 51.1 | 176.1 | 249.8 | 249.8 | 249.8 | 249.8 | 249.8 | 249.8 |
| Project Dev. | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | - | - | - | - | - | - |
| Subtotal | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 581.9 |
| Dulles Phase 1 | | | | | | | | | | | | |
| Facilities & Equip. | | | | | | | | | | | | 35.7 |
| Rolling Stock | | | | | | | | | | | | - |
| Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 35.7 |
| Total | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |
| | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 | |
| Base | | | | | | | | | | | | |
| Metro Matters | \$ 43.2 | \$ 43.2 | \$ 43.2 | \$ 43.2 | \$ 23.4 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | |
| * Facilities & Equip. | 280.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 282.5 | 282.5 | |
| * Rolling Stock | 249.8 | 257.1 | 266.7 | 312.3 | 327.7 | 339.2 | 348.1 | 312.1 | 312.1 | 312.1 | 312.1 | |
| Project Dev. | | | | | | | | | | | | |
| Subtotal | \$ 573.5 | \$ 576.8 | \$ 586.4 | \$ 632.0 | \$ 627.5 | \$ 615.7 | \$ 624.5 | \$ 588.6 | \$ 588.6 | \$ 594.6 | \$ 594.6 | |
| Dulles Phase 1 | | | | | | | | | | | | |
| Facilities & Equip. | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | |
| Rolling Stock | | | | | | | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 | |
| Subtotal | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 71.5 | \$ 71.5 | \$ 71.5 | \$ 71.5 | \$ 71.5 | |
| Total | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 | |

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Capital Improvement Program
including Dulles Phase 1
FY2008 - 2030



Note: Base cost for "Facilities & Equipment", and "Rolling Stock" relate to non-Metro Matters programs

Table 8: Projected WMATA Capital Needs vs. Funding Available - Excluding Local Over-match

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Capital Needs | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |
| Funding Available | 618.5 | 358.2 | 328.5 | 321.9 | 344.9 | 369.7 | 377.3 | 403.3 | 414.6 | 426.2 | 438.2 | 450.5 |
| Δ = Local Over-match | \$ 104.4 | \$ 114.5 | \$ 140.9 | \$ 80.0 | \$ 131.8 | \$ 198.5 | \$ 226.8 | \$ 214.3 | \$ 200.2 | \$ 185.6 | \$ 153.8 | \$ 167.1 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|-----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Capital Needs | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 |
| Funding Available | 463.2 | 476.3 | 489.8 | 503.6 | 517.9 | 532.7 | 547.8 | 563.5 | 579.6 | 596.1 | 613.2 |
| Δ = Local Over-match | \$ 146.0 | \$ 136.2 | \$ 132.3 | \$ 164.0 | \$ 145.3 | \$ 118.7 | \$ 148.2 | \$ 96.6 | \$ 80.5 | \$ 69.9 | \$ 52.9 |

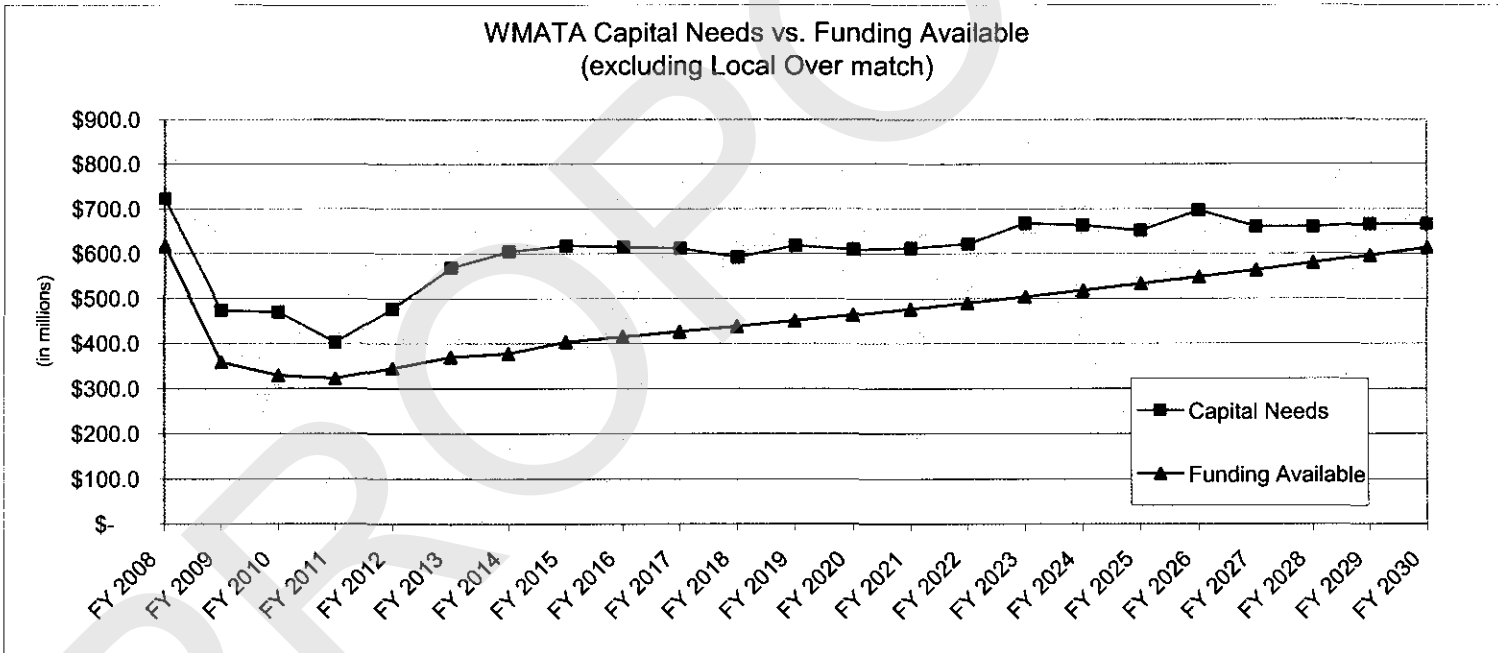


Table 9: Projected WMATA Capital Funding Available - Including Local Over-match

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Federal Funds | \$ 243.6 | \$ 258.5 | \$ 262.4 | \$ 245.5 | \$ 263.9 | \$ 283.7 | \$ 292.2 | \$ 301.0 | \$ 310.0 | \$ 319.3 | \$ 328.9 | \$ 338.8 |
| Local Funds: | | | | | | | | | | | | |
| Matching | | | | | | | | | | | | |
| Federal Funds | 49.4 | 53.1 | 57.1 | 61.4 | 66.0 | 70.9 | 73.1 | 75.3 | 77.5 | 79.8 | 82.2 | 84.7 |
| Over-match | 104.4 | 114.5 | 140.9 | 80.0 | 131.8 | 198.5 | 226.8 | 214.3 | 200.2 | 185.6 | 153.8 | 167.1 |
| Subtotal | \$ 153.8 | \$ 167.7 | \$ 198.0 | \$ 141.4 | \$ 197.8 | \$ 269.4 | \$ 299.9 | \$ 289.6 | \$ 277.7 | \$ 265.4 | \$ 236.0 | \$ 251.8 |
| Other Sources | 325.4 * | 46.6 * | 9.0 | 15.0 | 15.0 | 15.0 | 12.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| Total | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |

* Includes final years of Metro Matters debt issuance

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Federal Funds | \$ 349.0 | \$ 359.4 | \$ 370.2 | \$ 381.3 | \$ 392.8 | \$ 404.5 | \$ 416.7 | \$ 429.2 | \$ 442.1 | \$ 455.3 | \$ 469.0 |
| Local Funds: | | | | | | | | | | | |
| Matching | | | | | | | | | | | |
| Federal Funds | 87.2 | 89.9 | 92.6 | 95.3 | 98.2 | 101.1 | 104.2 | 107.3 | 110.5 | 113.8 | 117.2 |
| Over-match | 146.0 | 136.2 | 132.3 | 164.0 | 145.3 | 118.7 | 148.2 | 96.6 | 80.5 | 69.9 | 52.9 |
| Subtotal | \$ 233.2 | \$ 226.1 | \$ 224.9 | \$ 259.4 | \$ 243.5 | \$ 219.8 | \$ 252.4 | \$ 203.9 | \$ 191.0 | \$ 183.8 | \$ 170.1 |
| Other Sources | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| Total | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 |

Projected Capital Funding Available
(Including Local Over-match)
FY2008 - 2030

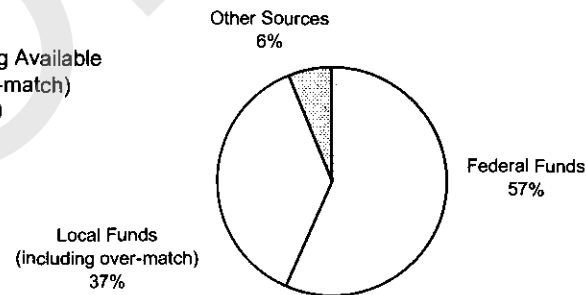


Table 10: Projected Jurisdictional Contribution to the Capital Program

(in millions)

| | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| District of Columbia | \$ 56.3 | \$ 61.4 | \$ 72.5 | \$ 51.8 | \$ 72.4 | \$ 98.7 | \$ 109.8 | \$ 106.1 | \$ 101.7 | \$ 97.2 | \$ 86.5 | \$ 92.2 |
| Maryland | | | | | | | | | | | | |
| Montgomery Co. | 26.2 | 28.5 | 33.7 | 24.1 | 33.7 | 45.9 | 51.1 | 49.3 | 47.3 | 45.2 | 40.2 | 42.9 |
| Prince Georges Co. | 29.0 | 31.6 | 37.3 | 26.7 | 37.3 | 50.8 | 56.5 | 54.6 | 52.4 | 50.1 | 44.5 | 47.5 |
| Subtotal | \$ 55.2 | \$ 60.2 | \$ 71.1 | \$ 50.7 | \$ 71.0 | \$ 96.7 | \$ 107.6 | \$ 103.9 | \$ 99.7 | \$ 95.2 | \$ 84.7 | \$ 90.4 |
| Virginia | | | | | | | | | | | | |
| Alexandria | 6.8 | 7.4 | 8.8 | 6.3 | 8.8 | 11.9 | 13.3 | 12.8 | 12.3 | 11.8 | 10.5 | 11.2 |
| Arlington County | 13.3 | 14.6 | 17.2 | 12.3 | 17.2 | 23.4 | 26.0 | 25.1 | 24.1 | 23.0 | 20.5 | 21.9 |
| City of Fairfax | 0.3 | 0.3 | 0.4 | 0.3 | 0.4 | 0.5 | 0.6 | 0.6 | 0.5 | 0.5 | 0.5 | 0.5 |
| Fairfax County | 21.4 | 23.3 | 27.5 | 19.6 | 27.5 | 37.4 | 41.7 | 40.2 | 38.6 | 36.9 | 32.8 | 35.0 |
| Falls Church | 0.4 | 0.5 | 0.6 | 0.4 | 0.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.7 | 0.7 | 0.7 |
| Subtotal | \$ 42.3 | \$ 46.1 | \$ 54.4 | \$ 38.9 | \$ 54.4 | \$ 74.1 | \$ 82.4 | \$ 79.6 | \$ 76.3 | \$ 73.0 | \$ 64.9 | \$ 69.2 |
| Total | \$ 153.8 | \$ 167.7 | \$ 198.0 | \$ 141.4 | \$ 197.8 | \$ 269.4 | \$ 299.9 | \$ 289.6 | \$ 277.7 | \$ 265.4 | \$ 236.0 | \$ 251.8 |

| | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| District of Columbia | \$ 85.4 | \$ 82.8 | \$ 82.4 | \$ 95.0 | \$ 89.2 | \$ 80.5 | \$ 92.4 | \$ 74.7 | \$ 70.0 | \$ 67.3 | \$ 62.3 |
| Maryland | - | - | - | - | - | - | - | - | - | - | - |
| Montgomery Co. | 39.7 | 38.5 | 38.3 | 44.2 | 41.5 | 37.4 | 43.0 | 34.7 | 32.5 | 31.3 | 29.0 |
| Prince Georges Co. | 44.0 | 42.6 | 42.4 | 48.9 | 45.9 | 41.5 | 47.6 | 38.5 | 36.0 | 34.7 | 32.1 |
| Subtotal | \$ 83.7 | \$ 81.1 | \$ 80.7 | \$ 93.1 | \$ 87.4 | \$ 78.9 | \$ 90.6 | \$ 73.2 | \$ 68.6 | \$ 65.9 | \$ 61.0 |
| Virginia | | | | | | | | | | | |
| Alexandria | 10.3 | 10.0 | 10.0 | 11.5 | 10.8 | 9.7 | 11.2 | 9.0 | 8.5 | 8.2 | 7.5 |
| Arlington County | 20.2 | 19.6 | 19.5 | 22.5 | 21.1 | 19.1 | 21.9 | 17.7 | 16.6 | 16.0 | 14.8 |
| City of Fairfax | 0.4 | 0.4 | 0.4 | 0.5 | 0.5 | 0.4 | 0.5 | 0.4 | 0.4 | 0.4 | 0.3 |
| Fairfax County | 32.4 | 31.4 | 31.2 | 36.0 | 33.8 | 30.5 | 35.1 | 28.3 | 26.5 | 25.5 | 23.6 |
| Falls Church | 0.7 | 0.6 | 0.6 | 0.7 | 0.7 | 0.6 | 0.7 | 0.6 | 0.5 | 0.5 | 0.5 |
| Subtotal | \$ 64.1 | \$ 62.1 | \$ 61.8 | \$ 71.3 | \$ 66.9 | \$ 60.4 | \$ 69.4 | \$ 56.0 | \$ 52.5 | \$ 50.5 | \$ 46.8 |
| Total | \$ 233.2 | \$ 226.1 | \$ 224.9 | \$ 259.4 | \$ 243.5 | \$ 219.8 | \$ 252.4 | \$ 203.9 | \$ 191.0 | \$ 183.8 | \$ 170.1 |

Appendix A: Calculation of Operating and Maintenance Expenses

Table A1: Calculation of Operating Variable Unit Costs

FY 2007 Approved Budget

| Functional Area: | | (in millions) | Operating Variables: | | Operating Variables Unit Costs | | |
|------------------|------------------------|-------------------|----------------------|------------------------------|--------------------------------|---------------------------------|-----------|
| 1. | Bus Transportation | \$ 206.4 | 1. | Bus Miles (millions) | 49.3 | 1. Bus Miles (millions) | \$ 4.187 |
| 2. | Bus Maintenance | 135.0 | 2. | Bus Fleet Size (Year End) | 1,503 | 2. Bus Fleet Size (Year End) | \$ 0.090 |
| 3. | Rail Transportation | 201.9 | 3. | Rail Car Miles (millions) | 70.5 | 3. Rail Car Miles (millions) | \$ 2.864 |
| 4. | Rail Car Maintenance | 89.8 | 4. | Rail Cars in Total Fleet | 1,040 | 4. Rail Cars in Total Fleet | \$ 0.086 |
| 5. | Facilities Maintenance | 184.3 | 5. | Stations & Track Miles | 192.1 | 5. Stations & Track Miles | \$ 0.959 |
| 6. | Paratransit | 56.1 | 6. | MetroAccess Trips (millions) | 2.4 | 6. MetroAccess Trips (millions) | \$ 23.375 |
| 7. | All Other Expenses | 252.1 | 8. | Formula | n/a | 8. Formula | n/a |
| | | <u>\$ 1,125.6</u> | | | | | |

FY 2006 Actual

| Functional Area: | | (in millions) | Operating Variables: | | Operating Variables Unit Costs | | |
|------------------|------------------------|-------------------|----------------------|------------------------------|--------------------------------|---------------------------------|-----------|
| 1. | Bus Transportation | \$ 194.7 | 1. | Bus Miles (millions) | 48.5 | 1. Bus Miles (millions) | \$ 4.014 |
| 2. | Bus Maintenance | 133.8 | 2. | Bus Fleet Size (Year End) | 1,440 | 2. Bus Fleet Size (Year End) | \$ 0.093 |
| 3. | Rail Transportation | 191.1 | 3. | Rail Car Miles (millions) | 68.1 | 3. Rail Car Miles (millions) | \$ 2.806 |
| 4. | Rail Car Maintenance | 89.7 | 4. | Rail Cars in Total Fleet | 954 | 4. Rail Cars in Total Fleet | \$ 0.094 |
| 5. | Facilities Maintenance | 188.2 | 5. | Stations & Track Miles | 192.1 | 5. Stations & Track Miles | \$ 0.980 |
| 6. | Paratransit | 52.8 | 6. | MetroAccess Trips (millions) | 1.8 | 6. MetroAccess Trips (millions) | \$ 29.333 |
| 7. | All Other Expenses | 219.1 | 8. | Formula | n/a | 8. Formula | n/a |
| | | <u>\$ 1,069.4</u> | | | | | |

FY 2005 Actual

| Functional Area: | | (in millions) | Operating Variables: | | Operating Variables Unit Costs | | |
|------------------|------------------------|-----------------|----------------------|------------------------------|--------------------------------|---------------------------------|-----------|
| 1. | Bus Transportation | \$ 185.3 | 1. | Bus Miles (millions) | 48.2 | 1. Bus Miles (millions) | \$ 3.844 |
| 2. | Bus Maintenance | 116.4 | 2. | Bus Fleet Size (Year End) | 1,440 | 2. Bus Fleet Size (Year End) | \$ 0.081 |
| 3. | Rail Transportation | 178.2 | 3. | Rail Car Miles (millions) | 64.2 | 3. Rail Car Miles (millions) | \$ 2.776 |
| 4. | Rail Car Maintenance | 79.9 | 4. | Rail Cars in Total Fleet | 954 | 4. Rail Cars in Total Fleet | \$ 0.084 |
| 5. | Facilities Maintenance | 173.6 | 5. | Stations & Track Miles | 192.1 | 5. Stations & Track Miles | \$ 0.904 |
| 6. | Paratransit | 42.0 | 6. | MetroAccess Trips (millions) | 1.9 | 6. MetroAccess Trips (millions) | \$ 22.105 |
| 7. | All Other Expenses | 201.6 | 8. | Formula | n/a | 8. Formula | n/a |
| | | <u>\$ 977.0</u> | | | | | |

Table A1: Calculation of Operating Variable Unit Costs (cont.)

| Operating Variables Unit Costs | FY 2005 | FY 2006 | FY 2007 | FY 2008 | Notes |
|---------------------------------|-----------|-----------|-----------|-----------|---------------|
| | Actual | Actual | Budget | Estimate | |
| 1. Bus Miles (millions) | \$ 3.844 | \$ 4.014 | \$ 4.187 | \$ 4.354 | 4% increase |
| 2. Bus Fleet Size (Year End) | \$ 0.081 | \$ 0.093 | \$ 0.090 | \$ 0.088 | average |
| 3. Rail Car Miles (millions) | \$ 2.776 | \$ 2.806 | \$ 2.864 | \$ 2.907 | 1.5% increase |
| 4. Rail Cars in Total Fleet | \$ 0.084 | \$ 0.094 | \$ 0.086 | \$ 0.088 | average |
| 5. Stations & Track Miles | \$ 0.904 | \$ 0.980 | \$ 0.959 | \$ 0.948 | average |
| 6. MetroAccess Trips (millions) | \$ 22.105 | \$ 29.333 | \$ 23.375 | \$ 24.938 | average |

Notes on sources for functional area budget

1. Bus Transportation Proposed Fiscal 2008 Annual Budget, page 95
2. Bus Maintenance Proposed Fiscal 2008 Annual Budget, page 97; plus \$18 for preventive maint.
3. Rail Transportation Proposed Fiscal 2008 Annual Budget, pages 77, 79, 81, 83, 84, and 89; and Approved Fiscal 2005 Annual Budget, page 66
4. Rail Car Maintenance Proposed Fiscal 2008 Annual Budget, page 75; plus \$2.7 for preventive maint.
5. Facilities Maintenance Proposed Fiscal 2008 Annual Budget, pages 61, 69, and 87
6. Paratransit Proposed Fiscal 2008 Annual Budget, page 99
7. All Other Expenses Difference between (sum of items 1-6) and (totals on page 25 plus \$20.7 annually)

Notes on sources for operating variables:

1. Bus Miles (millions) Approved Fiscal 2007 Annual Budget, page 112; and OMBS database
2. Bus Fleet Size (Year End) Fleet Management Plans
3. Rail Car Miles (millions) Approved Fiscal 2007 Annual Budget, page 130; and OMBS database
4. Rail Cars in Total Fleet Fleet Management Plans
5. Stations & Track Miles Metro Facts, Sequence of Metrorail Openings

Distribution of functional area budgets to modes

| | <u>Metrobus</u> | <u>Metrorail</u> | <u>MetroAccess</u> |
|---------------------------|-----------------|------------------|--------------------|
| 1. Bus Transportation | 100% | | |
| 2. Bus Maintenance | 100% | | |
| 3. Rail Transportation | | 100% | |
| 4. Rail Car Maintenance | | 100% | |
| 5. Facilities Maintenance | 10% | 90% | |
| 6. Paratransit | | | 100% |
| 7. All Other Expenses | 25% | 75% | |

Table A2: Projection of Operating and Maintenance Expenses: Base Only

A. WMATA Operating Variables: Base

| | Budget | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Operating Variables: | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
| 1. Bus Miles (millions) | 49.3 | 50.8 | 51.8 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 |
| 2. Bus Fleet Size (Year End) | 1,503 | 1,545 | 1,579 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 |
| 3. Rail Car Miles (millions) | 70.5 | 74.0 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 |
| 4. Rail Cars in Total Fleet | 1,040 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 |
| 5. Stations & Track Miles | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 |
| 6. MetroAccess Trips (millions) | 2.4 | 2.6 | 2.8 | 2.9 | 3.0 | 3.1 | 3.1 | 3.3 | 3.4 | 3.6 | 3.7 | 3.8 | 3.9 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

| | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|----------|
| Operating Variables (continued): | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> | | |
| 1. Bus Miles (millions) | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 |
| 2. Bus Fleet Size (Year End) | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 |
| 3. Rail Car Miles (millions) | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 | 75.8 |
| 4. Rail Cars in Total Fleet | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 | 1,120 |
| 5. Stations & Track Miles | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 |
| 6. MetroAccess Trips (millions) | 4.0 | 4.1 | 4.2 | 4.3 | 4.4 | 4.4 | 4.5 | 4.5 | 4.6 | 4.6 | 4.7 | 4.7 | 4.7 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

B. WMATA Operating Variables Unit Costs: Base

(in millions)

| | Budget | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Operating Variables: | <u>FY 2007</u> | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
| 1. Bus Miles (millions) | \$ 4.187 | \$ 4.354 | \$ 4.485 | \$ 4.620 | \$ 4.759 | \$ 4.902 | \$ 5.049 | \$ 5.200 | \$ 5.356 | \$ 5.517 | \$ 5.683 | \$ 5.853 | \$ 6.029 |
| 2. Bus Fleet Size (Year End) | 0.090 | 0.088 | 0.090 | 0.093 | 0.096 | 0.099 | 0.102 | 0.105 | 0.108 | 0.111 | 0.114 | 0.117 | 0.121 |
| 3. Rail Car Miles (millions) | 2.864 | 2.907 | 2.994 | 3.084 | 3.177 | 3.272 | 3.370 | 3.471 | 3.575 | 3.682 | 3.792 | 3.906 | 4.023 |
| 4. Rail Cars in Total Fleet | 0.086 | 0.088 | 0.091 | 0.094 | 0.097 | 0.100 | 0.103 | 0.106 | 0.109 | 0.112 | 0.115 | 0.118 | 0.122 |
| 5. Stations & Track Miles | 0.959 | 0.948 | 0.976 | 1.005 | 1.035 | 1.066 | 1.098 | 1.131 | 1.165 | 1.200 | 1.236 | 1.273 | 1.311 |
| 6. MetroAccess Trips (millions) | 23.375 | 24.938 | 25.686 | 26.457 | 27.251 | 28.069 | 28.911 | 29.778 | 30.671 | 31.591 | 32.539 | 33.515 | 34.520 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Inflation Assumption | | | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |

| | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------|----------|
| Operating Variables (continued): | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> | | |
| 1. Bus Miles (millions) | \$ 6.210 | \$ 6.396 | \$ 6.588 | \$ 6.786 | \$ 6.990 | \$ 7.200 | \$ 7.416 | \$ 7.638 | \$ 7.867 | \$ 8.103 | \$ 8.346 | \$ 8.595 | \$ 8.846 |
| 2. Bus Fleet Size (Year End) | 0.125 | 0.129 | 0.133 | 0.137 | 0.141 | 0.145 | 0.149 | 0.153 | 0.158 | 0.163 | 0.168 | 0.173 | 0.178 |
| 3. Rail Car Miles (millions) | 4.144 | 4.268 | 4.396 | 4.528 | 4.664 | 4.804 | 4.948 | 5.096 | 5.249 | 5.406 | 5.568 | 5.734 | 5.904 |
| 4. Rail Cars in Total Fleet | 0.126 | 0.130 | 0.134 | 0.138 | 0.142 | 0.146 | 0.150 | 0.155 | 0.160 | 0.165 | 0.170 | 0.175 | 0.180 |
| 5. Stations & Track Miles | 1.350 | 1.391 | 1.433 | 1.476 | 1.520 | 1.566 | 1.613 | 1.661 | 1.711 | 1.762 | 1.815 | 1.869 | 1.924 |
| 6. MetroAccess Trips (millions) | 35.556 | 36.623 | 37.722 | 38.854 | 40.020 | 41.221 | 42.458 | 43.732 | 45.044 | 46.395 | 47.787 | 49.219 | 50.691 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Inflation Assumption | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |

Table A2: Projection of Operating and Maintenance Expenses: Base Only (cont.)

C. WMATA O&M Expenses: Base

(in millions)

| Functional Area: | Budget | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|---------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 |
| 1. Bus Transportation | \$ 206.4 | \$ 221.2 | \$ 232.3 | \$ 246.7 | \$ 254.1 | \$ 261.8 | \$ 269.6 | \$ 277.7 | \$ 286.0 | \$ 294.6 | \$ 303.5 | \$ 312.6 | \$ 321.9 |
| 2. Bus Maintenance | 135.0 | 135.7 | 142.1 | 151.7 | 156.6 | 161.5 | 166.4 | 171.3 | 176.1 | 181.0 | 185.9 | 190.8 | 197.4 |
| 3. Rail Transportation | 201.9 | 215.1 | 226.9 | 233.8 | 240.8 | 248.0 | 255.4 | 263.1 | 271.0 | 279.1 | 287.4 | 296.1 | 304.9 |
| 4. Rail Car Maintenance | 89.8 | 98.6 | 101.9 | 105.3 | 108.6 | 112.0 | 115.4 | 118.7 | 122.1 | 125.4 | 128.8 | 132.2 | 136.6 |
| 5. Facilities Maintenance | 184.3 | 182.0 | 187.5 | 193.1 | 198.8 | 204.8 | 210.9 | 217.3 | 223.8 | 230.5 | 237.4 | 244.5 | 251.8 |
| 6. Paratransit | 56.1 | 64.8 | 71.9 | 76.7 | 81.8 | 87.0 | 89.6 | 98.3 | 104.3 | 113.7 | 120.4 | 127.4 | 134.6 |
| 7. All Other Expenses | 252.1 | 229.4 | 240.7 | 251.8 | 260.2 | 268.8 | 276.8 | 286.6 | 295.8 | 306.1 | 315.9 | 325.9 | 336.8 |
| Total | \$ 1,125.6 | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,300.9 | \$ 1,343.8 | \$ 1,384.1 | \$ 1,432.9 | \$ 1,479.1 | \$ 1,530.5 | \$ 1,579.4 | \$ 1,629.4 | \$ 1,684.2 |

| Functional Area (continued): | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 |
| 1. Bus Transportation | \$ 331.6 | \$ 341.5 | \$ 351.8 | \$ 362.4 | \$ 373.3 | \$ 384.5 | \$ 396.0 | \$ 407.9 | \$ 420.1 | \$ 432.7 | \$ 445.7 |
| 2. Bus Maintenance | 203.9 | 210.4 | 216.9 | 223.4 | 230.0 | 236.5 | 243.0 | 249.5 | 257.7 | 265.9 | 274.0 |
| 3. Rail Transportation | 314.1 | 323.5 | 333.2 | 343.2 | 353.5 | 364.1 | 375.1 | 386.3 | 397.9 | 409.8 | 422.1 |
| 4. Rail Car Maintenance | 141.1 | 145.6 | 150.1 | 154.6 | 159.0 | 163.5 | 168.0 | 173.6 | 179.2 | 184.8 | 190.4 |
| 5. Facilities Maintenance | 259.3 | 267.2 | 275.3 | 283.5 | 292.0 | 300.8 | 309.9 | 319.1 | 328.7 | 338.5 | 348.7 |
| 6. Paratransit | 142.2 | 150.2 | 158.4 | 167.1 | 176.1 | 181.4 | 191.1 | 196.8 | 207.2 | 213.4 | 224.6 |
| 7. All Other Expenses | 348.1 | 359.6 | 371.4 | 383.6 | 396.0 | 407.7 | 420.8 | 433.3 | 447.7 | 461.3 | 476.3 |
| Total | \$ 1,740.4 | \$ 1,798.0 | \$ 1,857.1 | \$ 1,917.8 | \$ 1,979.9 | \$ 2,038.5 | \$ 2,103.8 | \$ 2,166.5 | \$ 2,238.5 | \$ 2,306.3 | \$ 2,381.7 |

D. WMATA O&M Expenses by Mode: Base

(in millions)

| Mode: | Budget | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|---------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 |
| • Metrobus | \$ 435.5 | \$ 432.5 | \$ 453.4 | \$ 480.6 | \$ 495.6 | \$ 510.9 | \$ 526.3 | \$ 542.3 | \$ 558.5 | \$ 575.2 | \$ 592.1 | \$ 609.3 | \$ 628.7 |
| • Metrorail | 634.0 | 649.6 | 678.1 | 701.7 | 723.5 | 745.9 | 768.2 | 792.3 | 816.3 | 841.6 | 866.9 | 892.7 | 920.8 |
| • MetroAccess | 56.1 | 64.8 | 71.9 | 76.7 | 81.8 | 87.0 | 89.6 | 98.3 | 104.3 | 113.7 | 120.4 | 127.4 | 134.6 |
| Total | \$ 1,125.6 | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,300.9 | \$ 1,343.8 | \$ 1,384.1 | \$ 1,432.9 | \$ 1,479.1 | \$ 1,530.5 | \$ 1,579.4 | \$ 1,629.4 | \$ 1,684.1 |

| Mode (continued): | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 |
| • Metrobus | \$ 648.4 | \$ 668.6 | \$ 689.1 | \$ 710.1 | \$ 731.4 | \$ 753.0 | \$ 775.2 | \$ 797.6 | \$ 822.6 | \$ 847.7 | \$ 873.6 |
| • Metrorail | 949.7 | 979.3 | 1,009.6 | 1,040.7 | 1,072.4 | 1,104.2 | 1,137.5 | 1,172.0 | 1,208.7 | 1,245.2 | 1,283.5 |
| • MetroAccess | 142.2 | 150.2 | 158.4 | 167.1 | 176.1 | 181.4 | 191.1 | 196.8 | 207.2 | 213.4 | 224.6 |
| Total | \$ 1,740.3 | \$ 1,798.1 | \$ 1,857.1 | \$ 1,917.9 | \$ 1,979.9 | \$ 2,038.6 | \$ 2,103.8 | \$ 2,166.4 | \$ 2,238.5 | \$ 2,306.3 | \$ 2,381.7 |

E. Notes:

- A.1. Increase in bus miles follows the increase in bus fleet size (year end), which increases 8.5% in three years, then is held constant.
- A.2. Bus fleet size (year end) is taken from fleet management plan.
- A.3. Rail car miles is increased 7.5% over two years; somewhat follows rail cars in total fleet, which increases 7.5% in one year, then is held constant.
- A.4. Rail cars in total fleet is taken from fleet management plan.
- A.5. Number of stations (86) plus miles of revenue track (106.1). Held constant in base.
- A.6. See file "MetroAccessStatistics.xls" for estimated trips requested based on FY 1995-2006 actuals and FY 2007 budget.
- B.1. - B.6. Unit costs for FY 2007 and FY 2008 are taken from "UnitCosts" tab.
- C.1. - C.6. For FY 2008 and beyond, section A multiplied by section B.
- C.7. All Other Expenses was set at 20% of total expenses.

Table A3: Projection of Operating and Maintenance Expenses: Base + Dulles Phase 1

A. WMATA Operating Variables: Base + Dulles Phase 1

| | Budget | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|---------------------------------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Operating Variables: | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 |
| 1. Bus Miles (millions) | 49.3 | 50.8 | 51.8 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 |
| 2. Bus Fleet Size (Year End) | 1,503 | 1,545 | 1,579 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 |
| 3. Rail Car Miles (millions) | 70.5 | 74.0 | 75.8 | 75.8 | 75.8 | 79.6 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 |
| 4. Rail Cars in Total Fleet | 1,040 | 1,120 | 1,120 | 1,120 | 1,180 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 |
| 5. Stations & Track Miles | 192.1 | 192.1 | 192.1 | 192.1 | 192.1 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 |
| 6. MetroAccess Trips (millions) | 2.4 | 2.6 | 2.8 | 2.9 | 3.0 | 3.1 | 3.1 | 3.3 | 3.4 | 3.6 | 3.7 | 3.8 | 3.9 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

| | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Operating Variables (continued): | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 |
| 1. Bus Miles (millions) | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 | 53.4 |
| 2. Bus Fleet Size (Year End) | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 | 1,631 |
| 3. Rail Car Miles (millions) | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 | 80.4 |
| 4. Rail Cars in Total Fleet | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 | 1,184 |
| 5. Stations & Track Miles | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 | 208.7 |
| 6. MetroAccess Trips (millions) | 4.0 | 4.1 | 4.2 | 4.3 | 4.4 | 4.4 | 4.5 | 4.5 | 4.6 | 4.6 | 4.7 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

B. WMATA Operating Variables Unit Costs: Base + Dulles Phase 1

(in millions)

| | Budget | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|---------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Operating Variables: | FY 2007 | FY 2008 | FY 2009 | FY 2010 | FY 2011 | FY 2012 | FY 2013 | FY 2014 | FY 2015 | FY 2016 | FY 2017 | FY 2018 | FY 2019 |
| 1. Bus Miles (millions) | \$ 4.187 | \$ 4.354 | \$ 4.485 | \$ 4.620 | \$ 4.759 | \$ 4.902 | \$ 5.049 | \$ 5.200 | \$ 5.356 | \$ 5.517 | \$ 5.683 | \$ 5.853 | \$ 6.029 |
| 2. Bus Fleet Size (Year End) | 0.090 | 0.088 | 0.090 | 0.093 | 0.096 | 0.099 | 0.102 | 0.105 | 0.108 | 0.111 | 0.114 | 0.117 | 0.121 |
| 3. Rail Car Miles (millions) | 2.864 | 2.907 | 2.994 | 3.084 | 3.177 | 3.272 | 3.370 | 3.471 | 3.575 | 3.682 | 3.792 | 3.906 | 4.023 |
| 4. Rail Cars in Total Fleet | 0.086 | 0.088 | 0.091 | 0.094 | 0.097 | 0.100 | 0.103 | 0.106 | 0.109 | 0.112 | 0.115 | 0.118 | 0.122 |
| 5. Stations & Track Miles | 0.959 | 0.948 | 0.976 | 1.005 | 1.035 | 1.066 | 1.098 | 1.131 | 1.165 | 1.200 | 1.236 | 1.273 | 1.311 |
| 6. MetroAccess Trips (millions) | 23.375 | 24.938 | 25.686 | 26.457 | 27.251 | 28.069 | 28.911 | 29.778 | 30.671 | 31.591 | 32.539 | 33.515 | 34.520 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Inflation Assumption | | | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |

| | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate | Estimate |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| Operating Variables (continued): | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 |
| 1. Bus Miles (millions) | \$ 6.210 | \$ 6.396 | \$ 6.588 | \$ 6.786 | \$ 6.990 | \$ 7.200 | \$ 7.416 | \$ 7.638 | \$ 7.867 | \$ 8.103 | \$ 8.346 |
| 2. Bus Fleet Size (Year End) | 0.125 | 0.129 | 0.133 | 0.137 | 0.141 | 0.145 | 0.149 | 0.153 | 0.158 | 0.163 | 0.168 |
| 3. Rail Car Miles (millions) | 4.144 | 4.268 | 4.396 | 4.528 | 4.664 | 4.804 | 4.948 | 5.096 | 5.249 | 5.406 | 5.568 |
| 4. Rail Cars in Total Fleet | 0.126 | 0.130 | 0.134 | 0.138 | 0.142 | 0.146 | 0.150 | 0.155 | 0.160 | 0.165 | 0.170 |
| 5. Stations & Track Miles | 1.350 | 1.391 | 1.433 | 1.476 | 1.520 | 1.566 | 1.613 | 1.661 | 1.711 | 1.762 | 1.815 |
| 6. MetroAccess Trips (millions) | 35.556 | 36.623 | 37.722 | 38.854 | 40.020 | 41.221 | 42.458 | 43.732 | 45.044 | 46.395 | 47.787 |
| 7. Formula | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Inflation Assumption | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% | 3.00% |

Table A3: Projection of Operating and Maintenance Expenses: Base + Dulles Phase 1

C. WMATA O&M Expenses: Base + Dulles Phase 1

(in millions)

| Functional Area: | Budget FY 2007 | Estimate FY 2008 | Estimate FY 2009 | Estimate FY 2010 | Estimate FY 2011 | Estimate FY 2012 | Estimate FY 2013 | Estimate FY 2014 | Estimate FY 2015 | Estimate FY 2016 | Estimate FY 2017 | Estimate FY 2018 | Estimate FY 2019 |
|---------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1. Bus Transportation | \$ 206.4 | \$ 221.2 | \$ 232.3 | \$ 246.7 | \$ 254.1 | \$ 261.8 | \$ 269.6 | \$ 277.7 | \$ 286.0 | \$ 294.6 | \$ 303.5 | \$ 312.6 | \$ 321.9 |
| 2. Bus Maintenance | 135.0 | 135.7 | 142.1 | 151.7 | 156.6 | 161.5 | 166.4 | 171.3 | 176.1 | 181.0 | 185.9 | 190.8 | 197.4 |
| 3. Rail Transportation | 201.9 | 215.1 | 226.9 | 233.8 | 240.8 | 260.5 | 270.9 | 279.1 | 287.4 | 296.0 | 304.9 | 314.0 | 323.4 |
| 4. Rail Car Maintenance | 89.8 | 98.6 | 101.9 | 105.3 | 114.5 | 118.4 | 122.0 | 125.5 | 129.1 | 132.6 | 136.2 | 139.7 | 144.4 |
| 5. Facilities Maintenance | 184.3 | 182.0 | 187.5 | 193.1 | 198.8 | 222.5 | 229.2 | 236.0 | 243.1 | 250.4 | 258.0 | 265.7 | 273.6 |
| 6. Paratransit | 56.1 | 64.8 | 71.9 | 76.7 | 81.8 | 87.0 | 89.6 | 98.3 | 104.3 | 113.7 | 120.4 | 127.4 | 134.6 |
| 7. All Other Expenses | 252.1 | 229.4 | 240.7 | 251.8 | 261.6 | 277.9 | 286.9 | 297.0 | 306.5 | 317.1 | 327.2 | 337.5 | 348.9 |
| Total | \$ 1,125.6 | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,308.2 | \$ 1,389.5 | \$ 1,434.6 | \$ 1,484.8 | \$ 1,532.6 | \$ 1,585.6 | \$ 1,636.0 | \$ 1,687.7 | \$ 1,744.3 |

| Functional Area (continued): | Estimate FY 2020 | Estimate FY 2021 | Estimate FY 2022 | Estimate FY 2023 | Estimate FY 2024 | Estimate FY 2025 | Estimate FY 2026 | Estimate FY 2027 | Estimate FY 2028 | Estimate FY 2029 | Estimate FY 2030 |
|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| 1. Bus Transportation | \$ 331.6 | \$ 341.5 | \$ 351.8 | \$ 362.4 | \$ 373.3 | \$ 384.5 | \$ 396.0 | \$ 407.9 | \$ 420.1 | \$ 432.7 | \$ 445.7 |
| 2. Bus Maintenance | 203.9 | 210.4 | 216.9 | 223.4 | 230.0 | 236.5 | 243.0 | 249.5 | 257.7 | 265.9 | 274.0 |
| 3. Rail Transportation | 333.2 | 343.1 | 353.4 | 364.1 | 375.0 | 386.2 | 397.8 | 409.7 | 422.0 | 434.6 | 447.7 |
| 4. Rail Car Maintenance | 149.2 | 153.9 | 158.7 | 163.4 | 168.1 | 172.9 | 177.6 | 183.5 | 189.4 | 195.4 | 201.3 |
| 5. Facilities Maintenance | 281.7 | 290.3 | 299.1 | 308.0 | 317.2 | 326.8 | 336.6 | 346.7 | 357.1 | 367.7 | 378.8 |
| 6. Paratransit | 142.2 | 150.2 | 158.4 | 167.1 | 176.1 | 181.4 | 191.1 | 196.8 | 207.2 | 213.4 | 224.6 |
| 7. All Other Expenses | 360.5 | 372.4 | 384.6 | 397.1 | 409.9 | 422.1 | 435.5 | 448.5 | 463.4 | 477.4 | 493.0 |
| Total | \$ 1,802.3 | \$ 1,861.9 | \$ 1,922.9 | \$ 1,985.5 | \$ 2,049.6 | \$ 2,110.4 | \$ 2,177.6 | \$ 2,242.6 | \$ 2,316.9 | \$ 2,387.1 | \$ 2,465.0 |

D. Incremental Increase to WMATA O&M Expenses for Dulles Phase 1 (all of this increase is attributed to Metrorail mode)

(in millions)

| | Budget FY 2007 | Estimate FY 2008 | Estimate FY 2009 | Estimate FY 2010 | Estimate FY 2011 | Estimate FY 2012 | Estimate FY 2013 | Estimate FY 2014 | Estimate FY 2015 | Estimate FY 2016 | Estimate FY 2017 | Estimate FY 2018 | Estimate FY 2019 |
|---------------------------------|-------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| • Base + Dulles Phase 1 (above) | \$ 1,125.6 | \$ 1,146.9 | \$ 1,203.4 | \$ 1,259.0 | \$ 1,308.2 | \$ 1,389.5 | \$ 1,434.6 | \$ 1,484.8 | \$ 1,532.6 | \$ 1,585.6 | \$ 1,636.0 | \$ 1,687.7 | \$ 1,744.3 |
| • Less Base | (1,125.6) | (1,146.9) | (1,203.4) | (1,259.0) | (1,300.9) | (1,343.8) | (1,384.1) | (1,432.9) | (1,479.1) | (1,530.5) | (1,579.4) | (1,629.4) | (1,684.2) |
| Incremental Increase | \$ - | \$ - | \$ - | \$ - | \$ 7.2 | \$ 45.6 | \$ 50.4 | \$ 51.9 | \$ 53.5 | \$ 55.0 | \$ 56.6 | \$ 58.3 | \$ 60.2 |

| continued: | Estimate FY 2020 | Estimate FY 2021 | Estimate FY 2022 | Estimate FY 2023 | Estimate FY 2024 | Estimate FY 2025 | Estimate FY 2026 | Estimate FY 2027 | Estimate FY 2028 | Estimate FY 2029 | Estimate FY 2030 |
|---------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| • Base + Dulles Phase 1 (above) | \$ 1,802.3 | \$ 1,861.9 | \$ 1,922.9 | \$ 1,985.5 | \$ 2,049.6 | \$ 2,110.4 | \$ 2,177.6 | \$ 2,242.6 | \$ 2,316.9 | \$ 2,387.1 | \$ 2,465.0 |
| • Less Base | (1,740.4) | (1,798.0) | (1,857.1) | (1,917.8) | (1,979.9) | (2,038.5) | (2,103.8) | (2,166.5) | (2,238.5) | (2,306.3) | (2,381.7) |
| Incremental Increase | \$ 61.9 | \$ 63.8 | \$ 65.8 | \$ 67.7 | \$ 69.7 | \$ 71.8 | \$ 73.8 | \$ 76.1 | \$ 78.5 | \$ 80.8 | \$ 83.3 |

| |
|-------------------|
| Total |
| \$ 1,232.0 |

E. Notes (same as for Stage 1 Base, but with these additions):

- A.3. Shadows increase in rail cars (A.4.), but lags by one year; 5% increase in FY 2012 and 1% increase in FY 2013.
- A.4. Added 60 cars in FY 2011 and 4 cars in FY 2012 per Dulles fleet plan, an increase in fleet size of 6%.
- A.5. Increased by 5 stations and 11.6 miles of track (16.6 total).

**Table A4: Projected WMATA Operating and Maintenance (O&M) Expenses by Mode,
Based on FY 2006 Unit Prices and with No Increase for Inflation**

(prepared at the request of the Virginia Department of Rail and Public Transportation)

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Base: | | | | | | | | | | | | |
| Metrobus | \$ 413.7 | \$ 422.0 | \$ 433.8 | \$ 434.0 | \$ 434.1 | \$ 434.1 | \$ 434.4 | \$ 434.6 | \$ 434.9 | \$ 435.1 | \$ 435.2 | \$ 435.4 |
| Metrorail | 637.5 | 645.8 | 648.3 | 648.8 | 649.2 | 649.2 | 650.2 | 650.7 | 651.6 | 652.1 | 652.5 | 653.0 |
| MetroAccess | 64.8 | 69.8 | 72.3 | 74.8 | 77.3 | 77.3 | 82.3 | 84.8 | 89.8 | 92.3 | 94.8 | 97.3 |
| Subtotal | \$ 1,116.0 | \$ 1,137.6 | \$ 1,154.4 | \$ 1,157.6 | \$ 1,160.6 | \$ 1,160.6 | \$ 1,166.9 | \$ 1,170.1 | \$ 1,176.3 | \$ 1,179.5 | \$ 1,182.5 | \$ 1,185.7 |
| Dulles Phase 1: | | | | | | | | | | | | |
| Metrorail | | | | 6.6 | 40.0 | 42.9 | 42.9 | 42.9 | 42.8 | 42.8 | 42.9 | 42.9 |
| Total | \$ 1,116.0 | \$ 1,137.6 | \$ 1,154.4 | \$ 1,164.2 | \$ 1,200.6 | \$ 1,203.5 | \$ 1,209.8 | \$ 1,213.0 | \$ 1,219.1 | \$ 1,222.2 | \$ 1,225.3 | \$ 1,228.5 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Base: | | | | | | | | | | | |
| Metrobus | \$ 435.5 | \$ 435.7 | \$ 435.8 | \$ 436.0 | \$ 436.1 | \$ 436.1 | \$ 436.3 | \$ 436.3 | \$ 436.5 | \$ 436.5 | \$ 436.6 |
| Metrorail | 653.4 | 654.0 | 654.4 | 654.9 | 655.3 | 655.3 | 655.8 | 655.8 | 656.3 | 656.3 | 656.7 |
| MetroAccess | 99.8 | 102.2 | 104.7 | 107.2 | 109.7 | 109.7 | 112.2 | 112.2 | 114.7 | 114.7 | 117.2 |
| Subtotal | \$ 1,188.7 | \$ 1,191.9 | \$ 1,194.9 | \$ 1,198.1 | \$ 1,201.1 | \$ 1,201.1 | \$ 1,204.3 | \$ 1,204.3 | \$ 1,207.5 | \$ 1,207.5 | \$ 1,210.5 |
| Dulles Phase 1: | | | | | | | | | | | |
| Metrorail | 42.9 | 42.8 | 42.9 | 42.9 | 42.9 | 42.9 | 42.8 | 42.8 | 42.9 | 42.9 | 42.9 |
| Total | \$ 1,231.5 | \$ 1,234.7 | \$ 1,237.8 | \$ 1,241.0 | \$ 1,244.0 | \$ 1,244.0 | \$ 1,247.1 | \$ 1,247.1 | \$ 1,250.4 | \$ 1,250.4 | \$ 1,253.4 |

**Table A5: Projected WMATA Operating and Maintenance (O&M) Expenses for Capacity Enhancements, by Mode
Based on FY 2006 Unit Prices and with No Increase for Inflation**

(prepared at the request of the Virginia Department of Rail and Public Transportation)

Capacity enhancements include the procurement and operation of 307 buses and 220 rail cars. The use of these rail cars would allow for 100% eight-car train operation during peak hours. Note that these capacity enhancement buses and rail cars are not funded in the WMATA's capital improvement program. The operating and maintenance cost of these buses and rail cars is shown here for planning purposes only.

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Capacity Enhancements Only | | | | | | | | | | | | |
| Metrobus | | | | \$ 18.3 | \$ 40.9 | \$ 66.3 | \$ 73.8 | \$ 74.0 | \$ 74.6 | \$ 75.4 | \$ 75.6 | \$ 75.6 |
| Metrorail | | | | 3.2 | 7.7 | 29.4 | 49.9 | 55.2 | 67.0 | 82.0 | 85.3 | 85.3 |
| MetroAccess | | | | | | | | | | | | |
| Total | | | | \$ 21.5 | \$ 48.6 | \$ 95.7 | \$ 123.7 | \$ 129.2 | \$ 141.6 | \$ 157.4 | \$ 160.9 | \$ 160.9 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| Capacity Enhancements Only | | | | | | | | | | | |
| Metrobus | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 | \$ 75.6 |
| Metrorail | 85.3 | 85.3 | 85.3 | 85.3 | 85.3 | 85.3 | 85.3 | 85.3 | 85.3 | 85.3 | 85.3 |
| MetroAccess | | | | | | | | | | | |
| Total | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 | \$ 160.9 |

Appendix B: Detail Capital Data Tables and Graphs

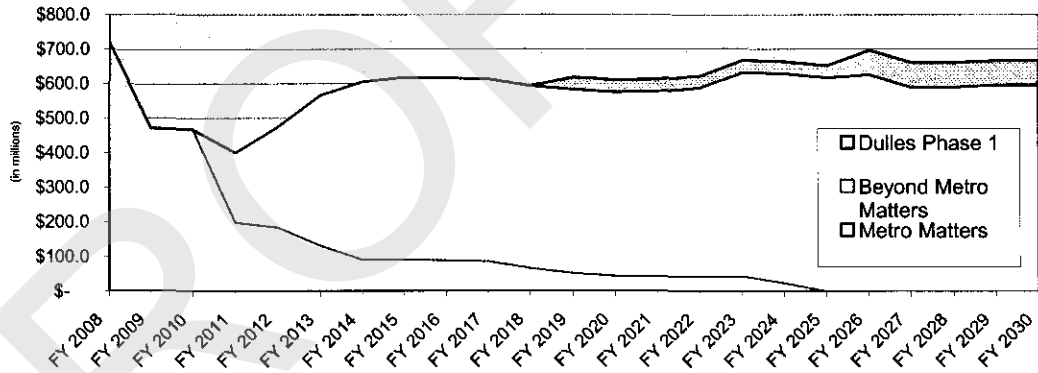
Capital Appendix Table B1: Projected WMATA Capital Cost by Capital Program Category

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base | | | | | | | | | | | | |
| Metro Matters | \$ 719.8 | \$ 469.8 | \$ 466.4 | \$ 198.0 | \$ 184.2 | \$ 131.8 | \$ 91.3 | \$ 91.3 | \$ 88.5 | \$ 85.5 | \$ 65.7 | \$ 51.6 |
| Beyond Metro Matters | - | - | - | 200.9 | 289.5 | 433.4 | 512.8 | 526.3 | 526.3 | 526.3 | 526.3 | 530.3 |
| Project Dev. | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | - | - | - | - | - | - |
| Subtotal | 722.8 | 472.8 | 469.4 | 401.9 | 476.7 | 568.2 | 604.1 | 617.6 | 614.8 | 611.8 | 591.9 | 581.9 |
| Dulles Phase 1 | - | - | - | - | - | - | - | - | - | - | - | 35.7 |
| Total | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|-----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base | | | | | | | | | | | |
| Metro Matters | \$ 43.2 | \$ 43.2 | \$ 43.2 | \$ 43.2 | \$ 23.4 | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - |
| Beyond Metro Matters | 530.3 | 533.6 | 543.2 | 588.8 | 604.2 | 615.7 | 624.5 | 588.6 | 588.6 | 594.6 | 594.6 |
| Project Dev. | - | - | - | - | - | - | - | - | - | - | - |
| Subtotal | 573.5 | 576.8 | 586.4 | 632.0 | 627.5 | 615.7 | 624.5 | 588.6 | 588.6 | 594.6 | 594.6 |
| Dulles Phase 1 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 71.5 | 71.5 | 71.5 | 71.5 | 71.5 |
| Total | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 |

WMATA Capital Cost - By Capital Program Category

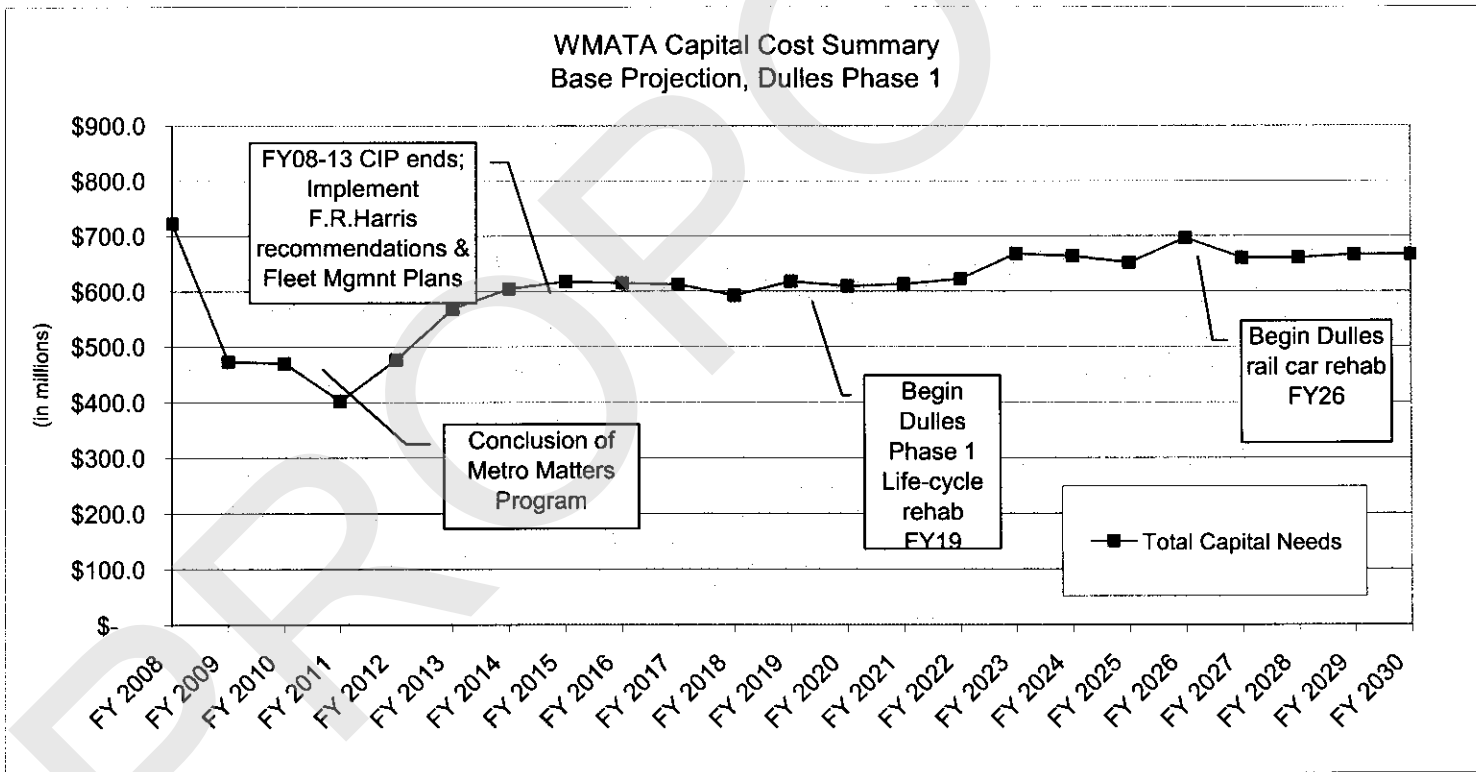


Capital Appendix Table B2: Projected WMATA Capital Cost by Capital Program Category

(in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 581.9 |
| Dulles Phase 1 | - | - | - | - | - | - | - | - | - | - | - | 35.7 |
| Total | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Base | \$ 573.5 | \$ 576.8 | \$ 586.4 | \$ 632.0 | \$ 627.5 | \$ 615.7 | \$ 624.5 | \$ 588.6 | \$ 588.6 | \$ 594.6 | \$ 594.6 |
| Dulles Phase 1 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 71.5 | 71.5 | 71.5 | 71.5 | 71.5 |
| Total | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 |



Capital Appendix Table B3: WMATA Capital Improvement Program including Dulles Phase 1 - Projected Capital Needs

(year of expenditure, in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|--------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| CAPITAL NEEDS | | | | | | | | | | | | |
| Base | | | | | | | | | | | | |
| Metro Matters | \$ 719.8 | \$ 469.8 | \$ 466.4 | \$ 198.0 | \$ 184.2 | \$ 131.8 | \$ 91.3 | \$ 91.3 | \$ 88.5 | \$ 85.5 | \$ 65.7 | \$ 51.6 |
| * Rolling Stock | | | | 45.9 | 51.1 | 176.1 | 249.8 | 249.8 | 249.8 | 249.8 | 249.8 | 249.8 |
| * Facilities & Equipment | | | | 155.0 | 238.4 | 257.3 | 263.0 | 276.5 | 276.5 | 276.5 | 276.5 | 280.5 |
| Project Development | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | | | | |
| Subtotal | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 581.9 |
| Dulles Phase 1 | | | | | | | | | | | | |
| Rolling Stock | | | | | | | | | | | | |
| Facilities & Equipment | | | | | | | | | | | | 35.7 |
| Subtotal | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ - | \$ 35.7 |
| Total | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |
| | | | | | | | | | | | | |
| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> | |
| Base | | | | | | | | | | | | |
| Metro Matters | \$ 43.2 | \$ 43.2 | \$ 43.2 | \$ 43.2 | \$ 23.4 | | | | | | | |
| * Rolling Stock | 249.8 | 257.1 | 266.7 | 312.3 | 327.7 | 339.2 | 348.1 | 312.1 | 312.1 | 312.1 | 312.1 | 312.1 |
| * Facilities & Equipment | 280.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 276.5 | 282.5 | 282.5 | |
| Project Development | | | | | | | | | | | | |
| Subtotal | \$ 573.5 | \$ 576.8 | \$ 586.4 | \$ 632.0 | \$ 627.5 | \$ 615.7 | \$ 624.5 | \$ 588.6 | \$ 588.6 | \$ 594.6 | \$ 594.6 | |
| Dulles Phase 1 | | | | | | | | | | | | |
| Rolling Stock | | | | | | | 35.8 | 35.8 | 35.8 | 35.8 | 35.8 | |
| Facilities & Equipment | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | 35.7 | |
| Subtotal | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 35.7 | \$ 71.5 | \$ 71.5 | \$ 71.5 | \$ 71.5 | \$ 71.5 | |
| Total | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 | |

Capital Appendix Table B4: WMATA Capital Improvement Program including Dulles Phase 1 - Projected Funding

(Including Local Overmatch)

(year of expenditure, in millions)

| | <u>FY 2008</u> | <u>FY 2009</u> | <u>FY 2010</u> | <u>FY 2011</u> | <u>FY 2012</u> | <u>FY 2013</u> | <u>FY 2014</u> | <u>FY 2015</u> | <u>FY 2016</u> | <u>FY 2017</u> | <u>FY 2018</u> | <u>FY 2019</u> |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| AVAILABLE FUNDING | | | | | | | | | | | | |
| Federal Funding | | | | | | | | | | | | |
| Federal Formula Grant Funds | \$ 197.6 | \$ 212.5 | \$ 228.4 | \$ 245.5 | \$ 263.9 | \$ 283.7 | \$ 292.2 | \$ 301.0 | \$ 310.0 | \$ 319.3 | \$ 328.9 | \$ 338.8 |
| Federal Discretionary/SAFETEA-LU | 35.0 | 35.0 | 34.0 | | | | | | | | | |
| Homeland Security - Transit & UASI | 11.0 | 11.0 | | | | | | | | | | |
| Subtotal | \$ 243.6 | \$ 258.5 | \$ 262.4 | \$ 245.5 | \$ 263.9 | \$ 283.7 | \$ 292.2 | \$ 301.0 | \$ 310.0 | \$ 319.3 | \$ 328.9 | \$ 338.8 |
| Local Funds | | | | | | | | | | | | |
| Federal Matching Requirement | 49.4 | 53.1 | 57.1 | 61.4 | 66.0 | 70.9 | 73.1 | 75.3 | 77.5 | 79.8 | 82.2 | 84.7 |
| Over-match | 104.4 | 114.5 | 140.9 | 80.0 | 131.8 | 198.5 | 226.8 | 214.3 | 200.2 | 185.6 | 153.8 | 167.1 |
| Subtotal | \$ 153.8 | \$ 167.7 | \$ 198.0 | \$ 141.4 | \$ 197.8 | \$ 269.4 | \$ 299.9 | \$ 289.6 | \$ 277.7 | \$ 265.4 | \$ 236.0 | \$ 251.8 |
| Other | | | | | | | | | | | | |
| Passenger Revenue/Vertical Transp | 6.0 | 6.0 | 6.0 | | | | | | | | | |
| Metro Matters Debt | 316.4 | 37.6 | - | | | | | | | | | |
| Local Refunds of Transit Bonds | | | | 12.0 | 12.0 | 12.0 | 12.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| Reimbursable Projects | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | | | | | |
| Subtotal | \$ 325.4 | \$ 46.6 | \$ 9.0 | \$ 15.0 | \$ 15.0 | \$ 15.0 | \$ 12.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 |
| Total | \$ 722.8 | \$ 472.8 | \$ 469.4 | \$ 401.9 | \$ 476.7 | \$ 568.2 | \$ 604.1 | \$ 617.6 | \$ 614.8 | \$ 611.8 | \$ 591.9 | \$ 617.6 |

| | <u>FY 2020</u> | <u>FY 2021</u> | <u>FY 2022</u> | <u>FY 2023</u> | <u>FY 2024</u> | <u>FY 2025</u> | <u>FY 2026</u> | <u>FY 2027</u> | <u>FY 2028</u> | <u>FY 2029</u> | <u>FY 2030</u> |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Federal Funding | | | | | | | | | | | |
| Federal Formula Grant Funds | \$ 349.0 | \$ 359.4 | \$ 370.2 | \$ 381.3 | \$ 392.8 | \$ 404.5 | \$ 416.7 | \$ 429.2 | \$ 442.1 | \$ 455.3 | \$ 469.0 |
| Federal Discretionary/SAFETEA-LU | | | | | | | | | | | |
| Homeland Security - Transit & UASI | | | | | | | | | | | |
| Subtotal | \$ 349.0 | \$ 359.4 | \$ 370.2 | \$ 381.3 | \$ 392.8 | \$ 404.5 | \$ 416.7 | \$ 429.2 | \$ 442.1 | \$ 455.3 | \$ 469.0 |
| Local Funds | | | | | | | | | | | |
| Federal Matching Requirement | 87.2 | 89.9 | 92.6 | 95.3 | 98.2 | 101.1 | 104.2 | 107.3 | 110.5 | 113.8 | 117.2 |
| Over-match | 146.0 | 136.2 | 132.3 | 164.0 | 145.3 | 118.7 | 148.2 | 96.6 | 80.5 | 69.9 | 52.9 |
| Subtotal | \$ 233.2 | \$ 226.1 | \$ 224.9 | \$ 259.4 | \$ 243.5 | \$ 219.8 | \$ 252.4 | \$ 203.9 | \$ 191.0 | \$ 183.8 | \$ 170.1 |
| Other | | | | | | | | | | | |
| Passenger Revenue/Vertical Transp | | | | | | | | | | | |
| Metro Matters Debt | | | | | | | | | | | |
| Local Refunds of Transit Bonds | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 | 27.0 |
| Reimbursable Projects | | | | | | | | | | | |
| Subtotal | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 | \$ 27.0 |
| Total | \$ 609.2 | \$ 612.5 | \$ 622.1 | \$ 667.7 | \$ 663.2 | \$ 651.4 | \$ 696.1 | \$ 660.1 | \$ 660.1 | \$ 666.1 | \$ 666.1 |