



**Finance, Administration and Oversight Committee**

**Action Item III-C**

**September 10, 2009**

**Amend FY010 Capital Budget for Safety and  
Security Projects**

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

<input checked="" type="radio"/> Action <input type="radio"/> Information	MEAD Number: 100317	Resolution: <input checked="" type="radio"/> Yes <input type="radio"/> No
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**TITLE:**

Amend FY10 Budget for DHS-Funded Security Projects

**PURPOSE:**

1. To inform the Finance, Administration and Oversight (FAO) Committee and the Board of Directors of the availability of 100% federally-funded U.S. Department of Homeland Security (DHS) grants; and 2. To obtain FAO concurrence and Board approval to: (a) amend the FY 2010 Annual Budget to include federal security grants that require no matching funds, and apply \$6,820,291 of grant funds to the FY10 Operating Budget, and apply \$60,369,913 of grant funds to the FY 2010 Capital, Metro Matters Program; (b) modify existing engineering, construction and equipment contracts and/or advertise and award contracts for security projects funded by the DHS funds; and (c) authorize 25 DHS grant-funded positions to the Metro Transit Police Department.

**DESCRIPTION:**

As a result of the terrorist attacks on September 11, 2001 an extensive review of Metro`s security program was conducted that resulted in the development of a series of initiatives to enhance the security of Metrorail and Metrobus. The Metro Matters Funding Agreement stipulates that federal financial assistance is the preferred funding source for security initiatives. Thus, Metro`s Office of Policy and Government Relations monitors federal legislation, and the Metro Transit Police Department studies grant announcements to identify grants and other funding arrangements suitable for supporting Metro security projects. This request is the result of matching more than 20 Metro security projects to new, and old but active, DHS grants. (Note: DHS grant identification numbers begin with "FY" followed by the federal fiscal year in which the grant first became available. Be aware that a grant ID with a year before 2009 might suggest to some readers that the grant was awarded to Metro years ago, when, in fact, the award is new or pending.)

The total U.S. Department of Homeland Security (DHS) funding addressed by this request is \$78,317,339; of which \$60,369,913 is designated for capital projects and \$17,947,426 is designated for security

operating expenses, which will fund several specific projects two to three years. The sum of DHS reimbursable operating expenses during Metro's Fiscal 2010 is capped at \$6,820,291.

Despite their significant financial contributions to Metro security, and the fact that DHS grants presented in this action require no matching jurisdictional funds, most of these grants will impact future Metro budgets. DHS-funded equipment will need servicing and maintenance, just as non-DHS funded fire alarm systems need periodic testing, servicing, repairs and upgrades to keep them working. DHS grants do not pay for that work, so future Metro budgets will likely bear the load. This action does not address the sustainability challenge, except to suggest that while the transit industry operates in a heightened security status, the cost of sustaining security systems is analogous to the cost of sustaining fire suppression/alarm systems. It is a necessary business expense to maintain safety and security systems. The operational impact statement follows the project and task descriptions in the next section.

Uses of the funds are described below:

Capital Projects -- \$60,369,913

1. Enhanced Closed Circuit Video/Access Control Integration & Central Monitoring Capability  
\$11,675,840     Fiscal 2009 Transit Security Grant Program  
Funding for design, equipment acquisition and installation to make centralized surveillance monitoring with remote access control a reality for various Metrorail sites. Funding also lets Metro integrate alarm systems with real time video and centralized alarms/video functions.
2. Ventilation Shafts/Portals Intrusion Detection  
\$11,500,000     Fiscal 2008 Transit Security Grant Program  
Funding will enable purchase and installation of camera detection and surveillance systems at selected Metro subway ventilation shafts and entrance portals. Images from all video cameras mounted at shafts located near underwater railroad crossing will appear at the Metro Operations Control Center and Metro Transit Police Department Operations Center. Camera video signals will be monitored also by smart video analytic software that will alert staff to fire, smoke and intruders.
3. Enhanced Security at Ends of Rail Station Platforms  
\$6,517,840     Fiscal 2009 Transit Security Grant Program  
Funding enables acquisition of equipment and technology to prevent and detect right-of-way intrusions at the ends of station platforms. The scope includes design, acquisition and installation of better security gates, and

smart-video surveillance - alarm systems at the ends of station platforms.

4. Cameras on Buses

\$6,410,000 Fiscal 2008 Transit Security Grant Program

The funding will enable camera system installations on buses currently in service that do not have cameras, and standardization of camera systems in new buses that were ordered before Metro standardized video systems. Finally, the funding will enable bus camera systems to send real time images to Transit Police vehicles and Bus Transportation Supervisors` vehicles.

5. Complete Radio Redundancy for Alternate Operations Control Center

\$5,900,000 Fiscal 2007 Transit Security Grant Program

The new funding, in conjunction with funding received in a FY06 DHS grant, will pay the cost to provide a redundant Comprehensive Radio Communication System (CRCS) outside downtown Washington. The CRCS is used by Bus, Rail, and Metro Transit Police. The installation of a redundant CRCS at a remote facility enables continuity of surface radio operation in the event the Jackson Graham Building becomes unusable due to a catastrophic event.

6. Bus Garage Security

\$5,800,000 Fiscal 2007 Transit Security Grant Program -- Supplemental

The funding will pay for perimeter security design services for all remaining bus garages, and will address intrusion prevention (lighting, fencing, bollards, guard booths) and intrusion detection (alarms, video smart analytics, real-time bus facility imaging on monitors in Metro`s Operations Control Center). After design work is completed, the funding will be utilized to install all security aspects in the five bus garages that have not been covered under other grants/funding arrangements. Cameras and digital video recorders will be installed at each of the five facilities along with off-site monitors that will be under the supervision of the Metro Transit Police Department (MTPD).

7. Cameras on Rail Cars

\$2,000,000 Fiscal 2008 Transit Security Grant Program

\$5,139,700 Fiscal 2009 Transit Security Grant Program

\$7,139,700 Total

The \$2M funding source will allow for design and preliminary installation of a prototype Closed Circuit Television System on rail cars. This project will construct a video network on passenger trains that will provide recorded images of activity on train cars and real-time access to live video when trains are in selected passenger stations. The System also will provide real-time camera views to Metro Transit Police Officers on the train by way of the officer`s portable computer. This project will include wireless equipment for rail cars, Metrorail stations, storage tracks and rail yard

facilities. The \$5.1M funding source is for the implementation phase.

8. Video Cameras Outside of Metrorail Stations  
\$2,774,000 Fiscal 2009 Urban Areas Security Initiative

Funding will be utilized to purchase and install one video camera over each of 153 Metrorail station entrances. Each camera will be a high-resolution, point-tilt-zoom with dual feeds: one feed designated for Metro's Live Wave recording system, and one feed designated for the jurisdictional fusion center. Metro will involve members of the National Capital Region Automated Fingerprint and Facial Recognition System project team to ensure integration and interoperability. The contract(s) for acquiring and installing the cameras, monitors and related video components, will also require the vendor to service and maintain those items until the grant ends (June 2012).

9. Chemical Detection in Metrorail Stations  
\$ 606,000 Fiscal 2006 Transit Security Grant Program  
\$1,300,000 Fiscal 2009 Urban Areas Security Initiative  
\$1,906,000 Total

Funding from two DHS grants will enable Metro to install chemical detection sensors in additional Metrorail stations. Signals from all Metro chemical sensors are linked and usable at many local and distant command centers.

10. Prince George's County Radio Upgrade in Metro Tunnels  
\$500,000 Fiscal 2009 Urban Areas Security Initiative

Funding will enable Metro to improve trunked radio system access in underground Metrorail sections to emergency first responders in Prince George's County.

11. Emergency Command Center Equipment and Technology Upgrade  
\$246,533 Fiscal 2006 State Homeland Security Program

This amount enables Metro to upgrade equipment, technology and office equipment in the Emergency Command Center. The purpose is to give Metro management team members more and better quality real-time images and information during special events, adverse weather and major incidents.

Operational Assistance -- \$17,947,426

12. 20 New Metro Transit Police Officer Positions  
\$9,560,064 Fiscal 2009 -- American Recovery and Reinvestment Act --  
Transit Security Grant Program -- Operational Packages

This amount will enable the MTPD to create 20 additional sworn Transit Police Officer positions for the purpose of creating five four-member Anti-Terrorism Teams (ATT). The teams will work full-time to prevent, discover and respond to actual or possible terrorist acts against Metrobus and Metrorail. The grant pays the 20 officers' salaries and fringe benefits for 36 months. The grant also reimburses Metro for \$2,066,616 of backfill overtime (for 10 months) so that the MTPD can quickly establish and train ATT's without leaving the patrol division short by 20 officers. The grant also provides MTPD \$2,044,000 of funding to procure high-tech surveillance equipment, special purpose vehicles, and miscellaneous standard surveillance equipment. The terms of the grant require MTPD to post the teams at random locations and times. The random highly-visible patrols will likely be noticed and appreciated by Metro customers and employees. DHS expects MTPD to retain the 20 new positions and officers after the grant period ends in 36 months.

13. Emergency Training for Front-Line Employee  
\$4,598,098 Fiscal 2007 Transit Security Grant Program  
\$1,620,000 Fiscal 2008 Transit Security Grant Program  
\$6,218,098 Total

Funding from two grants is enabling Metro to train 9,000 front-line operation employees about their individual roles and responsibilities during the first 15 minutes of an incident on Metrorail or Metrobus. The grant reimburses Metro the cost of all overtime paid to employees who attend the class on a day off, and also reimburses Metro the cost of overtime to backfill scheduled runs to let a bus driver or rail operator attend the class during normal working hours.

14. Three New Transit Police Officers for New Explosives Detection Canine Teams  
\$961,241 Fiscal 2009 Transit Security Grant Program

MTPD will receive Homeland Security funds to enable the Department to add three Transit Police Officer positions, three dogs, and equipment to expand the MTPD Explosives Detection Canine Unit by three teams. The grant will reimburse Metro for personnel and non-personnel expenses directly related to the creation and maintenance of the K-9 teams, including up to ten months of backfill overtime to cover the three vacancies that will occur in the patrol division when three police veterans transfer to the K-9 unit. This is a 30-month grant. This K-9 grant and the ATT grant (*Item 13*) are "seed money," in that DHS expects Metro to retain the officers and their positions after the grants expire.

15. Security Risk Assessment

\$500,000     Fiscal 2008 Transit Security Grant Program

Metro will use this funding to contract for consultants to help the MTPD conduct a formal Security Risk Assessment for the purpose of identifying and rating Metro`s security strengths and weaknesses. The Security Risk Assessment is a necessary prelude to updating security plans, prioritizing security projects and deciding what and how to sustain in-place security measures.

16. Other Operational Assistance

Funding from several DHS grants totaling \$708,023 will fund these operational activities:

One Intelligence Analyst position in the MTPD, for 30 months

\$300,000     Fiscal 2007 Transit Security Grant Program - Supplemental

One Bomb Response Liaison Officer in the MTPD, for 30 months

\$186,653     Fiscal 2007 Transit Security Grant Program - Supplemental

H1N1 Flu Pandemic Planning (continued)

\$166,370     Fiscal 2007 Urban Areas Security Initiative

Funding a consultant to help Metro update, formalize, review and approve, and document Metro`s response plans for the likely return of the H1N1 Pandemic Flu in Fall/Winter 2009.

Assign one current Transit Police Officer to the Explosives Detection Canine Team

\$40,000     Transit Security Administration National Explosives Detection Canine Team Program

(This lets one on-board sworn police officer work as an explosives detection canine handler. It is not an added position.) This funding opportunity is a cooperative agreement with the Transit Security Administration to annually reimburse Metro up to \$40,000 to equip, train and maintain one current sworn Transit Police Officer to be an explosives detection dog handler. The salary and fringe benefits of the Transit Officer are already budgeted.

Presidential Inauguration Planning Support

\$15,000     Fiscal 2007 Urban Areas Security Initiative

Funding for administrative help in preparing guidelines for handling very high ridership events based on recent experience.

**FUNDING IMPACT:**

If the Board approves this request, Metro will become eligible to use the following 100% federally-funded U.S. Department of Homeland Security (DHS) grants, which do not require local jurisdictional matching funds, to reimburse costs associated in implementing the projects and activities listed above. The DHS grants and their funding limits by category are:

**Department of Homeland Security Funding Available to Metro**

<u>Grant</u>	<u>Status</u>	<u>Capital</u>	<u>Operating</u>	<u>Total</u>
FY06 State Homeland Security Program	Awarded	\$ 246,533	\$0	\$246,533
FY06 Transit Security Grant Program	Awarded	606,000	0	606,000
FY07 Transit Security Grant Program	Pending	5,900,000	4,598,098	10,498,098
FY07 Transit Security Grant Program - Supplemental	Award Letter Received	5,800,000	486,653	6,286,653
FY07 Urban Areas Security Initiative	Partially Awarded	0	181,370	181,370
FY08 Transit Security Grant Program	Pending	19,910,000	2,120,000	22,030,000
FY09 American Recovery and Reinvestment Act - Transit Security Grant Program	Pending	0	9,560,064	9,560,064
FY09 Transit Security Grant Program	Pending	23,333,380	961,241	24,294,621
FY09 Urban Areas Security Initiative	Pending	4,574,000	0	4,574,000
National Explosives Detection Canine Team Program	Awarded	0	40,000	40,000
	<b>Total</b>	<b>\$60,369,913</b>	<b>\$17,947,426</b>	<b>\$78,317,339</b>



## Impact of Homeland Security Grants on the Operating Budget

This chart indicates the number of new positions and costs that would be required to sustain five proposed Department of Homeland Security (DHS) grant-funded security projects. Annual costs will continue to accrue to sustain all projects for which DHS funding is available.

Fiscal Year	Category	Comprehensive Radio System	Bus Garage	Rail Car Cameras	Shaft and Portal Protection	Bus Cameras	Total
2011	Track and Structures Staffing New Positions	3	2	1	3	0	9
2011	Personnel Cost	\$270,360	\$180,420	\$120,000	\$270,630	\$0	\$841,680
2011	Track and Structures Parts and Supplies	60,000	42,000	26,875	7,500		\$136,375
2011	Information Technology	148,389	150,000	0	50,000	140,060	488,449
<b>2011</b>	<b>Operating Impact</b>	<b>\$479,019</b>	<b>\$372,420</b>	<b>\$146,875</b>	<b>\$328,130</b>	<b>\$140,060</b>	<b>\$1,466,504</b>
2012	Track and Structures Staffing New Positions	3	6	2	1	0	12
2012	Personnel Cost	270,630	541,260	180,420	90,210	0	1,082,520
2012	Track and Structures Parts and Supplies	60,000	42,000	26,875	7,500	0	136,375
2012	Technology	148,389	150,000	0	50,050	140,060	488,449
<b>2012</b>	<b>Operating Impact</b>	<b>\$479,019</b>	<b>\$733,260</b>	<b>\$207,295</b>	<b>\$382,130</b>	<b>\$140,760</b>	<b>\$1,887,764</b>

### RECOMMENDATION:

Approval to (1) increase the FY2010 Operating Budget by \$6,820,291; (2) increase the FY2010 Metro Matters, Security Program budget by \$60,369,913 in conformity with the Metro Matters Funding Agreement which provides for the security program to be fully federally funded; (3) authorize the General Manager to implement the security projects identified herein by initiating, awarding contracts and/or modifying existing contracts, as appropriate, subject to the receipt of federal funding; and (4) add 25 positions to the Metro Transit Police Department.



**WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY**

# **Amend FY 2010 Budget for Safety and Security Projects**

Finance, Administration and Oversight Committee

September 10, 2009



## Purpose

1. To inform the Finance, Administration and Oversight (FAO) Committee and the Board of Directors of the availability of 100% federally-funded U.S. Department of Homeland Security (DHS) grants.
2. Obtain FAO concurrence and Board approval to:
  - A. Amend the FY 2010 Annual Budget to include federal security grants that require no matching funds, and apply the funds to:
    - Operating Budget \$6,820,291  
DHS reimbursable operating expenditures in FY 2010
    - Capital, Metro Matters Program \$60,369,913  
DHS backed multi-year contracts obligated in FY 2010
  - B. Modify existing contracts or advertise and award contracts for security projects
  - C. Add 25 grant-funded positions to the Metro Transit Police Department.



# Overview of New Security Grants

Metro has received notices of awards and pending awards from the U.S. Department of Homeland Security for the following grants. All grants are 100% federally funded.

• National Explosives Detection Canine Team Program	\$0.0 M*
• State Homeland Security Program	0.2 M
• Transit Security Grant Program	73.3 M
• Urban Areas Security Initiative	<u>4.8 M</u>
	<b>\$ 78.3 M</b>

\* *Rounds to less than \$100,000*

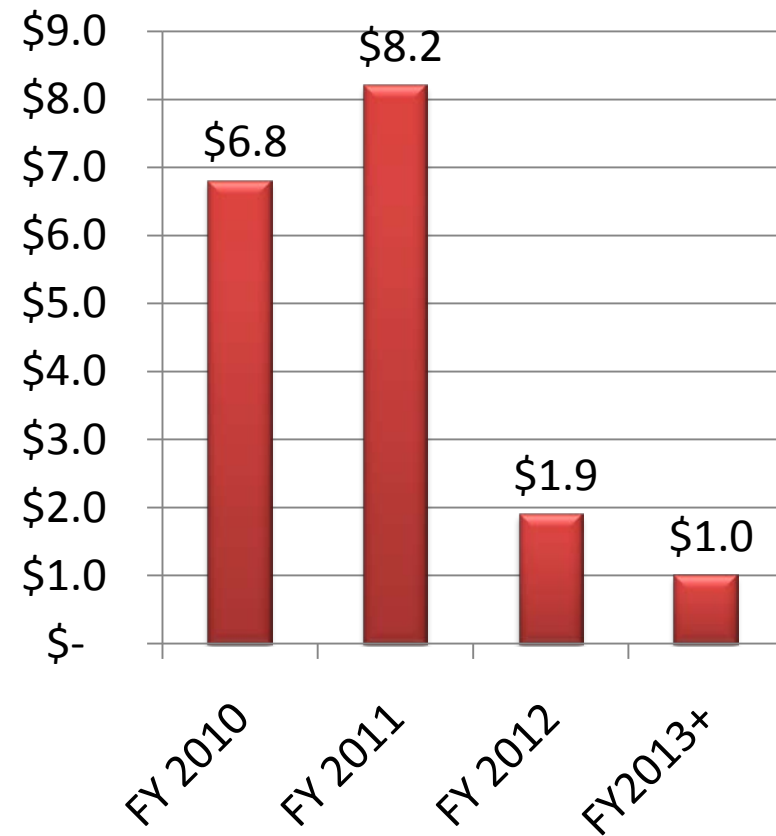


# Overview of New Security Grants

**DHS Grants = \$78,317,339**



**Operating Assistance  
\$17,947,426**





## Operating Assistance Grants without Operating Impact

The DHS grants will reimburse the following Metro operating expenses:

*In millions*

<b>Project</b>	<b>Total Grant</b>	<b>FY 2010</b>	<b>FY 2011</b>
Emergency Training for Front-Line Employees	\$6.2	\$ 2.3	\$3.9
H1N1 Flu Pandemic Planning (continued)	0.2	0.2	0.0
Presidential Inauguration Planning Support	0.0*	0.0*	0.0
Security Risk Assessment	0.5	0.2	0.3
TSA National Explosives Detection Canine Team Program (Pays for vehicle, veterinary care, supplies)	0.0*	0.0*	0.0
	<b>\$6.9</b>	<b>\$2.7</b>	<b>\$4.2</b>

\* *Rounds to less than \$100,000*



# Operating Assistance Grants with Operating Impact

These DHS grant-funded projects generate operational expenses that are neither budgeted nor reimbursable by the DHS grants. Extra expenses include uniforms and equipment for 25 new Transit Police officers. MTPD will defer other FY10 non-personnel purchases in order to outfit and equip the new officers.

## Projects

- One Bomb Response Liaison Officer
- One Intelligence Analyst
- Five 4-member Anti-Terrorism Teams
- Three K-9 teams for 30 Months

*In millions*

	<u>Total</u>	<u>FY10</u>	<u>FY11</u>	<u>FY12</u>	<u>FY13</u>
Grant Reimbursements	\$11	\$4	\$4	\$1.9	\$0.8
Non-Reimbursable (Budget Impact)	\$ 1.4	\$0.1	\$0.2	\$0.3	\$0.8



# DHS Capital Grants with an Operating Impact

<b>Project</b>	<b>Value</b> <i>In millions</i>
Enhanced Closed Circuit Video/Access Control Integration and Central Monitoring Capability	\$11.7
Shaft/Portal Intrusion Detection	11.5
Alternate Operations Control Center	5.9
Bus Garage Security	5.8
Enhanced Security at Ends of Rail Station Platforms	6.5
Cameras on Buses	6.4
Cameras on Rail Cars -- Implementation Phase	5.1
Cameras on Rail Cars -- Design phase through system testing phase	2.0
Video Cameras Outside of Metrorail Stations	2.8
Chemical Detection in Metrorail Stations	1.9
Prince George's County Radio Upgrade in Metro Tunnels	0.5
Emergency Command Center Equipment and Technology Upgrade	0.2
	<b>Sub-total \$ 60.4</b>





# DHS Capital Grants with an Operating Impact

- All DHS capital grants will be obligated before June 30, 2010.
- Upper chart shows value of DHS capital grants and expenditure forecasts to 2012.
- Lower chart shows non-reimbursable impacts on Metro's Operating Budgets.

<i>In Millions</i>	FY 2010	FY 2011	FY 2012
Total Capital Security Grants *	Expend	Expend	Expend
\$ 60.4	\$15.4	\$30.0	\$10.4

\* FY 2013 expenditures will be \$4.6

Impact on the Operating Budgets FY10 – FY12	Operating Impact	Operating Impact	Operating Impact
\$ 3.4	\$ -	\$ 1.5	\$ 1.9



# Recommendation

The Finance, Administration and Oversight Committee approves, and forwards to the Board of Directors for approval:

1. Amending the FY 2010 Annual Budget to include federal security grants that require no matching funds, and apply the funds to:
  - Operating Budget \$6,820,291
  - Capital, Metro Matters Program \$60,369,913
2. Modifying existing contracts or advertising and awarding contracts for security projects.
3. Adding 25 grant-funded positions to the Metro Transit Police Department.



# Appendix

## Appendix Slides

- DHS Capital Grants Operating Impact in Metro Fiscal 2010 and 2011
- Security Projects Capital Highlights (2 slides)
- DHS Operating Assistance Grants - 25 New Transit Police Positions



# DHS Capital Grants Operating Impact in Metro Fiscal 2011 and 2012

Additional costs to maintain DHS-funded projects after the DHS grants end.

*In Millions*

Metro Fiscal Year	Comprehensive Radio Communication System	Bus Garage	Rail Car Cameras	Shaft and Portal Detection	Bus Cameras	<b>Total</b>
<b>2011</b>	\$0.5	\$0.4	\$0.2	\$0.3	\$0.1	<b>\$1.5</b>
<b>2012</b>	0.5	0.7	0.2	0.4	0.1	<b>1.9</b>
<b>Totals</b>	\$1.0	\$1.1	\$ 0.4	\$0.7	\$0.3	<b>\$3.4</b>



# Security Project Capital Highlights

- \$5.9M for providing a redundant Comprehensive Radio Communication System.
- \$5.8M for design and installation of perimeter security for bus garages, to include intrusion capability, smart video analytics, alarms, lights, fences, protective traffic bollards and guard booths.



Radio Equipment



Guard Booth



Security Fence



# Security Project Capital Highlights

- \$2.0M for design and preliminary installation of cameras on rail cars.
- \$11.5M for camera detection and surveillance systems at selected Metro subway ventilation shafts and entrance portals.
- \$6.4M for additional bus cameras and bus camera systems.



Exterior Surveillance Camera



Bus Camera



# DHS Operating Assistance Grants 25 New Metro Transit Police Positions

## **New Metro Transit Police Positions and Operational Support**

### Specialty Positions

- 1 Sworn Bomb Response Liaison Officer
- 1 Intelligence Analyst

### Anti-Terrorism Teams

- 20 Transit Police Officers
  - will form five full-time anti-terrorism teams
  - will receive \$411,000 per team for special equipment + 10 months of backfill overtime to cover 20 vacancies in patrol units while replacement officers are trained

### Explosives Detection Canine Teams

- 3 Transit Police Officers
- 3 Dogs capable of sensing explosives
  - + Explosives detection team training and equipment
  - + 10 months of backfill overtime to cover three vacancies in patrol units while replacement officers are trained

- ❖ The Department of Homeland Security wants grant recipients to form K-9 and Anti-Terrorism Teams soon after grants are awarded. Therefore, overtime is a reimbursable expense when the overtime backfills patrol unit vacancies caused by patrol officers transferring to the new teams.

SUBJECT: AMEND THE FY2010 BUDGET TO INCLUDE SAFETY & SECURITY PROJECT

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

WHEREAS, The Washington Metropolitan Area Transit Authority (Metro) is eligible to receive Department of Homeland Security grants totaling \$78,317,339; and

WHEREAS, The grants do not require any local jurisdictional matching funds; and

WHEREAS, The grants will provide up to \$17,947,426 in operational support over three years, and \$60,369,913 for capital security projects; therefore be it,

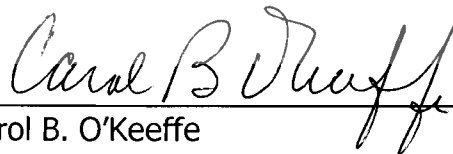
*RESOLVED*, That the Board of Directors increases the FY2010 Operating Budget by \$6,820,291; and be it further

*RESOLVED*, That the Board of Directors increases the FY2010 Metro Matters, Security Program budget by \$60,369,913 in conformity with the Metro Matters Funding Agreement which provides for the security program to be fully federally funded; and be it further

*RESOLVED*, That the Board of Directors authorizes the General Manager to implement the security projects identified in the Attachment A by initiating, awarding contracts and/or modifying existing contracts, as appropriate, subject to the receipt of federal funding; and be it further

*RESOLVED*, That this Resolution shall be effective immediately.

Reviewed as to form and legal sufficiency,



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Carol B. O'Keeffe  
General Counsel



PROJECTS COVERED BY THIS RESOLUTION

- Emergency Training For Frontline Employees
- Security Risk Assessment
- H1N1 Pandemic Flu Planning
- Presidential Inauguration Planning Support
- TSA National Explosives Detection Canine Team Program
- Canine Explosives Detection Teams
- Bomb Response Liaison Officer
- Intelligence Analyst
- Anti-Terrorism Teams
- Operations Control Center Radio Redundancy
- Bus Garage Security
- Cameras On Buses
- Cameras On Rail Cars
- Emergency Command Center Upgrade
- Chemical Detection In Metrorail Stations
- Subway Shaft and Portal Intrusion Detection
- Cameras Outside Metrorail Stations
- Public Radio System Improvements
- Enhanced Security At Ends Of Rail Platforms
- Enhanced Video/Access Control/Alarms Integration and Central Monitoring Capability