

MEMORANDUM OF AGREEMENT

**REGARDING COORDINATION OF TECHNICAL ANALYSIS, TESTING, FUNDING AND
ADMINISTRATION for NEW ELECTRONIC PAYMENTS PROGRAM SYSTEM (NEPP)**

This Memorandum of Agreement is entered into between and among the Northern Virginia Transportation Commission ("NVTC") and the below identified participating jurisdictions and transportation agencies (the "Entities") as a means of demonstrating their joint commitment to the development, testing, funding and implementation of the Washington Metropolitan Transit Authority's ("WMATA's" or "Metro's") New Electronic Payments Program ("NEPP") system as is more fully described below. The Memorandum of Agreement shall be effective upon the signature of the Northern Virginia Transportation Commission (NVTC) and one or more of the Entities and shall continue in accordance with the terms hereof.

In accordance with the terms of this Memorandum of Agreement, NVTC is authorized to act on behalf of the following Entities as the contracting and coordinating agent for technical analysis, testing, funding and administration of the New Electronic Payment Program (NEPP) system:

- Arlington County (Arlington ART)
- Fairfax County (Fairfax Connector)
- Loudoun County (LC Transit)
- City of Alexandria
- Alexandria DASH
- City of Fairfax (Fairfax CUE)
- Potomac and Rappahannock Transportation Commission (PRTC OmniRide and Omni Link)
- NVTC and PRTC jointly as owners and operators of Virginia Railway Express (VRE)

1.0 PURPOSE

NVTC and the Entities mutually desire, in coordination with WMATA, and with the assistance of grant funding agencies such as the Virginia Department of Rail and Public Transportation ("DRPT"), to provide transit customers a common means for payment of transit fares by using WMATA's NEPP system.

2.0 BACKGROUND

WMATA is seeking to modernize and eventually replace the existing SmarTrip fare collection system. The NEPP system is expected to be completely in place region-wide by December, 2020.

Metro and its regional transit partners have sought proposals for the development, deployment, financing, operation and maintenance of the next generation of electronic fare payment under the NEPP system. This solicitation sought proposals that would bring together the innovation of consumer electronics and wireless industries into a standards-based, customer-centric fare payment system that will provide greater flexibility, reduce operating costs and refocus Metro on its core business of providing transportation services. As designed, the program will secure the services of a system integrator to bring the necessary industry specialists together to deploy a state-of-the-art fare payment system. The new system will only use contactless cards, including payment cards (pre-paid, debit or credit), federal identity cards or smart phones with near-field communication (NFC) capability to pay transit fares directly at the faregate or farebox.

The NEPP system uses non-proprietary technology and is based on a centralized data system (CDS) rather than a complex layer of field devices and will allow riders to use smart phones, credit cards and government ID cards and other media to pay fares. The NEPP system will also permit the Entities, after exercising their option to participate in the NEPP system, to customize and implement the NEPP system to suit their needs. This technology solution will be the first of its kind and as such WMATA's vendor will be required to demonstrate proof of concept through a pilot at the expense of the vendor. The concept design review (CDR) will occur concurrently with the pilot. Technical support is needed by NVTC and the Entities beginning in the first quarter of 2014 to support the Entities' transit systems in the CDR, the oversight of the pilot, the exercise of options to participate in the NEPP system, and the implementation phase.

NVTC, working with WMATA, VRE and PRTC, has taken the lead for Northern Virginia on the coordination of the NEPP system development, testing and implementation.

Participating transit operators and agencies in the District of Columbia and Maryland, along with the Entities, are being asked to jointly design and test the NEPP system beginning in January 2014 with the goal of each of them purchasing and implementing transit fare collection equipment and system that will replace SmarTrip® and continue to support a uniform regional approach to fare collection.

Prior to WMATA's final procurement of the NEPP system, the Entities will need to conduct analyses on how to effect the transition from the existing regional fare collection system to the NEPP system. These plans include common regional fare policies, operating procedures, and administrative procedures, such as the transmission of data required to clear financial transactions.

The Entities concur in the following goals for the regional NEPP system:

- Maximize passenger convenience in purchasing and using existing devices, such as secure ID badges, cell phones, existing SmarTrip cards and credit cards, all of which are integral to allowing ease of access for transit customers to pay fares in the system;
- Continue to maximize transit integration by allowing passengers to travel seamlessly between and among different transit service providers and transportation modes using existing devices paired with an individual account;
- Capitalize on operational effectiveness and work to develop a simpler system focused on operational ease;
- Utilize the NEPP system to the benefit of customers, participating agencies and jurisdictions, and creating an environment which is conducive to the continued growth and expansion of the transit ridership base;
- Support broad access to transit through NEPP system policies and programs;
- Ensure commonality of passenger fare collection practices leveraging existing, accessible technology and the ability for customers to still use cash on board buses if desired;
- Maintain a regional approach that takes advantage of pricing opportunities and regional opportunities to maximize available funding
- Develop policies and programs regarding the NEPP system in an open and cooperative environment; and
- Maintain local decision making authority and coordinate policies and procedures regionally to support continued seamless operation of the NEPP system.

To achieve the program goals identified by the Entities, a coordinated approach to the NEPP system regional administration is required. Among the areas requiring coordination to ensure as seamless a fare collection system as intended are: fare policy coordination (but not necessarily pricing), fare technology, and operating/administrative procedures. There may also be procedural issues that will require a coordinated response, which can best be addressed by a standing committee of the Entities. This Memorandum of Agreement sets forth the principles which will be used in establishing such a centralized administrative/coordinating function and principles for Entity participation.

3.0 TECHNICAL ANALYSIS AND TESTING

Each Entity authorizes NVTC to procure on their behalf contract support for technical analysis during WMATA's development, testing and implementation of the NEPP system through the WMATA transit zone, and to work with the Entities in identifying sources of funding to achieve full implementation of NEPP system.

NVTC will issue a request for proposals ("RFP") for a consultant to support the technical analysis, pilot and testing for the NEPP system. NVTC shall develop a scope of work and initial task list for the required technical assistance for approval by the Entities which scope will include but not be limited to the following:

- 1. Serve as Technical Representative for NVTC's Contract Officer** - Provide overall management and technical support on behalf of the Entities for the NEPP system CDR, the development of the CDS, and the pilot program. Work in this task will include but not be limited to:

- Reviewing WMATA's vendor procurement progress with respect to contract milestones and evaluation;
- Reviewing and monitoring WMATA's vendor performance with emphasis on testing and quality assurance;
- Reviewing and responding to requests for technical information or resources;
- Developing periodic progress reports to NVTC and the Entities.
- Attendance at meetings of all transit entities participating in implementation of the NEPP system;
- Supporting regional subcommittees that represent the Entities' interests, including, but not limited to, participation in Technical Review Committee and Operations Subcommittee and other committees at request of NVTC;
- Attending design review meetings and related workshops for regional CDR and CDS activities;
- Attending design review and related activities for the CDR of the NEPP system; and
- Providing technical support in reviewing and coordinating any suggested changes through the designated change management process as documented by WMATA .

- 2. Design and Monitor Pilot and Tests for Conceptual Design Review (CDR) and Central Data System (CDS) development** - Provide technical support related to the design and monitoring of tests. This support will be comprised of two primary components:

- A. Support related to the design and testing of the WMATA - configured NEPP system including validating testing performed by others (WMATA) on the NEPP system; and
- B. Additional support related to testing of CDR and CDS for the NEPP system.

The pilot and testing activities are intended to validate the following functions and processes:

- Functionality, operational speed and configuration of the NEPP system;
- Performance of the NEPP system with various payment media;
- Reliability of data transmission and upload process;
- Accuracy of reported data;
- Communication of data to the CDS.
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C. Work with the Entities to ensure adequate testing of any of the specific components to be purchased by NVTC or the Entities and not tested by others, including:

- Identification of functionality to be tested and methods for testing and validating different aspects of the functionality;
- Data collection forms;
- Methods for collecting comparison and validation data;
- Sampling methods;
- Data evaluation processes; and
- Success criteria.

3. Assist in Integrating NEPP and Fareboxes with GPS and Other On-Board and Off-Board Electronic Equipment - The intent of the integration will be to reduce the operator workload by combining functions into a single device, to reduce redundant activities and data collection processes that may be present once the NEPP system is installed and to provide consolidated reporting. This task will include the following activities:

- Work with the Entities to identify integration capabilities and to review preferred integration approach from technical and contractual perspectives;
- Identify and negotiate integration capabilities of existing fareboxes to the NEPP system;
- Review integration conceptual designs;
- Review any contractual change documents related to this integration;
- Review pilot and testing activities; and
- Review pilot and test plans and results.

4. Review Alternatives for Integrating VRE Fare Collection with NEPP -- Assist VRE with identifying and evaluating options for deploying the NEPP system functionality in the VRE environment. This includes options such as modifying existing systems. Options for providing proof of payment inspection on the trains will also be explored.

5. **Bridge Assistance for additional Phases of Work** – This includes advice and plan review regarding the functionality of parallel fare payment systems while phasing out SmarTrip. Elements of this work includes but are not limited to:

- Dual operation;
- Data collection/analysis;
- Costs; and
- User error.

4.0 FUNDING AND FINANCING

On behalf of the Entities, NVTC has applied to DRPT for fiscal year 2014 mid-cycle grant assistance for technical assistance in the amount of \$200,000 (including the 50% match) to support technical assistance, analysis and startup costs. The application was reviewed by Entities and is attached (Appendix B). The grant requires a total local match of \$100,000 which will come from the Entities executing this Memorandum of Agreement.

Please note: The allocation of the cost described in this section are intended for purposes of determining proportional share among the participants for any match required for all grant funding for technical assistance support. It is anticipated that the participants will determine the appropriate allocation of costs for the procurement of the NEPP and amend this agreement or execute a separate agreement as appropriate.

The Technical Assistance Grant match share structure for the Entities is as follows:

<u>JURISDICTION</u>	Percentage Share (based on FY14 transactions)	
Arlington Co.	9.3%	\$9,348.39
city of Fairfax	2.0%	\$2,025.50
city of Alexandria	11.1%	\$11,062.03
Fairfax Co.	42.7%	\$42,690.58
Loudoun Co.	5.8%	\$5,764.65
PRTC	11.8%	\$11,841.15
VRE*	17.3%	<u>\$17,267.70</u>
	100.0%	\$100,000.00

50% DRPT Match

In addition, subject to approval by the Entities and agreement to pay their respective shares of any grant match amount in accordance with the percentages set forth above, NVTC will apply for additional funding for technical assistance in support of the CDR, the pilot , and implementation for the time period July 1, 2014 to June 30, 2016.

NVTC and the Entities will work together to develop a plan for funding for the acquisition of equipment and implementation of the NEPP system among the Entities. This plan may include but will not be limited to NVTC seeking grant assistance on behalf of the Entities (some of

whom which do not accept federal funds on an individual basis) from the Federal Transit Administration (FTA) and DRPT, and the Commonwealth as well as looking at financing options.

5.0 COORDINATION AND ADMINISTRATION

NVTC will coordinate and administer the Entities' participation in development and implementation of the NEPP system. NVTC will convene regular meetings among the Entities and other regional stakeholders to discuss and seek agreement on all aspects of the NEPP system testing, funding and implementation.

6.0 PARTICIPANT ROLES AND RESPONSIBILITIES

Entities executing this Memorandum of Agreement agree to:

- Actively participate in the technical review and implementation of the NEPP system;
- Work to consensus insofar as possible in resolution of all matters;
- Designate a lead and appropriate additional representatives to participate in technical teams for the concept design review and the pilot phase, and in the funding work group for both technical resources and acquisition and implementation of the new hardware and system;
- Make personnel available to analyze a variety of functions related to the NEPP system and the purposes of this Memorandum of Agreement, including: operations, customer service, technology, marketing and finance;
- Participate in work sessions, routine progress checks, and milestone reviews; and
- Identify appropriate funding sources of local or system match.

7.0 AMENDMENTS

Any signatory to this Memorandum of Agreement may propose an amendment at any time. Any such amendment shall become effective upon the receipt of written approval of the amendment by all participating agencies.

8.0 DURATION OF MEMORANDUM OF AGREEMENT

This Memorandum of Agreement shall have an initial duration of five (5) years from its initial effective date and shall automatically be renewed for an additional five (5) year period unless a majority of the participating Entities give written notice that they do not wish to renew their participation not less than ninety (90) calendar days prior to the expiration date. If this Memorandum of Agreement is not renewed, the participating Entities shall use the ninety (90) calendar day period prior to the expiration of the Memorandum of Agreement for the orderly termination of their further participation in the development, testing, and implementation of the NEPP system.

9.0 ASSIGNMENTS

No Entity shall have the power to assign either their rights or obligations under this Memorandum of Agreement, provided however, that any reorganization of an Entity shall automatically transfer the former Entity's rights and obligations to the successor entity.**IN WITNESS WHEREOF, the parties hereto have executed this Memorandum of Agreement by their duly authorized representative;**

AGENCY: City of Alexandria

By: _____

Name: Rashad Young (Date)

Title: City Manager

AGENCY: AlexandriaDASH

By: _____

Name: Sandy Modell (Date)

Title: Manager, Alexandria DASH

AGENCY: Arlington County / Arlington Transit (ART)

By: _____

Name: Barbara Donnellan (Date)

Title: County Manager

AGENCY: City of Fairfax /CUE

By: _____

Name: Bob Sisson (Date)

Title: City Manager

AGENCY: Fairfax County / Fairfax Connector

By: _____

Name: Edward Long (Date)

Title: County Executive

AGENCY: Potomac and Rappahannock Transportation Commission

By: _____

Name: Al Harf (Date)

Title: Executive Director, PRTC

AGENCY: Loudoun County / Loudoun County Transit (LC Transit)

By: _____

Name: Tim Hemstreet (Date)

Title: County Administrator

AGENCY: NVTC and PRTC, jointly as the Virginia Railway Express (VRE)

By: _____

Name: Doug Allen (Date)

Title: Chief Executive Officer

AGENCY: Northern Virginia Transportation Commission

By: _____

Name: Kelley Coyner (Date)

Title: Executive Director, NVTC

Acknowledgement that WMATA will work with NVTC through this agreement framework:

AGENCY: Washington Metropolitan Area Transit Authority (WMATA)

By: _____

Name: Richard Sarles (Date)

Title: General Manager & CEO