

COMMONWEALTH OF VIRGINIA
MEMORANDUM OF UNDERSTANDING

Agreement Number: NVTE-1208-02

Between

Virginia Department of Transportation (VDOT)
1401 East Broad Street, Richmond, VA 23219

And

Washington Metropolitan Area Transit Authority
600 Fifth Street NW, Washington, DC 20001

This Memorandum of Understanding (“**MOU**”) is made and entered into this ____ day of _____, 2012, by the Virginia Department of Transportation (“**VDOT**”) and the Washington Metropolitan Area Transit Authority (“**WMATA**”), collectively referred to herein as the “**Parties**” or the “**Party**” for Transit Signal priority along Route 7, as identified in Attachment (A) Intersection Locations.

RECITALS

1. WMATA is an interstate compact agency and instrumentality of the Commonwealth of Virginia, the State of Maryland and the District of Columbia.
2. WMATA has been tasked with implementing transit signal priority (“**TSP**”), which is an operational strategy that facilitates the movement of in-service transit vehicles through traffic signals by modifying the normal signal operation. The alteration is limited to changes in the amount of time provided for a given direction.
3. TSP will be implemented at approximately fifteen (15) VDOT-controlled intersections along Route 7 in Virginia, per Attachment (A), (the “**Route 7 Corridor**”), as part of the TIGER I grant awarded to the Metropolitan Washington Council of Governments (“**COG**”) (collectively, the “**Project**”).
4. COG will reimburse WMATA for capital costs incurred while implementing the Project (the “**TSP Funds**”), upon receiving an invoice for such costs.
5. The purpose of the Project is to implement a TSP system (the “**System**”), which will consist of certain equipment and firmware described below in Section 4 (the “**TSP Equipment**”).
6. In order for TSP to be installed on VDOT traffic signals, the signal controllers need to be upgraded, which requires replacement of the existing signal controllers, and upgrade of communication, hardware and firmware.

7. VDOT has agreed to upgrade the existing traffic signal controllers along the Route 7 Corridor and WMATA has agreed to pay VDOT for the new signal controllers using the TSP Funds. VDOT has further agreed to upgrade the communication using its own funds. The controllers are standard items purchased routinely by VDOT under a separate contract for supplies which are installed by state forces. *(See 3.0 VDOT Responsibilities of this agreement)*
8. Once VDOT has upgraded the existing traffic signal controllers and the communication, VDOT has agreed to allow WMATA to install TSP on the VDOT traffic signals along the Route 7 Corridor.
9. WMATA also will reimburse VDOT for the purchase and installation of up to four (4) traffic monitoring cameras to be installed along the WMATA Route 28X alignment (VA Route 7 in the Tyson's Corner area). The cameras are standard items purchased routinely by VDOT and installed by a contractor under a valid contract with VDOT. *(See 3.0 VDOT Responsibilities of this agreement)*

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants herein contained, the Parties hereto agree as follows:

1.0 Scope of MOU. WMATA and VDOT agree that the scope of this MOU is limited to the installation and operation of TIGER-funded TSP on VDOT traffic signals and the installation and operation of up to four (4) TIGER funded traffic signal monitoring cameras and shall govern the rights and obligation of the parties with respect to the same.

WMATA shall reimburse VDOT for the initial installation of traffic signal controllers and cameras. Any traffic signal controllers and cameras damaged by accidents, weather, power surges or acts outside of the initial installation will be repaired and/or replaced by VDOT through VDOT's routine maintenance program. There will be no reimbursement request to WMATA for routine maintenance under this agreement.

1.1 The matrix below details each component, ownership, installation, payment responsibility, maintenance responsibility and access approval that is referenced in each of the following sections.

Description	Owned by	Installed by	Payment by	Maintained by	Accessed by
Upgrade existing traffic signal controllers (Type 2070)	VDOT	VDOT (existing contract)	WMATA (Tiger grant via MOU with VDOT)	VDOT (routine maintenance)	VDOT, WMATA with notification to VDOT
New traffic signal controller firmware (D4)	VDOT	VDOT (existing contract)	VDOT (existing contract)	VDOT (routine maintenance)	VDOT only

Upgrade existing traffic signal communication	VDOT	VDOT (existing contract)	VDOT (existing contract)	VDOT (routine maintenance)	VDOT only
New traffic monitoring cameras	VDOT	VDOT (existing contract)	WMATA (Tiger grant via MOU with VDOT)	VDOT (routine maintenance)	VDOT, WMATA "read only" permission
Transit priority system roadside equipment (RSE) in VDOT cabinet	WMATA	WMATA (Tiger grant)	WMATA (Tiger grant)	WMATA (routine maintenance)	WMATA, VDOT with notification to WMATA
Transit priority system roadside equipment (RSE) in WMATA cabinet	WMATA	WMATA (Tiger grant)	WMATA (Tiger grant)	WMATA (routine maintenance)	WMATA only
Transit priority system on-board equipment (OBE)	WMATA	WMATA (Tiger grant)	WMATA (Tiger grant)	WMATA (routine maintenance)	WMATA only

2.0 WMATA Responsibilities.

- 2.1 WMATA shall be responsible for the preparation of the TSP procurement specification.
- 2.2 WMATA, with active VDOT participation, shall select a contractor (the "**Contractor**") to furnish and advise as to TSP installation at fifteen (15) intersections along the Route 7 Corridor.
- 2.3 The Contractor, or Contractors, shall be responsible for the design, implementation and testing of the System.

3.0 VDOT Responsibilities.

- 3.1 VDOT shall be responsible for a one time upgrade of existing traffic signal controllers, along the Route 7 Corridor, at the locations where TSP will be installed by no later than December 15, 2012
- 3.2 VDOT shall purchase new signal controllers. The signal controllers purchased are standard items purchased routinely by VDOT under a separate contract for supplies which are installed by state forces. *(See item number 7 of Recitals section of this agreement)*
- 3.3 VDOT shall install the new signal controllers and monitor the integration of the TSP Equipment with the new traffic signal hardware and software components.
- 3.4 VDOT shall purchase and install up to four (4) traffic monitoring cameras along the WMATA Route 28X alignment in the Tysons Corner area. The purchase and installation of these cameras, under a separate contract, are

part of VDOT's continuing maintenance program. (See item number 9 of Recitals section of this agreement)

4.0 TSP Equipment. The TSP Equipment will consist of the following:

- 4.1 Roadside Equipment – The Roadside Equipment (“**RSE**”) shall be capable of processing transit vehicle information and transmitting TSP requests to signal controllers. RSE may include Ultra High Frequency (“**UHF**”) receivers and TSP transmitters located in the traffic signal cabinets, if the space is available. If space is not available in the cabinet, then UHF receivers and TSP transmitters will be installed outside the cabinet, in a separate box. Should installation be required in a separate box, it shall be WMATA's responsibility to select and pay the awarded contractor to perform such work.
- 4.2 Should space in a VDOT cabinet allow for installation of RSE, VDOT will dispatch a signal technician to the location, at a mutually agreed upon time depending on the nature of the request, to provide access to VDOT's control box for maintenance and programming of the RSE unless VDOT grants WMATA permission to access the VDOT cabinet unsupervised. This is only authorized on a case by case basis and must be approved by the Traffic Field Operations Manager.
- 4.3 Each party shall notify the other when repair/maintenance work is being performed on their equipment that may affect operation.
- 4.4 Traffic Signal Controller Firmware – Traffic Signal Controller Firmware (“**Firmware**”) owned and maintained by VDOT shall be capable of processing and responding to TSP requests
- 4.5 On-Board Equipment – On-Board Equipment (“**OBE**”) shall be used to transmit real-time transit vehicle information to roadside equipment. OBE may include Global Positioning System receivers and UHF transmitters located on WMATA transit vehicles.

5.0 Ownership of the TSP Equipment. WMATA shall be the legal and equitable owner of the OBE, UHF receivers and TSP transmitters. VDOT will be the legal and equitable owner of the traffic signal cabinet, and traffic signal controller with associated Firmware.

6.0 Implementation of the Project. Implementation of the Project will proceed as follows:

- 6.1 VDOT will provide this one-time upgrade communication and remove all designated existing signal controllers along the Route 7 Corridor and replace them with new signal controllers by no later than October 15, 2012. Any additional controllers, other than this one-time upgrade will be procured and awarded under existing or current contract methods at that time.

- 6.2 VDOT will then make sure the RSE is integrated with the VDOT traffic signal system that has been previously tested and currently operational in the field where controllers have been upgraded to date.
- 6.3 The TSP Equipment will be installed by a vendor selected by WMATA and such installation shall be supervised by VDOT.

7.0 Cost of Services. WMATA shall pay VDOT no more than Seventy Five Thousand Dollars (\$75,000) (the “**Traffic Signal Controller Upgrade Fee**”) to replace the existing signal controllers and upgrade the hardware and software to be compatible with the TSP technology being selected pursuant to the WMATA procurement process, in accordance with the following provisions:

- 7.1 VDOT shall submit a payment request for the Traffic Signal Controller Upgrade Fee to WMATA within thirty (30) days of implementation of TSP operation. The fee for the initial controller upgrade will be the actual cost to purchase the controllers using an existing VDOT contract.
- 7.2 Within thirty (30) days of receipt of the payment request from VDOT, WMATA shall pay VDOT the Traffic Signal Controller Upgrade Fee; provided, however that in no event shall WMATA pay the Traffic Signal Controller Upgrade Fee to VDOT if it has not received the TSP Funds from COG.
- 7.3 WMATA shall reimburse VDOT with TIGER I funds using the same process noted above, in 7.1, for up to Thirty-Thousand Dollars (\$30,000) each to purchase and install four (4) traffic monitoring cameras along the WMATA Route 28X alignment in the Tyson’s Corner area, total cost for the four cameras not to exceed One-Hundred-Twenty Thousand Dollars (\$120,000). This equipment cost is derived at the cost of parts and labor under an existing VDOT contract.

8.0 Anti-Deficiency. All obligations of WMATA under this Agreement that directly or indirectly require the expenditure by WMATA, of any of its funds, are subject to the appropriation and availability of funding through WMATA’s budgetary procedures. The annual budget is subject to approval by WMATA’s Board of Directors.

9.0 Maintenance.

- 9.1 VDOT shall be responsible for maintaining existing Firmware through scheduled maintenance and will provide WMATA with notice of any scheduled maintenance that will interfere with TSP operations. WMATA, or its contractor, shall be responsible for maintenance of the RSE specific to transit priority operations. At the request of WMATA, or its contractor, VDOT will dispatch a signal technician to the location, at a mutually agreed upon time depending on the nature of the request, to provide access to VDOT’s control box for maintenance and programming of the TSP system unless VDOT grants WMATA permission to access the VDOT cabinet unsupervised. This is only authorized on a case by case

basis and must be approved by the Traffic Field Operations Manager. WMATA shall be responsible for ensuring that only individuals authorized under this Agreement can operate the TSP system.

- 9.2 WMATA shall be responsible for maintaining the OBE.
 - 9.3 Parties will share data generated from the TSP System and WMATA consultants will be allowed to access the TSP Equipment within the signal cabinet if accompanied by a VDOT signal technician or with written approval from the VDOT Northern Virginia Traffic Field Operations Manager.
 - 9.4 VDOT will be solely responsible for all operations and maintenance associated with the traffic monitoring cameras.
 - 9.5 WMATA shall have the right to inspect the Firmware and RSE to ensure that such equipment is operating properly. In the event that WMATA determines that the Firmware or RSE is not operating properly, WMATA shall notify VDOT and VDOT shall promptly respond within the 4 hours industry standard, and shall repair the RSE specific to normal traffic signal operation. WMATA shall be responsible for the repair of RSE specific to transit priority operations.
 - 9.6 Following the initial one-time upgrade of the traffic signal controllers, VDOT shall only be responsible for maintaining and ensuring that VDOT equipment remains operational for the term of this contract. VDOT shall notify WMATA whenever repair/maintenance work is being performed on VDOT equipment that may affect the operation of WMATA equipment.
 - 9.7 Following the initial one-time upgrade of the traffic signal controllers, WMATA shall be liable to VDOT for maintaining and ensuring that WMATA equipment remains operational for the term of this contract. WMATA shall notify VDOT whenever repair/maintenance work is being performed on WMATA equipment that may affect the operation of VDOT equipment.
- 10.0 Liability.** Each party shall be responsible for its own actions and shall in no way assume any responsibility for or provide indemnification for the actions of the other Party, its officers, agents, employees or contractors for or against any damages, actions or costs of any name or description arising from or caused by any acts or activities performed in connection with this MOU.
- 11.0 Consequential Damages.** In no event shall either party be liable to the other party for any indirect, special or consequential damages, lost profits or loss data arising out of or related to this MOU, including, without limitation, the performance or breach thereof, the services provided or failed to be provided, or any delay, non-delivery, wrong delivery or service interruption, whether or not caused by the negligence of either Party or their officers, agents, employees or contractors.

- 12.0 Term of MOU.** The Term of this MOU shall begin upon execution of this MOU and shall continue, until unless terminated by either Party, for a term of five (5) years, with the option of two successive five (5) year renewal periods. The Parties may, if in agreement, renew the Term of this MOU, subject to the availability of funding.
- 13.0 Termination.** This MOU may be terminated by WMATA or VDOT by providing thirty (30) days advanced written notice to the other Party. The Parties agree that on the date such termination becomes effective, WMATA may, at its discretion, remove the TSP Equipment installed pursuant to this MOU. WMATA shall notify VDOT's Traffic Field Operation Manager prior to removal of any equipment.
- 13.1** WMATA retains the right to disconnect or remove any OBE device or equipment from WMATA vehicles at any time for any reason without prior notice to VDOT. WMATA may, at any time, terminate this MOU pursuant to Section 16 below if, in the opinion of WMATA, continued implementation and operation of the System is not in the best interest of WMATA or its transit patrons.
- 14.0 No Rights in Third Parties.** No provision of this MOU shall create in the public, or any person or entity other than the Parties, rights as a third party beneficiary. No parties other than WMATA and VDOT shall have the right to sue pursuant to the terms of this MOU.
- 15.0 Notices.** All notices, demands or other communications required or permitted by this Agreement ("**Notice**") shall be in writing, properly addressed, and shall be given by (i) personal delivery (with proof thereof), (ii) overnight commercial courier, (iii) registered or certified, mail (return receipt requested), or (iv) facsimile with confirmation. Notices shall be effective upon receipt; inability to make delivery because of an incorrect or outdated address, or refusal to accept delivery, shall constitute receipt as of the date of attempted delivery.

If to WMATA: Director
Office of Station Area Planning and Asset
Management
Washington Metropolitan Area Transit Authority
600 Fifth Street, NW
Washington, DC 20001
Phone: (202) 962-2294
Facsimile: (202) 962-1409

With a copy to: Washington Metropolitan Area Transit Authority
Office of General Counsel
600 Fifth Street, NW
Washington, DC 20001

If to VDOT: Virginia Department of Transportation
Central Office
Constance S. Sorrell, Chief of Systems Operations
1401 E. Broad Street
Richmond, VA 23219

- 16.0 Waiver.** To be effective, a waiver of any obligation or right under this MOU must be in writing signed by the Party waiving its rights. The failure of either party to require performance by the other Party of any provision of this MOU shall not affect the full right to require such performance at any time thereafter; nor shall the waiver by either Party of a breach of any provision hereof be taken or held to be a waiver of any subsequent breaches of that or any other provision. No provision of this MOU shall constitute or be construed as a waiver of any immunity of any kind held by WMATA or VDOT, or their officials, directors or employees.
- 17.0 Governing Law.** This MOU, and the rights and obligations of the parties under this Agreement, shall be governed by the laws of the Commonwealth of Virginia, without regard to principles of conflicts of laws, provided that the venue for any action commenced against WMATA shall be in the United States District Court of Virginia, and the Parties hereto expressly consent to the venue and jurisdiction of such courts.
- 18.0 Entire Agreement.** This MOU contains the entire agreement between the Parties with respect to the matters addressed herein and shall as to this MOU not be amended or modified in any manner except by an instrument in writing executed by the Parties as an amendment to this MOU.
- 19.0 Invalid or Unenforceable Term.** If any provision of this MOU or the application to any person or situation shall be held invalid or unenforceable, the remainder of this MOU and the application of such provision to persons or situations other than those held invalid or unenforceable shall not be affected and shall continue valid and be enforced to the fullest extent permitted by law provided that to do so does not cause this MOU to fail of its essential purposes.
- 20.0 Authority.** The undersigned individuals represent that they have the requisite authority to enter into this MOU on behalf of WMATA and VDOT, respectively, and to bind WMATA and VDOT hereby.
- 21.0 Counterparts.** This MOU may be signed in counterparts, each constituting an original. Photocopies or facsimile transmissions of signatures shall be deemed original signatures and shall be fully binding upon the Parties to the same extent as original signatures.

IN WITNESS WHEREOF, the Parties to this MOU have hereunder set their hands and seals this _____ day of _____ 2012.

VIRGINIA DEPARTMENT OF TRANSPORTATION

Date: _____

Constance S. Sorrell
Chief Of Systems Operations

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

Date: _____

Richard Sarles
General Manager, CEO

ATTACHMENT (A)

INTERSECTION LOCATIONS

VIRGINIA DEPARTMENT OF TRANSPORTATION	
1	Fairfax Sq/Fashion Blvd.
2	Old Gallows Rd.
3	Evans Ct/Patterson Rd.
4	Pimmit Dr.
5	I-66ramp
6	Shreve/Haycock
7	Castle Rd.
8	Seven Corners Center
9	Patrick Henry Dr.
10	Rio Dr. Ped signal
11	Lakeside View Dr./Nevius St.
12	Glen Carlyn Dr.
13	Charles St. and Glen Forest Dr. -These two intersections are controlled using a single controller so we consider this as one traffic signal.
14	Shopping Center
15	Carlin Springs Rd.